

Purpose of This Document

Ombrixia's design direction requires clarity for engineering so that functionality, user experience, and underlying logic stay aligned with the broader vision. This document consolidates the universal-utility rationale, the event-card schema, the model-agnostic AI pipeline, and the two-step QR-based access flow so development can proceed confidently, especially during the Gemini integration work.

Rationale for Universal Positioning

Ombrixia is intended to be a general-purpose camera intelligence tool usable by any person, not only activists or civic-oriented users. The majority of significant real-world recordings are captured by everyday individuals who had no intention of becoming 'witnesses.' By building Ombrixia around universal functionality, the app becomes approachable and useful for lifestyle creators, travelers, commuters, parents, students, and others. This prevents ideological framing, supports mass adoption, and ensures long-term platform stability.

Influencer Example Analysis

The reference user represents the type of individual who records daily life for aesthetic or personal purposes. Such users respond to minimalism, ease of use, and intelligent features rather than political messaging. Ombrixia must meet these expectations so the tool feels like a natural extension of normal life. When exceptional moments occur—law enforcement interactions, emergencies, unusual public events—the same system seamlessly generates structured, high-signal intelligence. The user does not need to identify as political for the tool to quietly provide civic value when needed.

How Multi-Functionality Is Achieved

Multi-functionality comes from the event-card schema and the AI adapter architecture. The universal layer extracts objects, colors, lighting, movement, key audio phrases, sentiment, and general environmental metadata. The civic-intel layer activates only when the system detects uniforms, badges, vehicles, plates, or agency identifiers. This dual behavior allows Ombrixia to be simultaneously a smart utility and a civic-intelligence system without advertising itself as either. The interface remains neutral, clean, and aesthetic. Advanced elements remain hidden unless the recorded content makes them relevant.

Two-Step Access Flow with QR or Check-In

Ombrixia will use a two-step user flow to rationalize recording access and preserve anonymity while still enabling geospatial intelligence.

Step 1: The user must either scan a QR code or 'check in' to generate one. No camera functions appear until this step is complete. This limits unnecessary or irrelevant recordings from entering the HotZones pool. Only users intentionally entering a space or initiating a recording session receive

access.

Step 2: Once the QR code is generated, it functions as a temporary session token tied to general geolocation. It does not identify the user but confirms presence within a zone. This enables Ombrixia to map activity patterns, visualize recorded moments, and reconstruct historical interactions within that environment without compromising anonymity.

The QR code system also creates a lightweight gating mechanism ensuring that HotZones remain populated with contextually meaningful uploads. It reduces noise while preserving privacy, aligning with the goal of universal adoption and responsible data handling.

Historical Recollection via QR-Linked Location

The QR code acts as a time-and-place anchor. It allows Ombrixia to surface past recordings that occurred within a certain proximity of the user's current position. Users may view previous events or interactions without requiring identity linkage. This creates a real-time historical layer—an evolving memory of the city—that helps ordinary users understand how spaces have changed or how events unfolded. The system accomplishes this without storing or exposing personal identifiers. Only the presence of a temporary QR session token and geospatial metadata is used to contextualize past events.

Technical Requirements for Universal Event Schema

The event card must support a universal layer and a conditional civic layer.

Universal Layer: timestamp, duration, GPS, event type, objects detected, scene changes, environmental lighting, motion levels, transcript, sentiment, and general tags.

Conditional Civic Layer: vehicle make, model, color, license plate, agency patches, badge numbers, uniform identifiers, behavior patterns, and threat or urgency indicators. This architecture ensures that Ombrixia remains useful for everyday content while scaling into civic-tech functionality when needed.

Prompts for Smart Utility Extraction

Example prompt for Gemini or any future model:

"Analyze this video or frame and return structured JSON. Extract general objects, colors, lighting conditions, motion indicators, environmental context, visible text from signage or surfaces, and any relevant audio transcription. If visible, also extract vehicle details, plate text, uniform markers, agency identifiers, and badge numbers. Return all fields with confidence scores. Do not assume the presence of civic indicators unless they are visible."

This prompt supports both layers of the event-card logic.

Prompts for Summary Generation

Two summaries are required:

1. Consumer Summary: a neutral, descriptive summary focusing on visual changes, interactions, movement, and audio tone.
2. Civic-Intel Summary: generated only when relevant content is detected. This summary remains factual and avoids legal interpretation.

Example consumer summary prompt:

"Provide a concise, neutral summary of what occurs in the video using only observable information."

Example civic-intel summary prompt:

"If uniforms, plates, or agency markings are detected, generate a factual summary describing visible elements without inference."

Model-Agnostic AI Pipeline

Ombrixia must remain model-agnostic. The llm_adapter layer will allow switching between Gemini, Llama, Fireworks, OpenAI Vision, Grok Vision, or local models without altering core application logic. The adapter handles extraction, summarization, and structured JSON processing. This ensures development continuity regardless of provider constraints and enables long-term scalability.

Implications for Interface and User Experience

The interface should remain understated, with no political terminology or civic framing. Users encounter a minimal utility for organizing recordings, viewing summaries, and accessing event cards. Advanced civic-intel elements appear only when triggered by content. This protects brand neutrality, supports mass adoption, and ensures that Ombrixia appeals to ordinary users during daily use while still empowering them during high-signal events.

Conclusion

Ombrixia's strength lies in presenting itself as a universal camera-intelligence tool. The two-step QR/check-in flow ensures meaningful participation in HotZones while maintaining anonymity. The event-card schema and AI pipeline support both routine and civic-intel use cases without forcing users into political contexts. This design philosophy preserves broad appeal, encourages adoption, and ensures longevity as engineering proceeds with the Gemini integration.

