

DIMENSION BREACH

When 2D maps meet a 3D city, navigation systems assume the world is flat — but Chongqing is not.

Audience, Stance and Position

"Maps are never neutral." — J. B. Harley, Deconstructing the Map (1989)

Before drawing a counter-map, this project must declare for whom it is drawn — and the readings it deliberately excludes. The decisions below frame all subsequent design choices, from the format of the artefact to the language of its interface.

INTENDED AUDIENCE

Who this map is drawn for

Chongqing residents who walk the path as part of daily life: longstanding Yuzhong District residents, non-car owners, and walkers for whom the path is dwelling as well.

EXCLUDED READERS

Who this map declines to address

Travellers who want to take the shortest-time route; algorithmic users who want the best route; tourists who see the city as scenery; and outsiders who expect it to just work. everywhere and without effort. These people are already taken care of by existing services.

CRITIQUE TARGETS

What this project resists

Navigation interfaces that flatten a three-dimensional path into a single red line; algorithms that translate spatial experience into distance and minutes;

POSITION

When commercial platforms become the default description of a city, locally situated knowledge is being progressively erased. A counter-map drawn for residents is a refusal of that erasure, not an instrument of communication directed at outsiders.

Background

Why choose here?

Chongqing is known as the "8D Magic City" - a city on clouds. Drivers often can't find their way around in Chongqing because we've always assumed we live on a flat planet, but Chongqing is not flat. The Third Mountain Path is 3.9km long and has 80m altitude difference. Google Map is a thin red line. In reality, it is the second-longest walking trail in Chongqing, taking you through time and space. Ming-Qing ancient alleys, French old colonial churches, wartime capital historical sites and modern creative spaces.

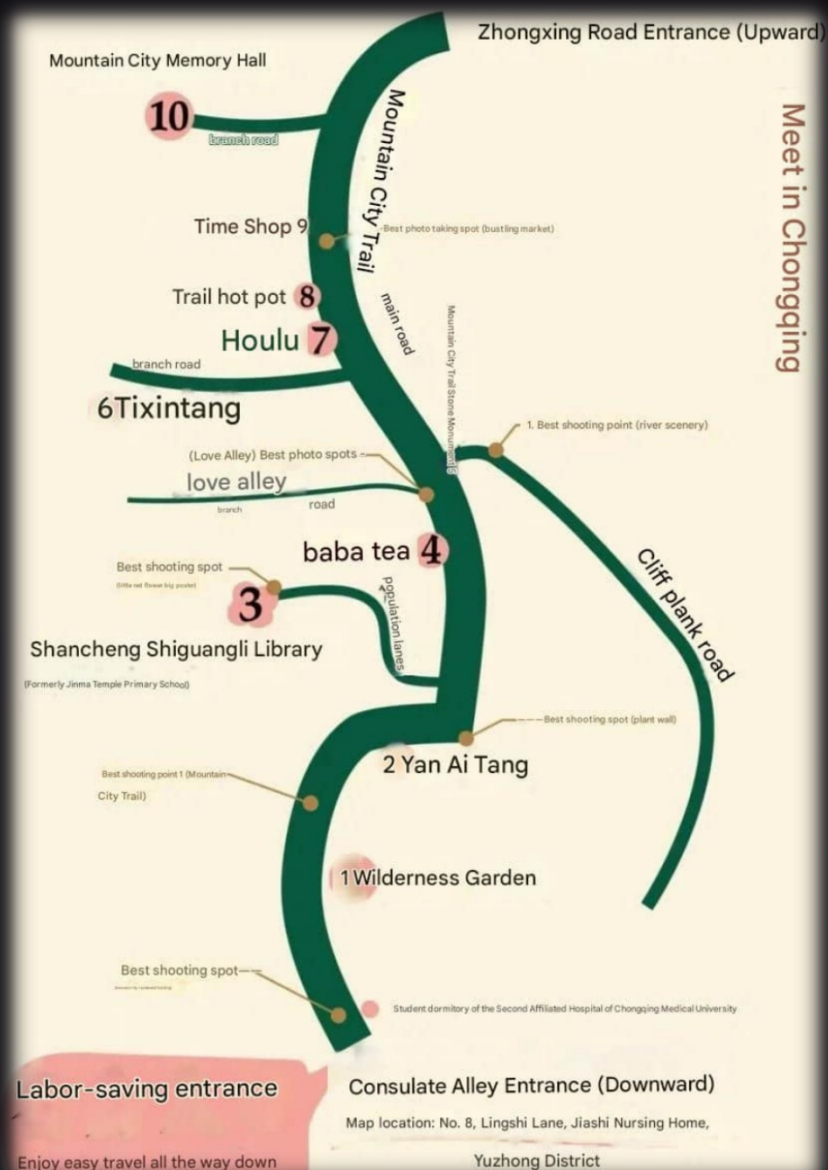
My story of interacting with this journey

When I walk on this road, the natural atmosphere changes my mood. The city noise fades behind me.

When I walk, I feel relaxed and at ease, naturally slowing down. This is the most beautiful route from my apartment to the city center.

Activity - I noticed:

Trees change color with seasons... When I see others walking the same path, I feel a sense of belonging...



Context-Field Research

Season: Spring

7-15°C

Air Temperature

River

7-10°C

River Temperature

Map Field Research



Time Variation



People-Emotion Collection

The Wheel of Emotions is an emotional model created by Robert Plutchik to describe and understand basic human emotions.

Plutchik's Wheel of Emotions (2000)



Emotion Indicators

- Anticipation**
Excitement before the unknown journey
- Serenity**
Peaceful calm under banyan trees
- Awe**
Overwhelmed by cliff view

Data Collection Methods

- Written Diary**
Record feelings at each stop
- Photo Documentation**
Capture moments of emotion
- Voice Recording**
Narrate real-time feelings

Design Development

Field sketching and projection studies preceding the final counter-map

Before settling on the multi-layer counter-map, the path was first drawn from observation and tested through several cartographic projections. Each system frames the territory differently — none is innocent. The two pages below trace this exploration.

FIELD SKETCH · STAIR SECTION

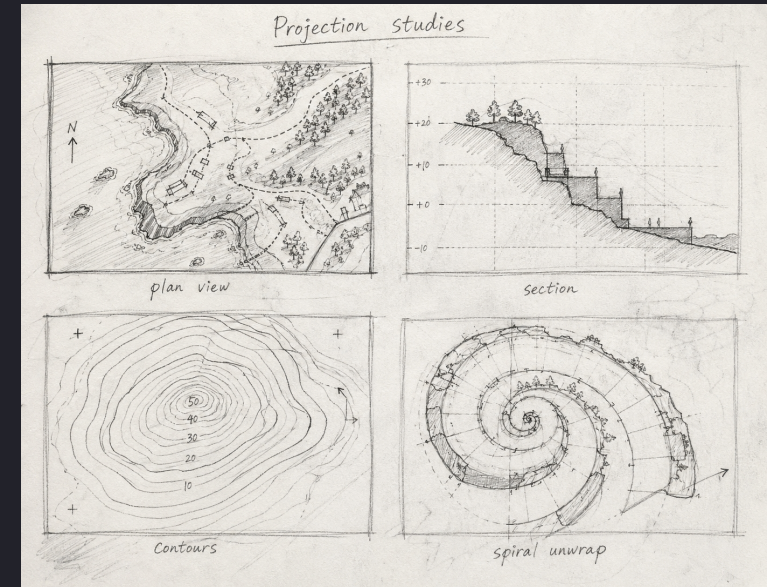
Drawn on site, April 2026



One of the unmarked stretches between Houlu and Tixintang. The drawing records what GPS cannot: weight, slope, the stoop of the climb.

PROJECTION STUDIES · FOUR APPROACHES

Testing four cartographic systems

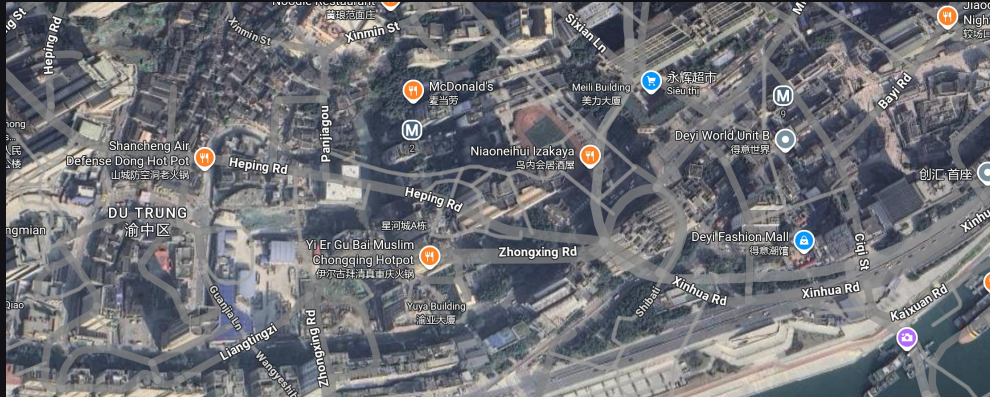


Plan, section, contour, and spiral. Each projection foregrounds a different aspect — verticality, time, density, or duration — and excludes others.

Existing Maps Analysis

What do official maps show?

On Google Maps and Amap, the Third Mountain Path is just a thin line. It cannot display: the 80m vertical elevation, 1748 steps, whether you're above or below the path.



What's Hidden / Missing

What 2D maps cannot express:

Traditional mapping assumes the world is flat. But spatial experience includes vertical, temporal, emotional, and sensory dimensions.

Vertical Elevation

80m climb from riverside to hilltop

Temporal Dimension

Different light morning vs evening

Emotional Experience

Anticipation, serenity, awe, nostalgia

Sensory World

Sound, smell, touch, temperature

Historical Layers

Ming-Qing, French, wartime overlap

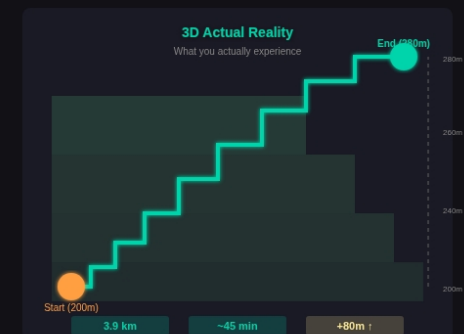
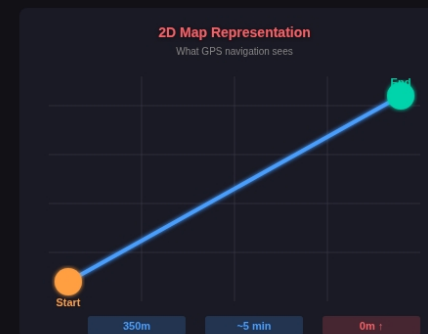
Navigation Failure Case

"I tried so hard to follow the navigation, but I just couldn't get out. After getting lost countless times, I started crying."

— Tourist Ms. Xing, Interface News, 2019

Core Question

How do traditional mapping systems 'flatten' a 3D city?



The Gap: What Navigation Misses

Distance
11x
longer

Time
9x
longer

Steps
1,748
invisible

Elevation
+80m
not shown

Effort
280
kcal burned

Result
LOST
navigation fails

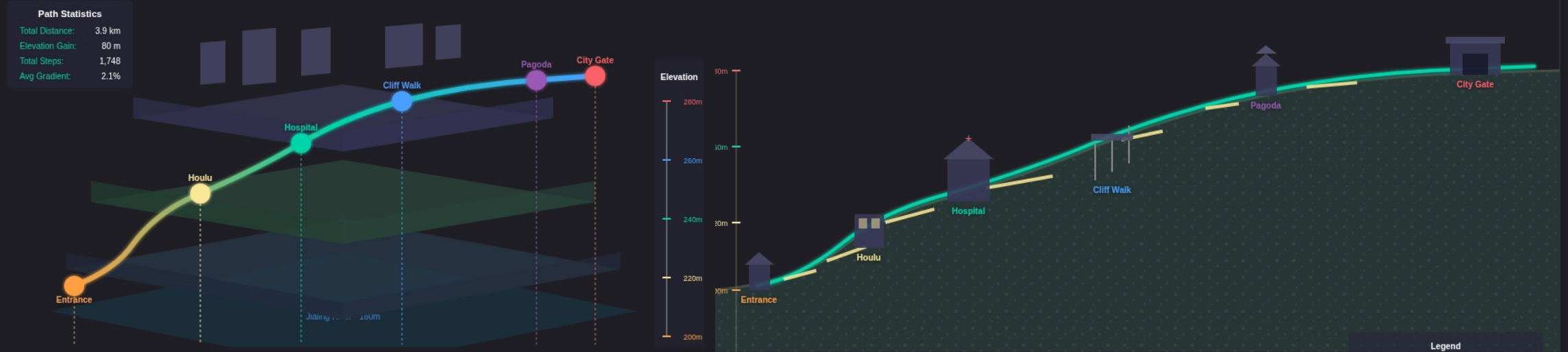
Who Drew This Line?

A comparative reading of how three cartographic systems represent the same path

The path itself is unchanging stone, soil and steps. The map is what changes — and each platform draws a different path according to whom it serves. The table below makes those decisions explicit.

DIMENSION	GOOGLE MAPS	AMAP / BAIDU	RESIDENTS' MENTAL MAP
How the path appears	A 3.9 km thin red line	Recommends a detour around it	80 m vertical climb · 1,748 steps · four historical layers
Who produced it	US-based platform · satellite imaging	Domestic platforms · driver-trace data	Two decades of habitual walking
Optimised for	Global readability · advertising	Vehicular efficiency	Dwelling, memory, sociality
Primary beneficiaries	Advertisers, transient visitors	Ride-hailing and delivery economies	(In principle) the residents themselves
Systematically excluded	Walkers, the elderly, longstanding residents	Pedestrians, those climbing on foot	—
Hidden cost	Reducing the city to a network	Reducing daily life to a route	—

Counter-Map: Vertical Profile



Along the Path



Emotion Layer

Entrance · 0m

Anticipation

First step onto bluestone, city noise fades. Ahead lies unknown twists.



Near Houlu · 800m

Serenity

Ancient banyan trees cast dappled shade, moss tells the story of time.



Cliff Walkway · 1.5km

Awe

Cliff below, Yangtze ahead — you see three 'ground levels' at once.



City Gate · 3.9km

Nostalgia

At the ancient wall's end, looking up at modern towers. 600 years in one step.



Sensory Layers

Sound

Porters' bamboo poles, Chongqing dialect, metro, river echoes

Smell

Damp stone, hotpot aroma, banyan fragrance, petrichor

Touch

Worn stone, cold/hot railings, humidity gradient

Sight

Layered rooftops, light/shadow, river glimpses, night lights

When the Path Disappears

Chongqing, 2055 — a speculative scenario in which the path is delisted from official cartography

PREMISE

After fifteen years of a unified urban operating system, paths not registered in the platform are no longer rendered on consumer maps. The Third Mountain Path — judged by a regulatory algorithm to be inefficient, unsafe and commercially unviable — has been officially delisted as a recoverable corridor. The path itself remains. It simply no longer appears.

TERRITORY • 2055

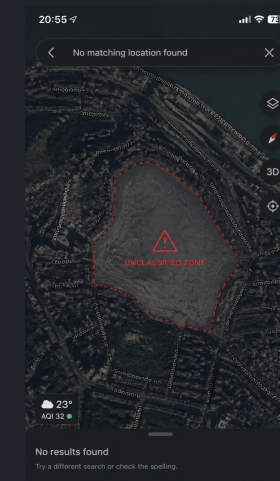
What the path still looks like



Residents continue to walk the stairs. The street remains, persistently physical, lined with hand-pasted notices and chalk markings — a parallel cartography that circulates outside the platform.

OFFICIAL MAP • 2055

What the platform shows



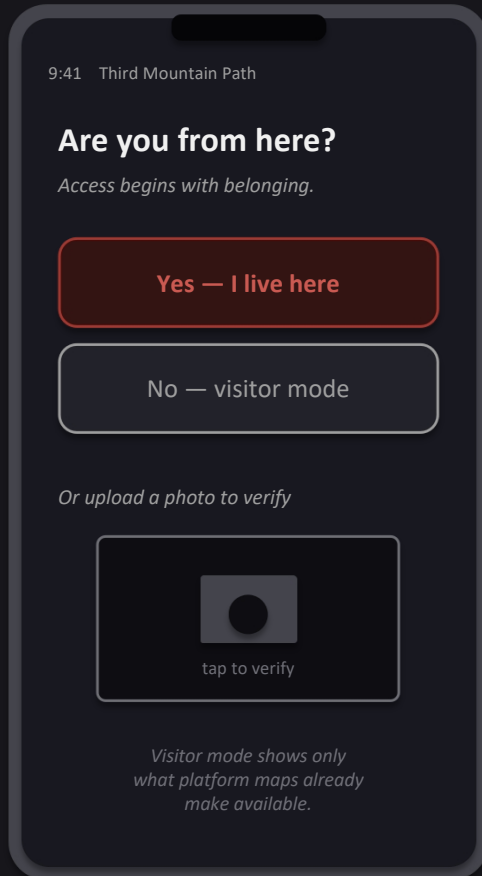
Search returns no result. The corridor is rendered as a grey unclassified zone.

When the platform's map becomes the operational territory, that which is unmapped becomes — administratively — unreal. The counter-map persists by remaining illegible to the system.

Interface for a Counter-Cartography

Three key screens of an application that makes the resident-authored map operable rather than merely visible

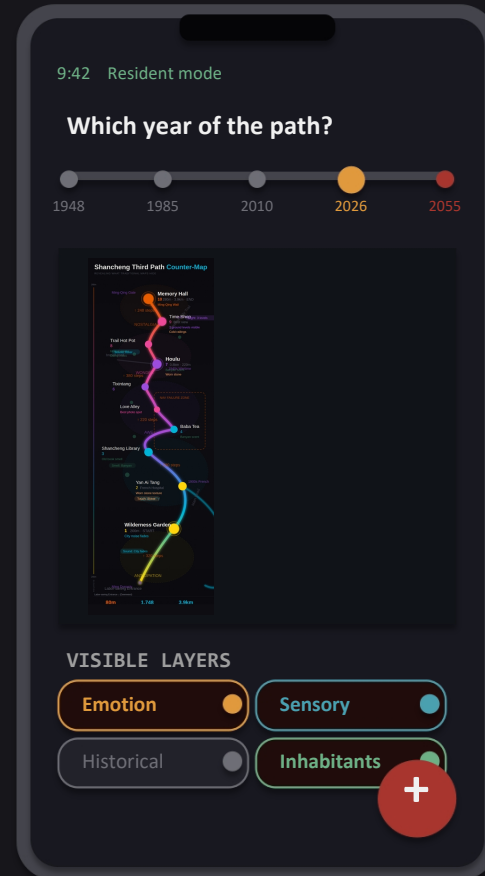
The interface translates the counter-map into a tool. It must answer the questions the brief asks of any cartographic interface: who has access, what can be edited, and how the system handles its own censorship.



01 • IDENTITY GATE

Who is granted full access

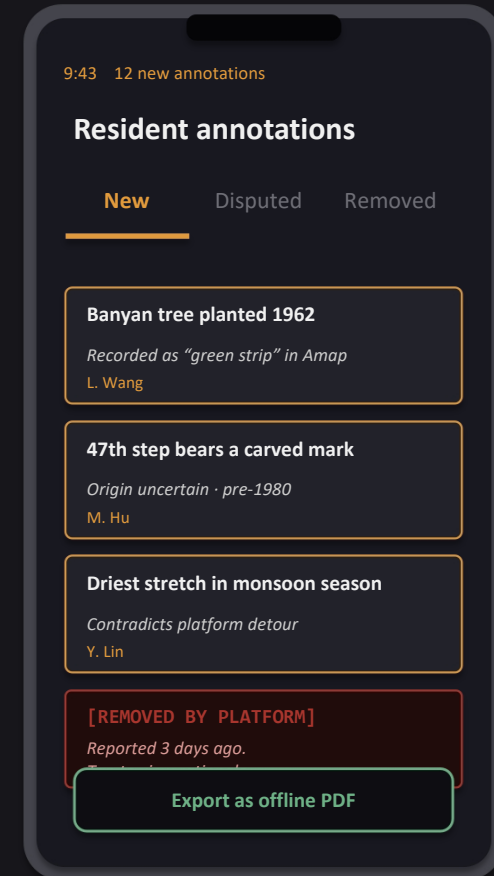
Establishes universal legibility as a political choice, not a default.



02 • LAYERED MAP

Time, layers, and contribution

Reframes the user from reader to cartographer.



03 • ANNOTATION LOG

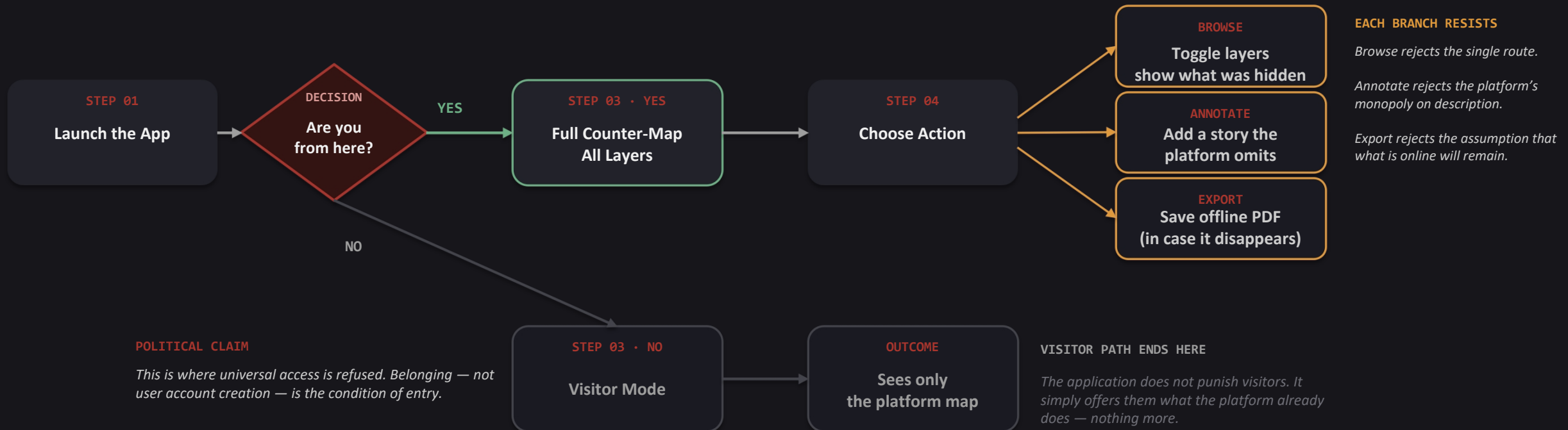
Collective record • censorship made visible

Renders moderation visible rather than seamless.

Interaction Logic

How a Chongqing resident moves through the application — and how the visitor is excluded by design

The flow itself is the argument. Each transition reproduces or refuses the platform logic of universal access. The diamond at the centre is where this refusal is enacted.



The flow itself is the argument: each transition reproduces or resists the platform logic of universal, frictionless legibility.

Counter-Map: Multi-Layer Diagram

WEEK 1 OUTPUT · COUNTER-MAP

REVISION · EDITED

A horizontal data-visualisation showing five layers of the Third Mountain Path: historical era, emotion, elevation, sensory experience, and ecosystem.



Originally part of a combined 'Final Map & Interface' slide. Separated here to mark this clearly as the Week 1 counter-map output, distinct from the Week 3 interface (slide 04).

Counter-Map: Vertical Path

WEEK 1 OUTPUT · COUNTER-MAP

REVISION · INSERTED

A vertical reading of the Third Mountain Path, plotted by elevation. Stations are marked with emotional zones, sensory cues, historical eras and recurring ecosystems.



Companion piece to the multi-layer diagram on the previous slide. The two together constitute the Week 1 counter-map; they are distinct from the Week 3 interface (slide 04).

Design Statement

This project employs counter-mapping to re-present a three-dimensional city which two-dimensional cartography cannot exhaust.

The Third Mountain Path is Chongqing's most prototypical vertical space — an 80-metre, 3.9-kilometre high-path reduces to a line on Google Maps, but in reality it is a journey that loses its dimensions — in space, time and feeling — when one navigates for it on Google. Chongqing is not flat.

My fieldwork reveals what two-dimensional maps invariably leave out: the curve of emotion from anticipation to serenity to wonder to nostalgia; the senses of sound (city fading to river); smell (banyan trees and damp moss); touch (worn stone steps; cold railings); and the historical layers from Ming to French colonial to wartime.

The final counter-map is not a map, but a new kind of spatial narrative — revealing how mapping systems two-dimensionalise a three-dimensional city, thereby flattening out the dimensions which give meaning to vertical space.

Core Findings

- 1 Navigation assumes flat world — Chongqing is not.
- 2 Maps omit the emotional dimension of space.
- 3 Sensory experience is essential to spatial cognition.
- 4 Counter-mapping makes the overlooked visible.

Reflection on ethics, what is revealed and what is concealed

References

REVISION · EDITED

Theoretical Framework

Peluso, N. (1995). Counter-Mapping Forest Territories

Harley, J.B. (1989). Deconstructing the Map

Plutchik, R. (2000). The Nature of Emotions

Case References

Parish Maps Project (UK, 1985-)

Counter Cartographies Collective

Forensic Architecture

Data Sources

Interface News "Chongqing: Navigation Fails" (2019)

Chongqing Government Mountain Path Plan

Field Research (February 2026)

Territories & Interfaces

Critical Cartographies

MA Comm Design 2026

Chongqing, China

29°33'N 106°34'E