

STS Mobile App Modernization proposal

1. Project Overview & Updated Scope

This project covers the major version upgrade of the STS Mobile Application from **0.65.1** to **0.74.x**. This is not a simple version bump; it is a structural modernization that transitions the app from the “Legacy Bridge” to the “New Architecture” (Bridgeless Mode) and React 18.

1. Core Upgrade & Technical Debt (Required)

- **Version Jump:** React Native 0.65.1 → 0.74.x (Bridgeless Mode).
- **Architecture:** Move to Hermes engine, Java 17, and Gradle 8.8.
- **Firebase & Notifee:** Full migration to Firebase v22 (Modular API) and replacement of deprecated notifications with @notifee/react-native.

Key Technical Deliverables:

- **Architecture Migration:** Enabling **Hermes** by default and moving to **Bridgeless Mode** (0.74 default). This involves removing Flipper and adopting the new React Native DevTools.
- **Yoga 3.0 UI Audit:** 0.74 uses a new layout engine. We will audit all `row-reverse` containers and `flex` layouts to ensure UI consistency, as Yoga 3.0 fixes long-standing layout bugs that may have been “worked around” in the old version.
- **Firebase Modular Migration:** Upgrading from v14 to **v18/v22**. This requires a shift from the *Namespaced API* (`firestore().collection()`) to the *Modular API* (`getDocs(query(...))`) to support tree-shaking and smaller bundle sizes.
- **Notification Engine Replacement:** Complete extraction of the deprecated notification library and full implementation of **@notifee/react-native**, including advanced triggers and

Android 13+ permission handling.

- **Component Refactoring:**

- Migrating MfaOptionScreen from react-native-masked-text to react-native-mask-input .
 - Fixing the RewardsModal logic to handle asynchronous state updates in React 18.
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2. Phase 5: Optional Enhancements & UX Optimization

These items are separated from the core upgrade to allow for flexible prioritization.

LMS & EvolveMe Challenge Improvements

- **Logic Fix (Correct Answer Validation):** We will debug the validation state logic to ensure that correct answers are no longer flagged as incorrect.
- **Native Video Player Migration: * Anti-Distracton:** Replace the YouTube iframe with a native player (e.g., react-native-video). This removes YouTube branding and suggested videos.
 - **Layout Fix:** Adjust the player container to respect the video's aspect ratio (e.g., 16:9) rather than forcing full-screen width.
 - **Controls:** Implement custom play/pause and a dedicated **Full Screen** toggle.
 - **Progress Tracking:** Implement a listener to enforce the "80% watched" rule before unlocking answers.
- **UI Update:** Bold text implementation for the watch-time requirement status.

Functional Additions

- **Attribution Query:** Add a "How did you find us?" prompt (Direct vs. EvolveMe) to the onboarding/user profile flow.

- **"Free First Step" UI:** Update the placement and logic for the “First Step” call-to-action within the user journey.
- **Dashboard Search:** Implement a location-based search and filter feature on the main dashboard for better discovery.

2. Project Timeline (11-Week Estimate)

Milestone	Duration	Primary Focus
M1: Core Environment	Weeks 1–2	Node 20+, Java 17, CocoaPods 1.15+, and initial 0.74 project scaffolding.
M2: Native Alignment	Weeks 3–4	Applying 0.74 native diffs (AppDelegate.mm , Gradle 8.8). Resolving build-time errors.
M3: Dependency Logic	Weeks 5–6	Firebase Modular API migration and Notifee implementation.
M4: UI & QA	Weeks 7–8	Yoga 3.0 layout fixes, Mask-input migration, and full regression testing.
M5: (Optional)	Weeks 8–10	LMS Video Player, Dashboard Search, and Attribution Logic.

3. Pricing & Resource Allocation

Pricing is calculated based on the specific weekly hours provided.

Weekly Resource Breakdown:

- **Lead Engineer (1):** \$160/week = **\$160**

- **Software Engineers (2):** \$750/week (each) = **\$1,500**
- **Total Weekly Burn: \$1,660**

Total Estimated Project Cost:

- **Project Total (11 Weeks): \$18,260**

Payment Milestones for must have:

1. **Commencement Deposit (20%):** \$3,320
2. **Completion of Core Upgrade (40%):** \$6,640
3. **Completion of UX Enhancements (30%):** \$4,980
4. **Final Handoff & Store Approval (10%):** \$3,320

5. Risk Mitigation & Assumptions

- **Library Compatibility:** We assume that 100% of current dependencies either support 0.74 if not we will have to explore a viable alternative.
- **OS Support:** By moving to 0.74, the app will no longer support **Android 5.0 (API 21/22)**.