**📌 Phased Delivery Plan for Khumbu Integrated System (as per Requirements Definition for the Khumbu Integrated System from C:\Users\mmereko\Documents\khumbulekhaya\_app\docs)**

**🔹 Phase 1: The Digital Foundation & AI Concierge (MVP)**

**Goal:** Launch the public website and a secure member portal with basic AI interaction for support and onboarding.

* **Features Delivered**
  + **Website (Public-Facing):**
    - **FR1:** Public info on savings, investments, travel.
    - **FR41 (part):** Help page with FAQs and a support request form.
    - **AI Assistant icon/button (bottom right corner)**
  + **WebApp (Member Authentication & Core Profile):**
    - **FR2:** Secure login (JWT/OAuth).
    - **FR3:** Password recovery via email/SMS.
    - **FR4:** Basic role-based access (Member, Admin).
    - **FR8:** Profile management (view and update).
    - **AI Assistant icon/button (bottom right corner)**
  + **AI Assistant:**
    - Basic FAQ (knowledge from C:\Users\mmereko\Documents\khumbulekhaya\_app\docs\stokvel) chatbot on website and WhatsApp.
    - **FR4 (AI part):** Recognizes registered users for personalized greetings.
* **Non-Functional:**
  + **NFR1, NFR3, NFR10:** Usability, cross-device compatibility, 99.5% uptime.
  + **NFR2, NFR7:** SSL/TLS encryption, secure APIs.
* **✅ Launch Outcome:** A professional public site to attract members, a secure login system, and a helpful AI concierge to answer basic questions. Foundation for all future phases is laid.

**🔹 Phase 2: Core Operations & Transaction Tracking**

**Goal:** Enable members to manage their finances and automate core administrative tasks.

* **Features Delivered**
  + **WebApp (Financial Core):**
    - **FR5:** Digital registration & KYC document upload.
    - **FR6:** Digital contract generation and e-signing.
    - **FR17:** Contribution and fee tracking.
    - **FR18:** View savings balances and transaction history.
    - **FR23:** Generate and export financial statements (PDF/CSV).
    - **FR28:** Enhanced dashboards for members and admins.
    - **FR9:** Bulk member upload (CSV/Excel).
  + **AI Assistant (Operational Automation):**
    - **FR36:** Automated payment reminders via WhatsApp/SMS (**FR7**).
    - **FR35:** Proactive weekly check-ins (**FR1**).
    - **FR41:** Basic feedback collection from members.
* **Non-Functional:**
  + **NFR4:** Support for up to 1,000 concurrent users.
  + **NFR11:** Daily automated backups.
  + **NFR6:** Data encryption at rest (Database).
* **✅ Launch Outcome:** Members can track contributions and statements. Admins save significant time on member management and payment reminders via AI automation. System handles real user data securely.

**🔹 Phase 3: Community Hub & Proactive Engagement**

**Goal:** Foster community interaction and introduce advanced AI-guided workflows for travel and services.

* **Features Delivered**
  + **WebApp (Community & Travel):**
    - **FR24:** Travel expense calculator.
    - **FR25:** Personal budget and savings dashboard.
    - **FR30:** Skills and Business Directory.
    - **FR31:** Service request and exchange system.
    - **FR33:** Ratings and reviews for services.
    - **FR34:** Business Assist feature (basic matchmaking).
  + **AI Assistant (Proactive Engagement):**
    - **FR4:** AI-Guided Onboarding (full workflow with tiers - **FR21**).
    - **FR36:** Bulk messaging to groups (**FR2**).
    - **FR38:** Proposal voting and real-time result sharing (**FR4**).
    - **FR39:** Auto-send virtual meeting invites (**FR3**).
    - **FR44:** AI-generated personalized tips and advice (**FR8**).
* **Non-Functional:**
  + **NFR5, NFR6:** Scalable, modular architecture.
  + **NFR12, NFR13:** Maintainable codebase with CI/CD.
* **✅ Launch Outcome:** The platform becomes a community engagement tool. Members can calculate travel savings, find services, and offer skills. AI proactively onboards new members and manages group communication.

**🔹 Phase 4: Full Financial Automation & Integrated AI Advisor**

**Goal:** Deliver a complete financial system with complex workflows, deep AI integration, and full compliance.

* **Features Delivered**
  + **WebApp (Advanced Financial Engine):**
    - **FR11:** Multi-Level Approval Workflows.
    - **FR12:** Beneficiary Management & Payout Rules.
    - **FR13:** Admin & Fine Automation.
    - **FR20:** Fund Withdrawals / Travel Voucher requests.
    - **FR21:** Full Loan Management lifecycle.
    - **FR22:** Comprehensive Financial Reporting.
    - **FR26:** Track travel savings and "expense gap".
    - **FR27:** Vehicle listing and trip booking.
    - **FR32:** Track income from internal services.
  + **AI Assistant (Financial Workflow Integration):**
    - **FR20 (AI part):** Handles withdrawal requests, checks eligibility, routes for approval.
    - **FR12 (AI part):** Guides users through beneficiary addition and verification.
    - **FR21 (AI part):** Guides users through loan applications.
    - **FR40:** Voice-to-text meeting minutes and attendance tracking (**FR6**).
    - **FR14:** AI-driven policy compliance monitoring (**FR18**).
* **Non-Functional:**
  + **NFR2:** Full POPIA/GDPR compliance.
  + **NFR9:** Adherence to South African financial regulations.
  + **NFR14, NFR15:** Full payment gateway (PayFast) and bank integration.
* **✅ Launch Outcome:** A fully automated financial co-operative. Members can apply for loans, manage beneficiaries, and request withdrawals via AI. The system enforces policies, manages complex approvals, and provides deep financial insights, with the AI acting as a central orchestrator and advisor.

**📊 Phase-to-Requirements Mapping (Corrected)**

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| --- | --- | --- |
| **Phase** | **Web Application & Website Features Delivered (FR)** | **AI Assistant Features Delivered (FR)** |
| **Phase 1** | FR1, FR2, FR3, FR4, FR8, FR41 (part) | Basic FAQ, FR4 (user recognition) |
| **Phase 2** | FR5, FR6, FR9, FR17, FR18, FR23, FR28 | FR36 (Reminders - **FR7**), FR35 (**FR1**), FR41 |
| **Phase 3** | FR24, FR25, FR30, FR31, FR33, FR34 | **FR4** (Onboarding), **FR36** (**FR2** - Messaging), **FR38** (**FR4** - Voting), **FR39** (**FR3** - Meetings), **FR44** (**FR8** - Advice) |
| **Phase 4** | FR11, FR12, FR13, FR20, FR21, FR22, FR26, FR27, FR32 | **FR20** (Withdrawals), **FR12** (Beneficiaries), **FR21** (Loans), **FR40** (**FR6** - Minutes), **FR14** (**FR18** - Compliance) |