**Business Requirement Document**

**for**

**BFSI Onboarding Software**

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# Executive Summary

The BFSI Digital Onboarding Platform is a secure, paperless solution that simplifies and accelerates customer onboarding for banks and financial institutions. With features like eKYC, document upload, automated verification, and real-time tracking, it reduces manual effort, ensures regulatory compliance, and enhances the overall customer experience—supporting digital transformation and operational efficiency in the BFSI sector.

**Key Benefits:**

* **Registration:**
  + **Seamless User Onboarding**

Simplifies the registration process with intuitive steps and minimal data input.

* + **Faster Conversion Rates**

Reduces time-to-start for new users, improving engagement and adoption.

* **User Management:**
  + **Centralized User Control**

Allows admins to view, edit, and manage user profiles efficiently.

* + **Role-Based Access**

Enhances security by assigning specific roles and permissions.

* + **User Activity Monitoring**

Tracks logins, interactions, and usage patterns for improved oversight.

* **KYC Compliance:**
  + **Regulatory Adherence**

Ensures compliance with government and financial regulations through structured KYC flows.

* + **Streamlined Document Uploads**

Allows users to easily upload and update identity proofs (Aadhaar, PAN, etc.).

* + **Auto-Verification & Status Tracking**

Reduces manual checks with automated KYC validation and real-time status updates.

* **Risk Assessment:**
  + **Smart Risk Profiling**

Evaluates user financial behaviours through questionnaires and credit data

* + **Improved Decision-Making**

Flags high-risk users early, minimizing financial exposure and fraud.

* + **Customizable Scoring Models**

Enables dynamic scoring based on business needs.

* **Account Setup:**
* **Frictionless Activation**

Guides users step-by-step through setting PIN/password and activating services.

* **Instant Credential Sharing**

Sends account details via secure channels like SMS/email**.**

* **Service Enablement**
* Automatically activates subscribed features post verification.
* **Omnichannel Support:**
* **24/7 Availability**

Users receive help anytime via chat, WhatsApp, SMS, or email.

* **AI-Powered Assistant**

Reduces workload on human agents and enhances first-contact resolution.

* **Unified Support Dashboard**

Centralizes support queries from multiple channels for easy tracking.

* **Integration:**
* **Real-Time API Sync**

Seamlessly connects with third-party tools and services.

* **Modular Design**

Enables adding or removing integrations without disrupting the core system.

* **Reduced Manual Work**

Automates data flow between systems, improving accuracy and speed.

* **Reporting and Analytics:**
* **Actionable Insights**

Generates detailed reports on user behavior, support efficiency, and business performance.

* **Custom Dashboards**

Allows teams to visualize KPIs relevant to their goals.

* **Training Gap Analysis**

Identifies where improvements are needed based on usage data.

* **Data Security:**
* **End-to-End Encryption**

Protects user data during storage and transmission.

* **Compliance Ready**

Follows best practices for GDPR, ISO, and other data protection laws.

* **Secure Admin Controls**

Defines access levels and audit trails for sensitive operations.

* **Feedback**
* **Continuous Improvement Loop**

Gather user opinions to refine features and support quality.

* **Service Rating Mechanism**

Tracks satisfaction levels across different touchpoints.

* **Insightful User Responses**

Provides real-world data to guide future product enhancements**.**

**Purpose**

The purpose of modernizing the customer onboarding process is to digitize applications, automate identity and document verification, ensure KYC compliance, and improve customer experience through personalization and real-time communication. This solution will support various financial products such as savings accounts, credit cards, and loan applications. It aims to improve efficiency, reduce costs, save time, and provide a better overall experience for customers.

**Objectives**

1. **Improve Operational Efficiency:**

Automate repetitive tasks such as data entry, document collection, and verification to reduce processing time and manual errors.

1. **Enhance Security and Compliance:**

Integrate advanced digital identity verification (eKYC, biometric checks) to prevent fraud and meet regulatory requirements.

1. **Deliver a Faster and More Convenient Customer Experience:**

Allow customers to open accounts anytime, anywhere via web or mobile, with

intuitive forms and real-time updates.

1. **Reduce Onboarding Costs:**

Minimize the need for physical branches, paper-based documentation, and staff

involvement, leading to significant cost savings.

1. **Provide Personalized Onboarding Journeys**:

Customize onboarding steps and offers based on customer type, preferences, and

financial behaviour to improve engagement and satisfaction.

1. **Enable Real-Time Data Processing and Integration:**

Seamlessly connect with the bank’s core systems to instantly update customer data,

trigger account setup, and ensure accurate record-keeping.

1. **Support Omnichannel Access**:

Ensure customers have a consistent onboarding experience across mobile apps, websites, and branch support, with smooth transition between channels.

**Expected Outcomes**

1. **Enhanced Customer Experience:**

* Customers find it easy and smooth to start using banking services online.
* Services are faster, making customers happier.
* Customers get financial products like credit cards and offers that fit their needs.
* Customers can use services anytime, anywhere through different digital ways.
* The app or website is simple and easy to use for everyone.

1. **Operational Efficiency:**

* Automated processes reduce manual intervention and errors.
* Streamlined workflows for verification, KYC, and account setup.
* Integration with third-party systems for smooth data exchange.
* Reduced dependency on physical branches and paperwork.

1. **Regulatory Compliance and Security:**

* Automated KYC and compliance checks ensure adherence to regulations.
* Enhanced data security measures to protect sensitive customer information.
* Comprehensive audit trails for transparency and accountability.
* Fraud detection and prevention mechanisms.
* Regular updates to comply with changing regulatory requirements.

1. **Improved Risk Management:**

* Enhanced risk profiling and credit scoring accuracy.
* Proactive identification and mitigation of high-risk accounts.
* Continuous monitoring of transactions and customer behaviour.
* Integration of compliance checks within onboarding workflows.
* Reduced chances of defaults and non-compliance penalties.

1. **Cost Optimization:**

* Reduced operational costs by minimizing branch visits and paperwork.
* Efficient resource utilization through digitized processes.
* Lower fraud risk leading to cost savings.
* Decreased costs of customer acquisition through digital channels.
* Reduced need for physical infrastructure and staffing.

1. **Customer Feedback and Continuous Improvement:**

* Collection of customer feedback to improve services.
* Faster implementation of feature updates based on user reviews.
* Enhanced customer retention through responsive support.
* Use of feedback analytics to guide product development.
* Continuous service quality improvement based on real data.

1. **Increased Market Reach and Inclusion:**
   * People in remote or less served areas can use banking services easily through online channels.
   * The system can handle many customers signing up quickly.
   * It supports different types of bank accounts and products.
   * It helps include people who don’t have a bank account yet.
   * It works in many languages and currencies to serve more people.

**Project Scope**

The digital customer onboarding system project scope encompasses the design and implementation of a streamlined, user-friendly onboarding platform for banking and financial services. This system will enable the secure and efficient collection of customer data, digital identity verification, KYC compliance, and document submission. It will support real-time communication, personalized onboarding journeys, and integration with backend banking services for account opening and service activation. The solution will also feature mobile accessibility, multi-language support, and analytics for tracking onboarding performance and customer engagement.

**Project Constraints**

1. **Integration with Core Banking:**

* The new boarding solution must integrate with existing core banking systems, document management system and third party Identity verification services.
* Data synchronization and compatibility with legacy systems could limit flexibility.

1. **Data Security and Privacy**

* Stringent data encryption, secure access protocols, and cybersecurity measures must be in place, which can limit architectural and design choices.
* Only authorized users can access sensitive customer data, impacting workflow and system design.

1. **Performance Requirements**

* The onboarding system must handle high volumes of concurrent users, especially during peak periods.
* Performance tuning and load testing may be limited by available infrastructure.

1. **Regulatory Compliance**

* The onboarding system must comply with local and international banking regulations such as RBI guidelines, KYC and data privacy laws.
* Regular updates may be required due to evolving regulatory frameworks.

1. **Time Constraints**

* The project must be completed within a fixed timeline, often aligned with financial year planning, regulatory deadlines, or product launch windows.

1. **Budget**

* The implementation must remain within the allocated budget, covering software development, third-party integrations, infrastructure, licenses, and training.

# Project Background

**Problem areas**

The current onboarding process in the BFSI domain is manual, fragmented, and time-consuming, impacting both customer satisfaction and operational efficiency.

**Data-related challenges include:**

* Customer data is scattered across multiple systems.
* Identity verification and KYC processes are mostly manual.
* Document handling lacks automation, increasing processing time.

**Customer experience issues:**

* No differentiation for low-risk users, making onboarding slower for them.
* Lack of a self-service option to apply or track onboarding status.
* No personalized recommendations are provided during onboarding.

**Business-related problems:**

* Manual KYC and risk checks delay account activation.
* Limited visibility into the onboarding funnel performance.
* High operational costs due to heavy reliance on manual intervention.

**These issues collectively contribute to:**

* Slower conversion and activation rates.
* Increased chances of human error and compliance risk.
* Poor customer experience leading to higher drop-off rates.

**Proposed Solutions**

**Problem Area 1: Manual and Fragmented User Onboarding**

* **Solution:** Streamline user onboarding through a centralized, digital registration and account setup process with minimal manual input.
* **Features:**
* Seamless registration form with minimal required fields
* Step-by-step guided account setup
* Auto-activation of services post-verification
* Instant credential sharing via secure channels

**Problem Area 2: Inefficient User Management and Lack of Access Control**

* **Solution:** Enable centralized user profile control with role-based access and visibility into user activities
* **Features:**
  + Admin control panel for user creation/editing
  + Role-based access management
  + User activity tracking (logins, updates, interactions)

**Problem Area 3: Manual and Error-Prone KYC Verification**

* **Solution:** Automate KYC documentation handling and verification to improve speed and compliance
* **Features:**
  + Document upload for Aadhaar, PAN, etc.
  + Auto-verification systems
  + Real-time KYC status tracking
  + Structured KYC flow adhering to regulations

**Problem Area 4: Inaccurate or Delayed Risk Profiling**

* **Solution:** Introduce intelligent, customizable risk assessment models to identify high-risk users early.
* **Features:**
  + Smart risk profiling via forms & credit checks
  + Custom scoring models based on behaviour
  + Flags and alerts for suspicious or risky profiles

**Problem Area 5: Delays in Activation and Service Enablement**

* **Solution:** Guide users through a frictionless PIN/password setup and instantly activate subscribed services.
* **Features:**
  + PIN/password setup steps
  + Secure delivery of credentials
  + Auto-activation of verified services

**Problem Area 6: Lack of Consistent Support Across Channels**

* **Solution**: Provide omnichannel support with AI assistance to reduce dependency on human agents.
* **Features**:
* Support via Chat, WhatsApp, SMS, Email
* AI-powered chat assistant for FAQs
* Unified dashboard to manage all support queries

**Problem Area 7: Complex Integrations with Third-Party Systems**

* **Solution**: Ensure real-time integration with third-party tools and modular plug-in components for flexibility.
* **Features**:
* Real-time API synchronization
* Modular integration framework
* Reduced manual input and duplicate data handling

**Problem Area 8: Limited Visibility into Onboarding Funnel and User Behaviour**

* **Solution**: Use analytics to generate actionable insights and customizable reports for different teams.
* **Features**:
* KPI-based dashboards
* Reports on user behaviour and onboarding conversion
* Training gap identification from usage data

**Problem Area 9: Data Security and Regulatory Compliance**

* **Solution**: Strengthen data protection through encryption, compliance checks, and secure access controls.
* **Features**:
* End-to-end data encryption
* GDPR/ISO compliance readiness
* Role-based admin access and audit trails

**Problem Area 10: Lack of User Feedback for Improvement**

* **Solution**: Implement feedback mechanisms to capture user experience and improve system features.
* **Features**:
* User feedback and opinion capture
* Service rating widgets at touchpoints
* Feedback-driven product iterations

**Opportunities**

**Opportunities for the Bank (Admin/Business Side)**

**1. Operational Efficiency**

**Reduced Manual Work**: Automation of KYC, document verification, and user profiling lowers dependency on manual intervention.

**Faster Turnaround Time**: Digital onboarding enables quicker user registration and service activation.

**Centralized Management**: Admins can manage users, roles, permissions, and support requests from a unified dashboard.

**2. Compliance & Risk Mitigation**

**Regulatory Adherence:** Ensures seamless compliance with KYC/AML regulations and data protection laws (e.g., GDPR).

**Smart Risk Assessment:** Dynamic risk profiling allows the bank to proactively manage high-risk customers and reduce fraud**.**

**3. Data-Driven Decision Making**

**Advanced Reporting Tools:** Provides actionable insights for funnel performance, support efficiency, and operational gaps.

**Training Gap Identification:** Helps improve internal staff performance based on behavioural analytics and support metrics.

**4. Cost Reduction**

**Lower Staffing Needs:** Automated workflows reduce human resource dependency.

**Error Minimization:** Reduced human error means fewer compliance penalties and reworks.

**5. Scalability and Flexibility**

**API-Driven Integration:** Easily connects with CRMs, loan platforms, and credit bureaus.

**Opportunities for the User (Customer Side)**

**1. Faster Onboarding Experience**

**Quick Registration & KYC:** Users can register with minimal data and upload documents easily.

**Real-Time Status Updates:** Users are informed throughout the onboarding process, reducing anxiety.

**2. Improved Accessibility & Support**

**Omnichannel Help:** 24/7 support via WhatsApp, chat, SMS, or email makes help always available.

**AI-Powered Assistance:** Quick answers and faster resolution without needing to wait for human agents.

**3. Enhanced Transparency**

**Trackable Progress:** Users can monitor where they stand in the onboarding process**.**

**Feedback Mechanisms:** Direct channels to provide suggestions or raise concerns.

**4. Security and Trust**

**Secure Data Handling:** End-to-end encryption ensures their personal and financial data is protected.

**Verification Confidence:** Auto-verification builds trust by showing the bank follows secure, standardized processes.

**5. Personalized Experience**

**Tailored Recommendations:** Based on user inputs and risk profiling, users receive relevant product or service suggestions.

**Low Friction for Low-Risk Users:** Fast-track onboarding for trusted users improves satisfaction.

**Business Needs**

**Core Needs**

**Fundamental necessities to run daily operations efficiently.**

**Efficient User Onboarding**

Simplify and accelerate registration and KYC processes to reduce drop-offs and start user engagement faster.

**Centralized User & Role Management**

Maintain control over user access and profiles via a unified dashboard.

**Regulatory Compliance**

Adhere to KYC, AML, and data protection laws (e.g., GDPR, ISO standards).

**Document Automation**

Enable secure upload, storage, and verification of user documents without manual delays**.**

**24/7 Omnichannel Support**

Ensure users receive consistent help across chat, WhatsApp, email, and SMS.

**Specific Needs**

Tactical requirements tailored to banking workflows and customer experiences.

**Smart Risk Profiling**

Identify and manage high-risk customers with automated scoring models and credit behaviour tracking.

**Self-Service Tools for Users**

Let customers register, track onboarding, and manage profiles without staff intervention**.**

**Real-Time Status Updates**

Keep users informed of their onboarding progress to build trust and transparency.

**Custom Dashboard & Analytics**

Provide business teams with insight into funnel performance, drop-off points, and training gaps.

**Integration with 3rd Party Tools**

Seamlessly sync with CRMs, credit bureaus, and verification services through APIs.

**Strategic Needs**

Long-term goals to drive growth, innovation, and competitive advantage**.**

**Scalable Digital Infrastructure**

Build a modular, API-first system that grows with business needs and evolving regulations.

**Customer-Centric Experience**

Offer a fast, transparent, and secure onboarding journey that boosts brand trust and loyalty.

**Operational Cost Reduction**

Automate repetitive tasks to lower human resource dependency and manual processing errors.

**Enhanced Decision-Making Through Data**

Leverage behavioural insights, KYC statuses, and engagement trends to guide product and policy evolution**.**

**Differentiated Onboarding for Low-Risk Users**

Accelerate onboarding for safe user segments to improve conversion rates and customer satisfaction.

# Project Scope

The digital customer onboarding system project scope encompasses the design and implementation of a streamlined, user-friendly onboarding platform for banking and financial services. This system will enable the secure and efficient collection of customer data, digital identity verification, KYC compliance, and document submission. It will support real-time communication, personalized onboarding journeys, and integration with backend banking services for account opening and service activation. The solution will also feature mobile accessibility, multi-language support, and analytics for tracking onboarding performance and customer engagement.

**Core Functionalities**:

* User Registration and Profile Management:
* Allow customers to register, create profiles, and manage personal information securely.

**Digital Identity Verification**:

* Enable automated ID verification through document upload, OCR, facial recognition, and validation with government databases.

**KYC Compliance and Document Handling:**

* Collect, validate, and store mandatory KYC documents with regulatory checks and audit trails.

**Form Filling and Submission:**

* Provide guided, pre-filled, or dynamic forms based on customer type and selected financial product.

**Communication and Support:**

* Integrate real-time chat, notifications, and guided assistance to improve user engagement.

**Workflow and Process Automation:**

* Automate approval steps, document checks, and internal task assignments to reduce manual effort.

**Reporting and Analytics:**

* Generate dashboards and reports to track onboarding completion rates, drop-offs, and compliance metrics.

**Additional Features:**

**Mobile and Multi-Device Access:**

* Ensure responsive design and functionality across desktops, tablets, and smartphones.

**Security and Data Privacy:**

* Implement encryption, authentication, and access controls to safeguard user data.

**Real-Time Notifications:**

* Enable instant updates via SMS, email, or in-app alerts for status changes and next steps.

**Integration with Core Banking and CRM Systems:**

* Seamlessly connect with internal systems for data synchronization and customer management.

**Project Boundaries**

**In-Scope:**

**Core Onboarding Functionality:**

* Digital registration, identity verification, KYC compliance, form submission, and document management.

**Integration with Internal Systems:**

* Seamless integration with core banking systems, CRM, and compliance databases.

**Mobile-Friendly Interface:**

* Design and development of a responsive platform accessible on smartphones and tablets.

**Real-Time Communication:**

* Inclusion of chatbots, notifications, and guided assistance for user support.

**Security and Privacy:**

* Implementation of advanced security protocols to safeguard sensitive customer data and ensure regulatory compliance

**Out-of-Scope:**

**Manual or In-Person Onboarding:**

The system will focus solely on digital onboarding processes.

**Physical Infrastructure:**

No hardware or physical device provisioning is included in this project.

**On-Site Training and Support:**

Training for staff or end-users will be handled separately and is not part of the initial deployment scope.

**Deliverables**

**1. Digital Onboarding Platform:**

o A fully functional, secure onboarding system with core features such as digital registration, identity verification, KYC compliance, and product enrolment.

* Intuitive, user-friendly interface for both customers and back-office staff.
* Responsive design for optimal performance on desktops, tablets, and mobile devices.

**2. User Manuals and Documentation:**

* Comprehensive user guides for customers, administrators, and support staff. Technical documentation detailing system architecture, data flows, maintenance, and troubleshooting procedures.

**3. Training and Support:**

* Training materials and walkthrough sessions for internal teams and support personnel.
* Ongoing technical support and system maintenance post-deployment.

**Expected Outcomes**

**1. Enhanced Customer Experience:**

* Faster, smoother onboarding process with reduced manual effort.
* Personalized journeys and real-time support to improve customer satisfaction.
* Clear, guided onboarding steps to reduce confusion and dropout rates.

**2. Increased Operational Efficiency:**

* Automated document checks and approval workflows to reduce processing time.
* Centralized data capture to eliminate duplication and manual errors.
* Lower onboarding costs through digital-first operations.

**3. Improved Regulatory Compliance:**

* Built-in KYC verification and audit trail features to meet compliance standards.
* Centralized storage of documents and identity checks for easier audits and tracking.
* Timely alerts and updates for policy or regulation changes.

**4. Data-Driven Insights:**

* Dashboards and analytics to monitor onboarding success rates, user behaviour, and process bottlenecks.
* Reporting tools to support strategic decision-making and compliance tracking.
* Predictive insights to identify drop-off points and recommend process optimizations.

**Limitations**

**Technical Limitations:**

**System Downtime:** Reliance on digital infrastructure means outages or downtime could disrupt onboarding.

**Cybersecurity Threats:** Risk of unauthorized access or data breaches if proper security protocols aren’t enforced**.**

**Access Gaps:** Customers without internet access or digital literacy may face difficulties completing onboarding**.**

**Operational Limitations:**

**Change Management:** Shifting from manual to digital processes may face resistance or require staff retraining**.**

**Third-Party Dependency:** Reliability of external services (e.g., identity verification APIs) may affect onboarding flow.

**Limited Offline Functionality:** Users may not be able to complete onboarding in areas with poor network connectivity.

# Requirements

The requirements section outlines the specific functionalities and features that the system must possess to meet the project scope, learning and development goals. It typically includes the following key aspects:

**User Management:**

* Allows new customers to initiate account opening online via web or mobile.
* Includes user-friendly digital forms for entering personal and financial details.
* Captures mobile/email and sends OTP for verification.
* Supports multiple product types (Savings, Current, Credit, etc.).

**Onboarding & KYC Process Management:**

* Handles collection and verification of identity documents (e.g., PAN, Aadhaar).
* Performs real-time KYC validation via integration with government/regulatory databases.
* Shows KYC status (Pending, Verified, Rejected) to users and admins.
* Ensures compliance with RBI and AML regulations.

**Risk Assessment**

* Collects financial and behavioral information through a questionnaire.
* Automatically assesses the customer’s risk level (Low/Medium/High).
* Supports rules-based or AI-based scoring mechanisms.
* Flags high-risk profiles for enhanced due diligence.

**Document Management**

* Allows secure upload of identity and address proof documents.
* Stores documents in encrypted digital format.
* Uses OCR to extract relevant data from uploaded documents.
* Enables reviewers to approve/reject or request re-upload of documents.

**Account Setup & Activation**

* Triggers automatic account creation after KYC and risk checks are cleared.
* Generates account number and links it to selected banking services.
* Send welcome messages, account details, and next steps via SMS/email.
* Allows customers to choose preferences (debit card, cheque book, etc.).

**Personalized Onboarding Journey**

* Tailors onboarding experience based on customer demographics and behaviour.
* Displays personalized product recommendations (e.g., credit cards, loans).
* Dynamically adjusts messaging and offers shown during onboarding.
* Improves cross-selling and customer satisfaction.

**Omnichannel Support**

* Provides helpdesk access through chat, email, and phone.
* Tracks and logs all customer support interactions.
* Enables agents to respond using a unified dashboard.
* Sends resolution updates and allows feedback collection from users.

**Integration Capabilities**

* Connects with Core Banking System (CBS) for real-time data sync.
* Integrates with third-party APIs (e.g., credit score providers, Digi Locker).
* Ensures seamless flow of customer data across systems.
* Supports plug-and-play integration with minimal development effort.

**Reporting and Analytics**

* Tracks key metrics like onboarding time, completion rates, and drop-offs.
* Generates dashboards for business users to monitor performance.
* Identifies bottlenecks and areas for process improvement.
* Helps compliance and operations teams make data-driven decisions.

**Additional Features:**

**1. E-Signature Integration**

* Allows customers to digitally sign application forms and agreements.
* Legally valid under Indian IT Act and global standards (e.g., eIDAS).
* Reduces paperwork and speeds up processing.

**2. Biometric Authentication**

* Uses fingerprint or facial recognition for identity verification.
* Especially useful for mobile-first and rural customers.
* Enhances security and convenience.

**3. Real-Time Status Tracker**

* Lets customers see progress of their application (e.g., "In Review", "KYC Pending", "Approved").
* Reduces inbound support queries.
* Improves transparency and trust.

**4. Cross-Platform Compatibility**

* Optimized for use across mobile, tablet, desktop, and kiosk devices.
* Ensures seamless onboarding experience regardless of platform.

**5. Document Reusability**

* Allows existing customers to reuse previously submitted documents.
* Speeds up re-onboarding or applying for additional products.

**6. Fraud Detection System**

* Uses AI to detect suspicious behaviour (e.g., mismatched photos, duplicate documents).
* Triggers alerts for manual review.
* Prevents account misuse and identity theft.

**Functional Requirements**

**User Management**

* **User User Registration and Profile Management**

- Enable customers to register via mobile or web applications.

- Collect personal details like name, contact, PAN, Aadhaar, etc.

* **Role-Based Access Control**

- Define roles: Customer, Admin, Support Agent, Compliance Officer.

- Assign access based on role responsibilities.

* **Secure Authentication**

- Enable multi-factor authentication (OTP, password, biometrics).

- Support for Single Sign-On (SSO) for internal users.

* **Onboarding & KYC Process Management**
* **Online Application Submission**

- Intuitive digital forms supporting multiple account types (Savings, Current, Credit, etc.).

- Real-time validation of entered data.

* **KYC Document Upload & Verification**

- Upload documents via mobile/web.

- Integration with OCR to auto-extract data.

- Digital identity checks using APIs (Aadhaar, PAN, DigiLocker).

* **KYC/AML Compliance Checks**

- Auto-verification against government databases, sanctions lists.

- Flag suspicious profiles for manual review.

**Risk Assessment**

* **Financial & Risk Profiling**

- Collect income, expenses, and occupation data.

- Risk questionnaire for customer profiling.

- Categorize customers as Low, Medium, or High risk.

* **Automated Scoring & Alerts**

- Generate risk scores.

- Trigger alerts for reassessment or high-risk patterns

**Document Management**

* **Secure Document Handling**

- Store user documents securely with encryption.

- Preview, download, and re-upload options for users.

* **Admin Document Actions**

- Request re-upload, verify document integrity, audit trails.

**Account Setup & Activation**

* **Automated Account Creation**

- Post-verification, auto-create account and assign account number.

* **Communication**

- Send welcome emails/SMS with account details.

* **Account Personalization**

- Allow customers to set preferences, PIN, and access modes.

**Personalized Onboarding Journey**

* **Dynamic Content Delivery**

- Show tailored messages, services based on customer profile.

* **Product Recommendations**

- Suggest financial products (loans, credit cards) using AI/ML.

* **Segmentation Logic**

- Use demographic/behavioural data to guide content and services**.**

**Omnichannel Support**

* **Support Access**

- Chatbot, live chat, WhatsApp, email, and SMS-based help.

* **Query Resolution**

- Agent dashboard to manage and close customer queries.

* **Support Analytics**

- Monitor query volumes, resolution time, and CSAT ratings**.**

**Integration Capabilities**

* **Core Banking System (CBS)**

- Integration Real-time data syncing for accurate records.

* **API Integration**

- Connect with third-party tools for identity verification, credit scoring, fraud detection.

- Plug-and-play support for services like Digi Locker, UIDAI, etc.

**Reporting and Analytics**

* **Operational Reports**

- Application completion, KYC approval rates, onboarding turnaround time.

* **Customer Insights**

- Segment-wise behaviour analysis, channel usage.

* **Custom Reports**

- Downloadable reports for audit, compliance, and management decisions.

**Non-Functional Requirements**

**Performance Requirements**

• **Response** **Time**: The system should respond to user requests within a specified timeframe.

• **Scalability**: The system should be able to handle increasing numbers of users and courses.

• **Load Capacity**: The system should be able to handle peak loads without performance degradation.

**Security Requirements**

• **Data Privacy and Confidentiality**: Implement robust security measures to protect sensitive user data.

• **Access Control**: Enforce strong access controls to prevent unauthorized access.

**• Data Encryption**: Encrypt sensitive data to ensure confidentiality.

• **Regular Security Audits**: Conduct regular security audits and vulnerability assessments.

• **Compliance with Security Standards**: Adhere to industry standards such as GDPR, HIPAA, and PCI DSS.

**Usability Requirements**

• **User-Friendly Interface**: Design an intuitive and user-friendly interface.

• **Clear Navigation**: Ensure easy navigation within the system.

• **Consistent User Experience**: Maintain consistent design and branding throughout the system.

• **Help and Support**: Provide comprehensive help documentation and support resources.

**Reliability Requirements**

• **High Availability**: Ensure high system availability and minimize downtime.

• **Fault Tolerance**: Implement redundancy and failover mechanisms to prevent system failures.

• **Disaster Recovery**: Have a robust disaster recovery plan to minimize data loss and system disruption.

**Maintainability Requirements**

• **Modular Design**: Design the system with modular components for easy maintenance.

• **Code Quality**: Adhere to coding standards and best practices.

• **Documentation:** Maintain comprehensive documentation for the system.

• **Testing and Debugging**: Implement effective testing strategies to identify and fix defects.

**Accessibility Requirements**

• **WCAG Compliance**: Adhere to WCAG 2.1 guidelines to ensure accessibility for users with disabilities. (Out scope)

• **Screen Reader Compatibility**: Ensure compatibility with screen readers.

• **Keyboard Navigation**: Provide keyboard-only navigation options.

• **Color Contrast:** Use sufficient color contrast for readability.

# Key Stakeholders

**Internal Stakeholders:**

* **Executive Leadership**
* Sets the strategic direction for the digital customer onboarding initiative.
* Allocates budget and resources.
* Approves business goals and milestone achievements.
* **IT Department**

○ Manage Security, Performance of onboarding system.

○ Provides technical infrastructure.

○ Ensure integration with core banking platforms.

○ Oversees data protection and cybersecurity.

○ Ensures compliance with data privacy regulations.

* **Risk Department**
* Performs audits and compliance checks
* Ensures that the onboarding process meets all KYC and regulatory requirements.
* **Product Management Team**
* Works closely with business teams and technical teams to align requirements.
* Own product Roadmap and onboarding feature prioritization.
* **Quality Assurance Team**
* Conducts functional and user acceptance testing.
* Ensures the solution meets specified requirements before deployment.
* **End Users (Bank Staff)**
* Relationship managers and onboarding staff who interact with the system.
* Branch executives who support offline-to-digital transitions.

**External Stakeholders**

* **Customers**
* End users who use the platform to apply for financial products and services.
* Expect a seamless, secure, and fast onboarding experience.
* **Digital Identity Providers**
* Third-party service providers for Aadhar eKYC, PAN verification, facial recognition etc.
* Integrate with the onboarding system for seamless verification.
* **Regulatory Authorities (e.g., RBI)**
* Provide compliance guidelines for KYC, AML, data handling, and onboarding regulations.
* May audit or review the onboarding systems
* **Technology Vendors**
* External partners responsible for developing or customizing the onboarding solution.
* Provide support for integration, maintenance, and updates.

# Schedule and Milestone

**Phase 1: Project Initiation and Planning (2–4 weeks)**

● Milestone 1: Project Kick-off Meeting

* Define project scope, vision, and measurable goals for the digital onboarding solution.
* Identify internal stakeholders (compliance, IT, CX teams) and assign responsibilities.
* Create a detailed project timeline, resource plan, and budget allocation.

● Milestone 2: Requirements Gathering and Analysis

* Conduct interviews, workshops, and surveys with bank departments and IT teams.
* Document core, specific, and strategic needs.
* Finalize functional (e.g., KYC, document upload) and non-functional requirements (e.g., uptime, security).

**Phase 2: System Design and Development (4–8 weeks)**

● Milestone 3: System Design

* Create UI/UX wireframes for the onboarding journey.
* Design system architecture for modular deployment (API-driven, scalable backend).
* Finalize integration map (e.g., Core Banking, ID verification API, Risk Engines).

● Milestone 4: Development and Testing

* Develop key modules: Registration, KYC, Document Upload, Risk Engine, Support Dashboard.
* Configure user role access and admin controls.
* Perform unit testing, integration testing, and basic security validations.

● Milestone 5: System Integration

* Integrate the system with third-party identity/KYC verification tools and core banking systems.
* Enable real-time data flow and automate risk scoring and KYC validations.

● Milestone 6: Data Migration

* Migrate legacy customer onboarding data and existing users, if any.
* Perform test runs and validation checks for data integrity.

● Milestone 7: System Deployment

* Deploy the platform in a production environment with secured access.
* Conduct regression testing, end-to-end validation, and compliance checks.

**Phase 3: User Training and Rollout (2–4 weeks)**

● Milestone 8: User Training

* Create training materials and conduct workshops for bank employees, especially KYC and support teams.
* Train the customer service team on omnichannel dashboard and escalation workflows.

● Milestone 9: System Rollout

* Launch the onboarding platform to end users (customers).
* Monitor user adoption, collect early feedback, and ensure smooth user journeys.

**Phase 4: Post-Implementation Support and Maintenance (Ongoing)**

● Milestone 10: Ongoing Support

* Provide technical support (ticket-based + live chat).
* Address customer issues related to KYC errors, document uploads, or account setup failures.

● Milestone 11: System Upgrades and Enhancements

* Analyse feedback from users and internal teams.
* Plan and release iterative improvements (e.g., UI updates, scoring logic enhancements, chatbot refinements).

*(\*Note - Please note that the project timeline and schedule provided in this document are estimates and may be subject to change based on various factors, including unforeseen technical challenges, resource constraints, and evolving business requirements. We will make every effort to adhere to the proposed timeline, but it is important to understand that flexibility may be required to ensure the successful delivery of the project.)*

**Resources**

**Human Resources:**

* **Project Manager:** Leads the project, coordinates across teams, manages timelines, and ensures successful delivery**.**
* **Business Analyst:** Collects and documents business requirements, maps workflows, and defines onboarding use cases.
* **Solution Architect:** Designs the overall architecture including system flow, integrations, and compliance mechanisms**.**
* **Front-End Developers:** Build the user interface for web and mobile platforms ensuring responsiveness and usability**.**
* **Back-End Developers:** Develop server-side logic, APIs, and database integration for document verification and KYC.
* **QA Engineers:** Conduct functional, usability, and security testing to ensure system stability and compliance**.**
* **DevOps Engineer:** Manages deployment pipelines, cloud infrastructure, and ensures uptime and scalability**.**
* **Technical Writers:** Prepare user manuals, system documentation, and compliance guides.
* **Support and Training Team:** Onboards internal teams and provides post-launch support to users.

**Technical Resources:**

* **Hardware**: Cloud servers, storage infrastructure, networking setup, and backup systems.
* **Software**: Development frameworks, identity verification APIs, database systems, content management systems.
* **Licensing**: Subscriptions or licenses for third-party tools such as OCR engines, analytics platforms, or security modules.

*(\*Note: The resources listed above are estimates and may vary depending on evolving project scope, technology choices, and business priorities. Resource allocation will be continuously reviewed and adjusted to ensure successful and efficient project execution.) (\*Note - Please note that the resources mentioned in this document are estimates and may be subject to change based on various factors, including project scope, complexity, and evolving business requirements. We will continually assess the project's needs and adjust the resource allocation accordingly to ensure optimal project delivery.)*

# Risk and Mitigation

**Risk Areas**

**Technical Risks**

* **Website performance issue** : slow page loading ,server crashes due to heavy traffic , Poor Mobile Optimization , Unoptimized Code or Media.
* **Cyber Security threats** : Phishing attacks , SQL injection ,Password Attacks ,malware attacks can compromise customer data and damage the brand's reputation.
* **Integration Issues** : Challenges in integrating with core banking platforms.

**Operational Risks**

* **Scalability Issues** : Systems may not handle user growth effectively.
* **Staff Training :** Delays in adoption of new systems.
* **Data Inaccuracy or Duplication** : Wrong customer records or compliance issues.
* **Customer Service Issues** : Poor customer support, long response times, or ineffective issue resolution can damage brand reputation.

**User Adoption Risks**

* **User Resistance** : Lack of user adoption and engagement.
* **Lack of Real-Time Support** : users face issues or confusion and can't get help immediately, they may abandon the process altogether.

**Content Risks**

* **Inaccurate Information** : Providing wrong or old details about services, terms, or policies can mislead users and reduce trust.
* **Inconsistent Language** : Poorly written or inconsistent content can confuse users or make instructions unclear.
* **Missing Mandatory Information** : Omitting key details (e.g., KYC documents required) can lead to onboarding failure or legal issues.

**Mitigation Strategy**

**Technical Risks**

* **Website performance issue** : Implement caching (browser & server-side) , Choose scalable cloud hosting (like AWS, Azure) , Use load balancers to manage traffic ,Use responsive design , Test UI across multiple devices and screen sizes , Avoid unnecessary plugins or scripts.
* **Cyber Security threats** : Use email filters and spam detection , Keep regular data backups (offline and cloud) , Always use HTTPS (SSL/TLS encryption) , Sanitize HTML and JavaScript inputs , Conduct regular security audits and vulnerability assessments.
* **Integration Issues** : Conduct early integration testing with clear API documentation and ensure continuous communication between development teams to resolve compatibility or data mismatch problems quickly.

**Operational Risks**

* **Scalability Issues** : Design for scalability from the start and perform load testing.
* **Data Inaccuracy or Duplication** : Implement validation checks and centralized data management.
* **Staff Training** : Provide change management support, training, and involve teams early.
* **Customer Service Issues** : Prioritize customer satisfaction by providing excellent customer support and resolving issues promptly.

**User Adoption Risks**

* **User Resistance** : Simplify UI and reduce the number of steps
* **Lack of Real-Time Support** : Add chatbot or live support for better customer experience.

**Content Risks**

* **Inaccurate Information** : Set up a review process with content experts.
* **Inconsistent Language** :Define tone (e.g., friendly, professional), vocabulary, and formatting rules.Use a content management system (CMS) where content can be updated and standardized easily.
* **Missing Mandatory Information** : Establish a checklist for all mandatory fields and documents with system validations to prevent form submission if required information is missing.

# 

# Assumptions

**Technical Assumptions**

* **Infrastructure:**
  + The organization has adequate server infrastructure to host the LMS.
  + The network infrastructure can support the required bandwidth and latency.
  + The organization has a reliable internet connection.
* **Technology Stack:**
  + The selected technology stack (programming languages, frameworks, databases) is suitable for the project.
  + Third-party APIs and services will be available and reliable.
* **Security:**
  + Strong security measures will be implemented to protect user data.
  + Regular security audits and vulnerability assessments will be conducted.
* **Accessibility:**
  + The LMS will be accessible to users with disabilities.
  + The LMS will be compatible with various browsers and devices.

**Organizational Assumptions**

* **Resource Allocation:**
  + Sufficient budget and personnel will be allocated to the project.
  + The project team will have the necessary skills and expertise.
* **Stakeholder Support:**
  + Key stakeholders will support the project and provide timely decisions.
  + Change management processes will be effectively implemented.
* **Training and Support:**
  + Adequate training will be provided to end-users and administrators.
  + A help desk or support team will be available to assist users.
* **Data Migration:**
  + Existing learner and course data can be successfully migrated to the new LMS.
  + Data migration processes will be well-defined and tested.

**User Assumptions**

* **Technical Proficiency:**
  + Users have basic computer skills and internet access.
  + Users are familiar with online learning platforms and tools.
* **Time Commitment:**
  + Users are willing to allocate time for learning and completing courses.
* **Motivation:**
  + Users are motivated to learn and improve their skills.