ANNEX 2

Application Flow Diagram

Flick MVP - iOS Application

October 8, 2025

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1. Overview

This document describes the overall application flow, user journeys, data interactions, and backend architecture for the Flick MVP iOS application, including all additional features requested by Good Monkeys LLC. It provides a comprehensive view of how different modules interact with each other and with the backend infrastructure.

2. Enhanced System Architecture

Layer	Components	Technology
Presentation Layer	iOS Application + Web QR Fallback	Flutter/React Native + HTML/CSS/JS
API Layer	RESTful API Gateway	Node.js + Express.js
Business Logic Layer	QR Processing, Location Tracking, Ownership History	Node.js
Data Layer	User DB, Lighter DB, Ownership History DB, Location DB	Supabase/Firebase
Storage Layer	Images, Documents, Backups	AWS S3 / Firebase Storage
Infrastructure Layer	Cloud Hosting, Load Balancing, CDN for Web QR	AWS/GCP/Vercel

3. Enhanced QR Code Scanning Flow

Step	Action	System Response
1	User scans QR code using native iOS camera	Camera app detects QR and attempts to open app
2A	If app installed: Deep link to app	App opens directly to relevant screen
2B	If app not installed: Open web page	Web page loads with notification-style interface
3	System validates QR code format	Backend checks if QR exists in database
4A	If registered lighter: Show ownership status	Display "This lighter is registered - return or claim?"
4B	If unregistered lighter: Show registration prompt	Display "New lighter - add to collection!" with download link
5	User takes action (return/claim/register)	System processes action and updates database
6	Success confirmation displayed	User receives confirmation and next steps

4. Smart Location Update Flow

Step	Action	System Response
1	System sends push notification	"Is your lighter with you right now?"
2	User responds Yes/No	One-tap response captured
3A	If Yes: Location updated	Current GPS location saved to lighter record
3B	If No: Follow-up question	"Is your lighter lost?"
4A	If lost: Mark as lost	Lighter status updated, owner notified
4B	If not lost: Normal status	"Just not with me right now" recorded
5	System logs interaction	Analytics updated, frequency tracking

5. Enhanced API Endpoints

Endpoint	Method	Purpose
/api/lighters/qr/validate	POST	Validate QR code and return status
/api/lighters/qr/web/action	POST	Handle QR web actions (return/claim/register)
/api/lighters/:id/ownership-history	GET	Get ownership history for lighter
/api/location/update	POST	Update lighter location
/api/location/request	POST	Request location update from user
/api/qr/web/register	POST	Handle web-based QR registration

6. Future Expansion Readiness

6.1 Social Feed Architecture Foundation

- Event Logging: All user actions (trades, scans, location updates) logged for future social features
- Activity Streams: Database structure ready for activity feed generation
- User Interaction Tracking: All social interactions captured for future analysis
- Scalable Infrastructure: Built to handle increased social activity and engagement

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This document forms Annex 2 of the Application Development Agreement between Good Monkeys LLC and CodeFlow Studios, dated October 8, 2025.