

# ANNEX 2 - UPDATED

## Application Flow Diagram

### Flick MVP - iOS Application

October 8, 2025

## 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, Social DB	PostgreSQL / Firebase
Storage Layer	Images, Documents, Backups	AWS S3 / Firebase Storage
Infrastructure Layer	Cloud Hosting, Load Balancing, CDN for Web QRs	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.*