# AfyaTrack v3.0 – Step-by-Step Implementation Plan

As Head of Product with decades of experience designing digital health applications, this plan breaks down the phased approach to developing AfyaTrack version 3.0. The approach emphasises cross-platform (React/Typescript/Supabase) development, user-centred design, and regulatory compliance.

## Phase 1: Project Initiation & Planning

* **Analyse current AfyaTrack v2.0 usage metrics** and user feedback to identify pain points and strengths.
* **Define project scope and success metrics** based on business goals (e.g. active users, subscription revenue, retention, forum engagement).
* **Draft high‑level requirements** for new features: multiple user roles (guest, individual, professional, institution, admin), expanded tracking services, new home page layouts, reminders, appointments, checklists, forums, payment system, and content modules.
* **Create a detailed roadmap** with milestones, deliverables, deadlines, and resource allocation.

## Phase 2: Requirements & Architecture

* **Finalise functional requirements** for each feature module (registration, login, service selection, homepages, content feeds, payment, notifications, user profiles, settings, reminders, checklists, forum, tools, content management, branding).
* **Define non‑functional requirements:** performance, security, scalability, localisation (Swahili initially with future multilingual support), accessibility, offline/low‑bandwidth experience.
* **Choose technology stack:** Lovable AI, React/Typescript/Supabase for cross-user web app, android and iOS development.
* **Design system architecture** including client–server communication, APIs, database schema (users, subscriptions, services, reminders, forums, content), and push notification infrastructure.
* **Document user roles and permissions** (individual, professional, institution, admin) and plan role‑based access control in both frontend and backend.
* **Outline integration points:** blog content ingestion, payment gateways, WhatsApp/social channels, external content APIs.

## Phase 3: UX/UI Design

* **Create a design system** consistent with AfyaTrack branding (#0046a5 primary, #ffbb01 accent) including typography, colour palette, iconography, spacing, and component library.
* **Design wireframes** for each page: language/country selection, onboarding, registration/login, service selection, payment, four home page variants (guest, getting pregnant, pregnancy, baby), content pages, forums, reminders/appointments, checklists, tools, profile, settings, and payment system.
* **Develop high‑fidelity prototypes** with detailed interactions (slider animations, bottom navigation transitions, cards with elevated shadows, subtle micro‑animations on button presses) in a tool like Figma.
* **Conduct usability testing** with representative users (women planning pregnancy, pregnant women, new parents, health professionals) to validate flows, navigation, readability, and content prioritisation.
* **Iterate design** based on feedback, ensuring accessibility (colour contrast, font size adjustments, language clarity) and responsive layouts across mobile, tablet, and web.

## Phase 4: Development

* **Set up development environment:** React/Typescript/Supabase, version control system (e.g. GitHub), automated build/test tools.
* **Implement user authentication:** support email/phone registration, optional social login, secure password management, phone/email verification, and session persistence across app and web. Implement role-based dashboards.
* **Build service selection module:** handle four services (guest, getting pregnant, pregnancy, baby). Capture inputs (Date of Last Normal Menstrual Period and cycle length for ovulation, LNMP for pregnancy, date of birth for baby) and store them securely.
* **Develop home pages:** create modular components (slider bar, number slider, current info card, wiki hii card, reminders/jamii card, makala zaidi card, bottom menu) and configure them per service. Integrate content from blog and tracking content repositories.
* **Integrate tools:** ovulation/menstrual tracker, BMI calculator, pregnancy tools (clinic appointments, birth plan, weight tracker, baby names, hospital bag, shopping lists), baby tools (milestone tracker, vaccination tracker, growth chart, activities list, shopping list).
* **Implement payment system:** build subscription selection UI with plans (3, 6, 12 months), integrate mobile money APIs and Visa/Mastercard payment gateways, generate control numbers, and implement subscription management (activation, renewal, expiry reminders). Ensure PCI compliance and secure storage of payment tokens.
* **Create forums:** allow users to browse topics (general, getting pregnant, pregnancy, baby), post questions, comment, and receive responses. Implement moderator/admin controls, rating system for professionals, user notifications for replies, and web-based view.
* **Implement reminders and notifications:** schedule daily/weekly/general notifications based on user service; support custom reminders and appointments; sync with local calendar where possible. Provide subscription renewal alerts.
* **Develop checklists:** allow users to create and manage lists (delivery bag, shopping, tasks) with progress indicators and reminders.
* **Build profile and settings pages:** display editable demographic data, service subscription status, professional bios, and allow theme (dark/light), text size, and sign out. Implement data editing and deletion flows.
* **Create a content management system** or integrate with existing blog CMS for weekly tracking articles, blog posts, and tool content. Implement caching and offline viewing.
* **Conduct unit and integration tests** for each module. Implement automated test suites and continuous integration.

## Phase 5: Integration & QA

* **Integrate all modules** and verify seamless navigation across flows (onboarding to home pages, payment to content, forum interactions, reminders).
* **Conduct cross‑platform testing** on Android, iOS, and major browsers to ensure consistent behaviour and UI rendering.
* **Perform security testing** (OWASP top 10), penetration testing, and code review to protect personal health information and payment data.
* **Test notification delivery and scheduling** on various devices and OS versions. Ensure fallback notifications for offline states.
* **Validate performance under load** and optimise network calls, caching, and asynchronous operations.
* **Fix bugs** and iterate on user feedback from beta testers.

## Phase 6: Deployment & Launch

* **Prepare store listings:** create compelling app descriptions, screenshots, videos, and localisation (Swahili initially) for Google Play Store and Apple App Store. Set up distribution for PWA/WebApp and ensure landing page redirects.
* **Configure backend for production:** secure hosting, environment variables, database backups, payment endpoints, and monitoring.
* **Roll out app updates** to existing AfyaTrack users; prompt them to update to v3.0. Provide clear migration paths and data retention for existing accounts.
* **Monitor early usage metrics**, crash reports, and error logs. Address critical issues immediately.
* **Develop marketing campaigns** focusing on new features (ovulation tracking, baby tools, forums, reminders). Engage local influencers, health professionals, and community groups. Utilise Jamii channels.

## Phase 7: Post‑Launch & Iteration

* **Collect user feedback** through in‑app surveys, store reviews, and analytics; prioritise enhancements and bug fixes.
* **Expand language support** beyond Swahili and refine country‑specific content if necessary.
* **Explore additional monetisation models** (sponsorships, premium content bundles) while maintaining ethical standards.
* **Continue to update weekly content**, blog posts, and tool data to keep users engaged.
* **Plan for future versions** (e.g. mental health tracking, integration with wearable devices, AI chatbots for quick advice).