

PROJECT CODE: FA-2

UrbanVista Analytics: US Airbnb Market 2023

Tableau Dashboard Strategy & Data Storyboard

Prepared for UrbanVista Stakeholders

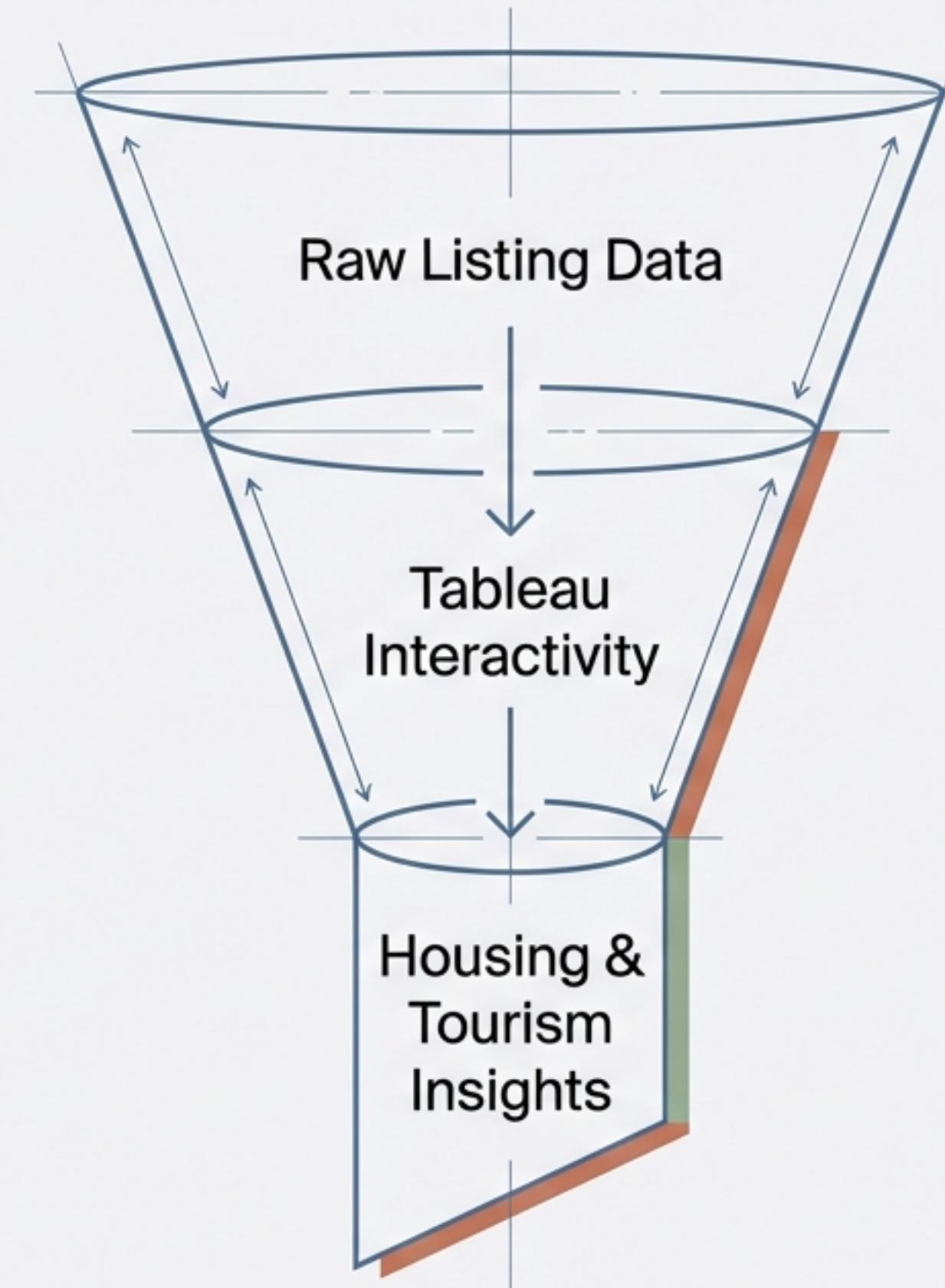
Dataset Source: AB_US_2023

Helvetica Now Display

The Mission Brief

Decoding the Modern Hospitality Landscape.

UrbanVista Analytics has been mandated to create a comprehensive intelligence tool to analyze Airbnb listings across the USA for the 2023 fiscal year.



The Goal: Transform raw listing data into an interactive dashboard answering critical stakeholder questions on price elasticity and urban dynamics.

The Deliverable: A fully realized storyboard and deployment plan revealing the tension between tourism hotspots and residential availability.

The Raw Material: Dataset Profile

1	2	3
The Source	Variables Inventory	Integrity Status
 Filename: AB_US_2023.csv Shape: [Insert Row Count] Rows × [Insert Col Count] Columns	Core Dimensions & Measures A Location/Text City, Neighbourhood, Latitude, Longitude, Room_type B Numeric Price, Availability_365, Minimum_nights, Number_of_reviews, Reviews_per_month	Quality Audit ✓ Missing Values: Identified in "reviews_per_month" and "last_review". ✓ Data Types: Geo-spatial, Numeric, and Time formats verified.

Ensuring Analytical Integrity

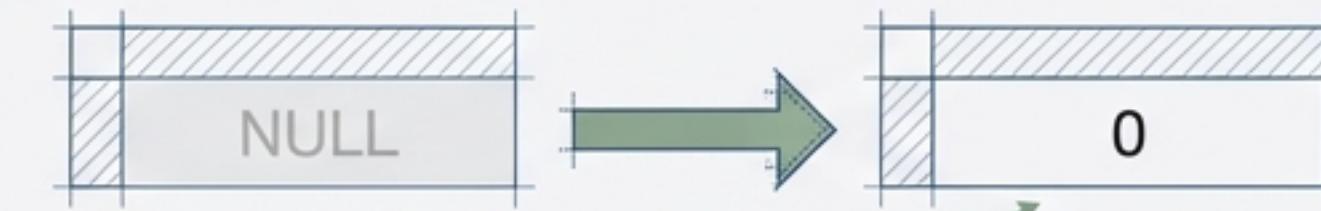
Data Cleaning Protocols & Logic

Protocol 1: Price Normalization



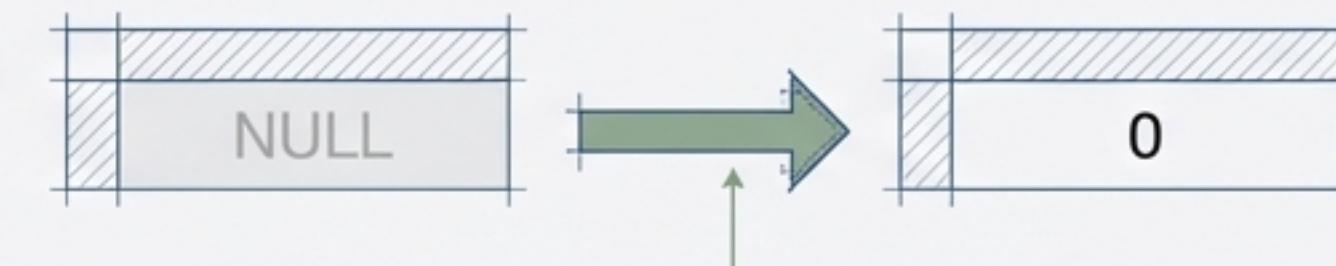
Action: Remove symbols/commas.
Rationale: Enables aggregation and color scaling.

Protocol 2: Null Handling



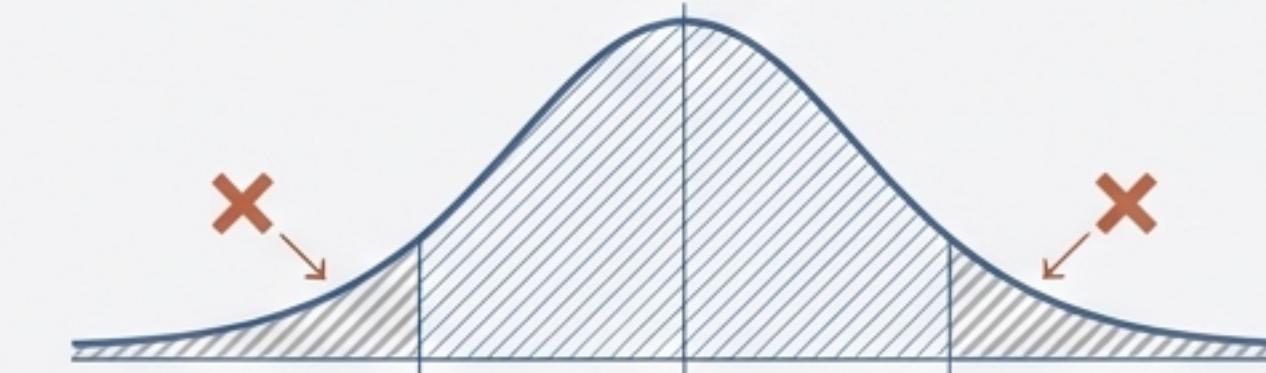
Target: "reviews_per_month".
Rationale: Null implies zero activity.

Protocol 2: Null Handling



Target: "reviews_per_month".
Rationale: Null implies zero activity.

Protocol 3: Outlier Management



Action: Filter >\$5000 price & >365 nights.
Rationale: Prevents skewing of averages.

The User Experience Blueprint

Header Zone: Title & High-Level KPIs

O O

Control Panel

City Selector

Room Type Checkbox

Dummy 1
 Dummy 2
 Dummy 3
 Dummy 4

Price Slider

min max

Global Filter Scope

1. Map Heatmap (Context)

Hover for Details

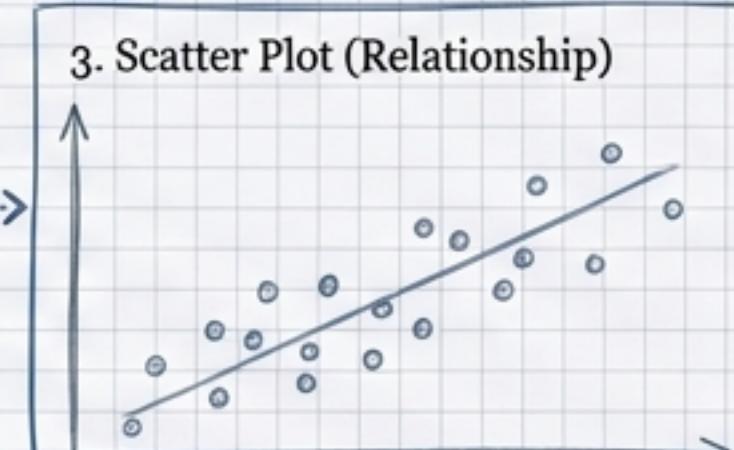


2. Trend Line (Analysis)



3. Scatter Plot (Relationship)

Global Filter Scope

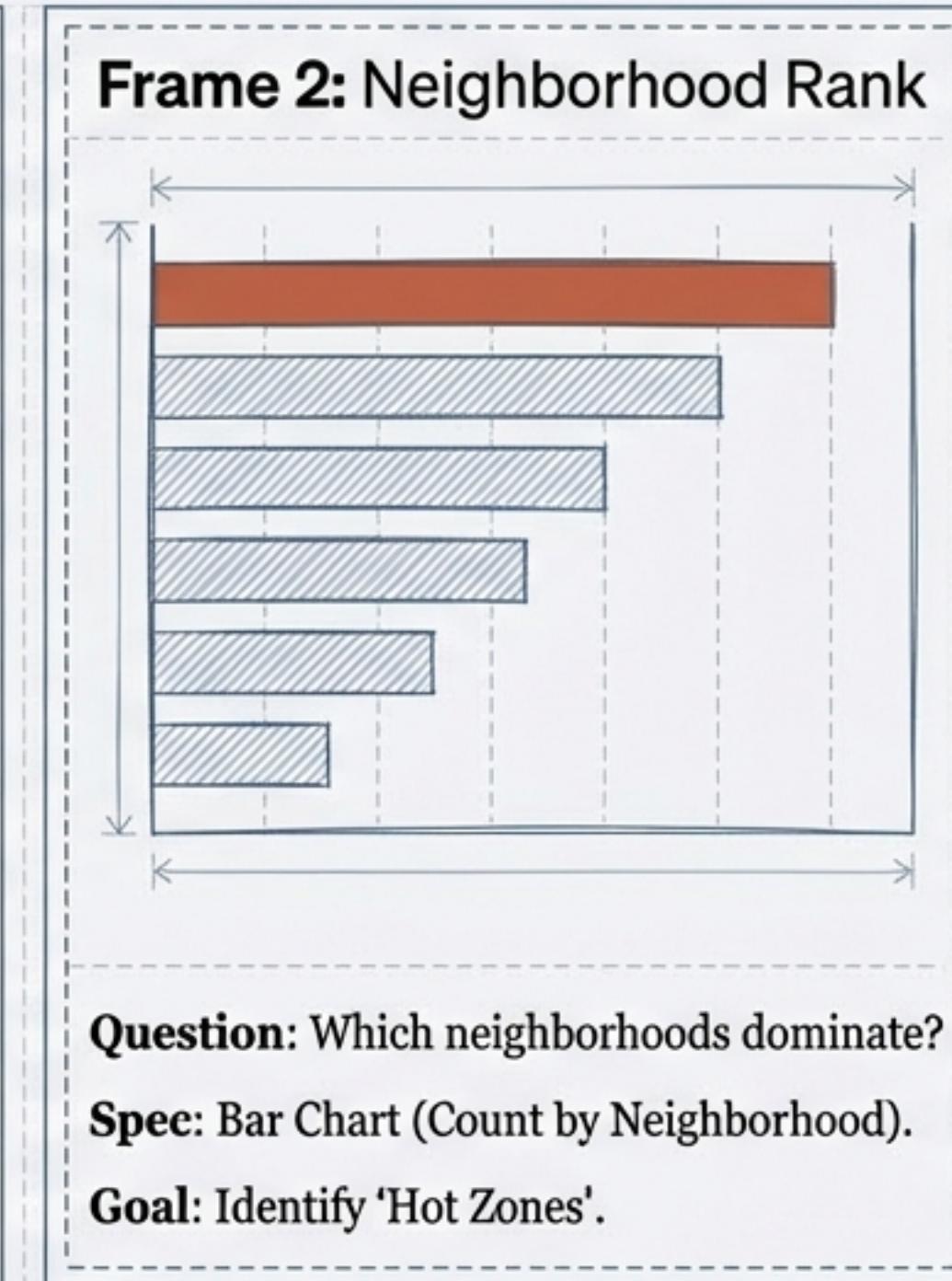
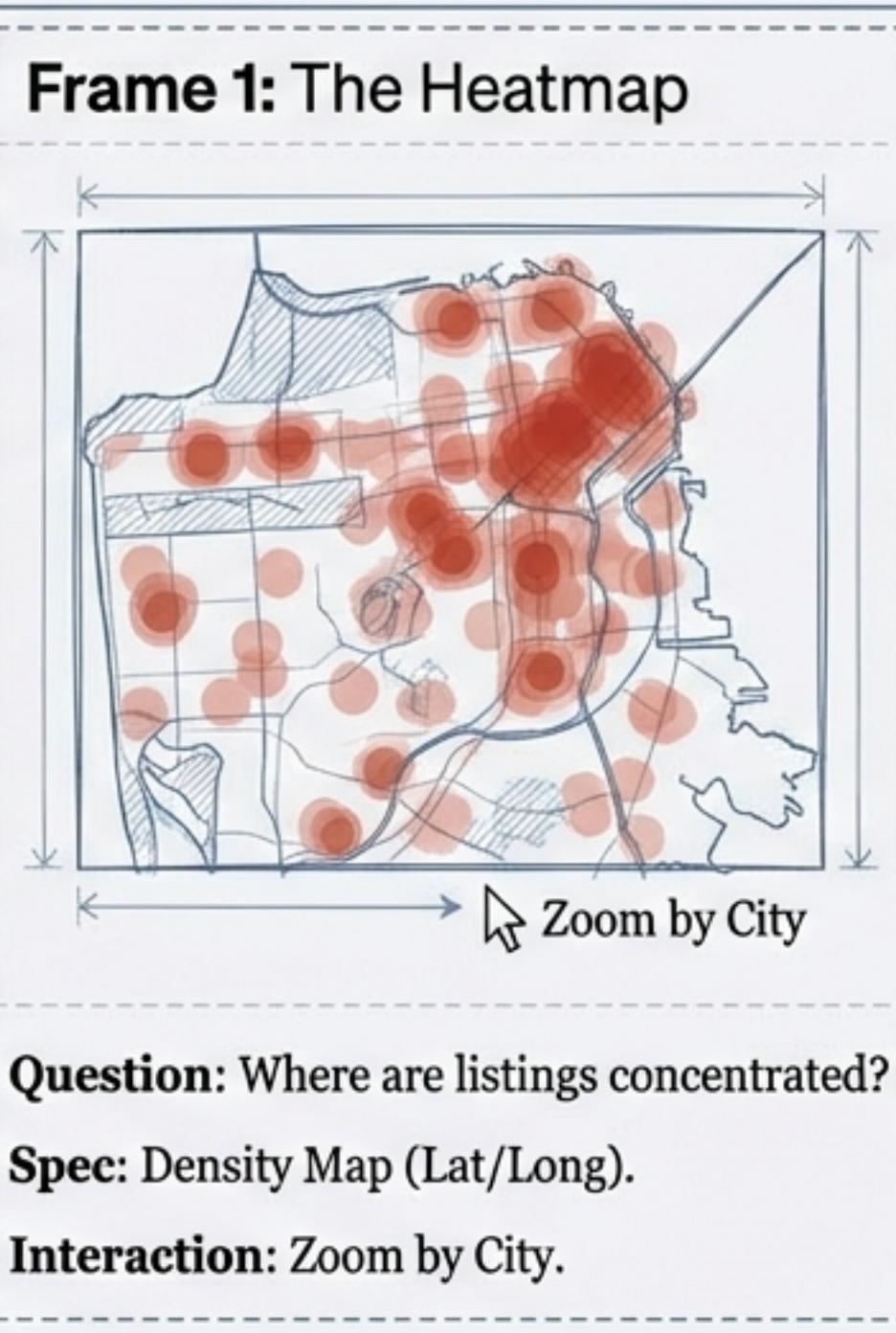


4. Granular Data Table

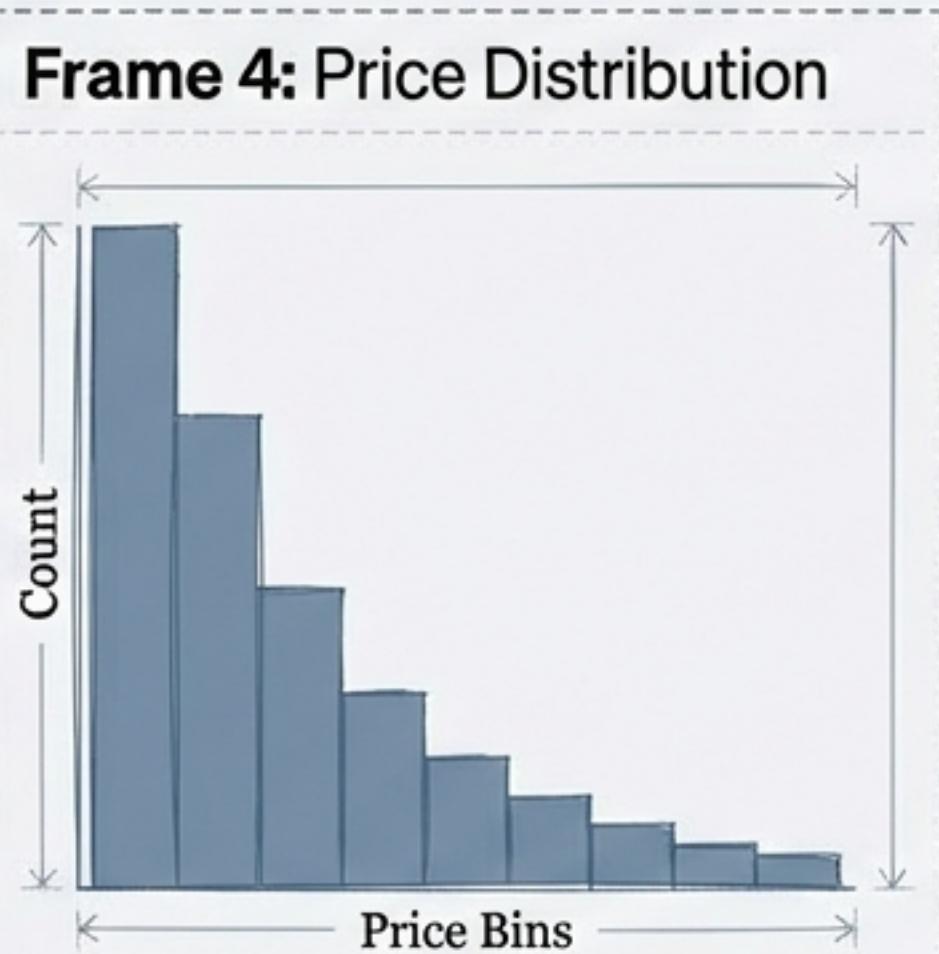
Header 1	Header 2	Header 3	Header 4
Data 1	Data 2	Data 3	Data 4
Data 5	Data 6	Data 7	Data 8
Data 9	Data 10	Data 11	Data 12
Data 13	Data 14	Data 15	Data 16
Data 17	Data 18	Data 19	Data 20

Storyboard Theme I: Geographic Landscape

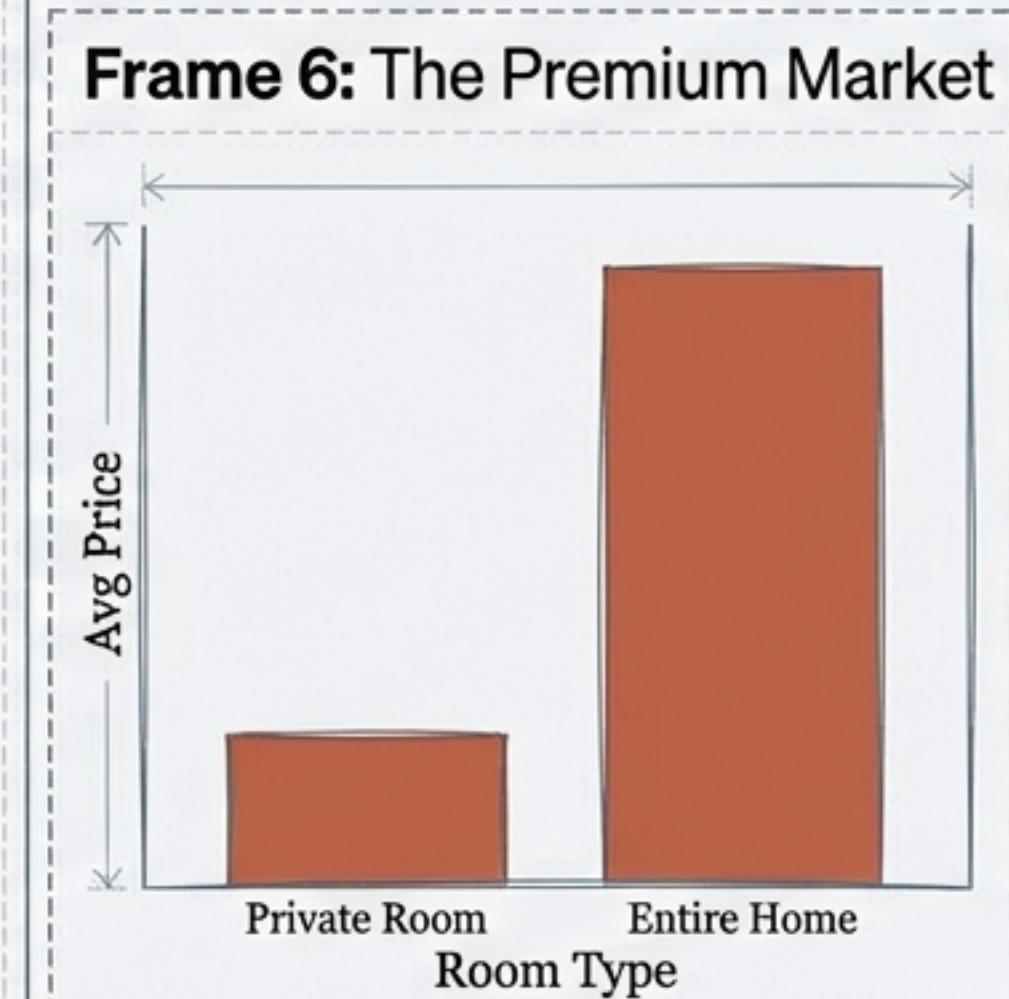
Visualizing the spatial distribution of listings, neighborhood dominance, and traveler activity.



Storyboard Theme II: Economics of Stay



Question: What is the standard cost?
Spec: Histogram (Price Bins) filtered by Room Type.



Question: Cost premium of privacy?
Spec: Avg Price by Room Type.

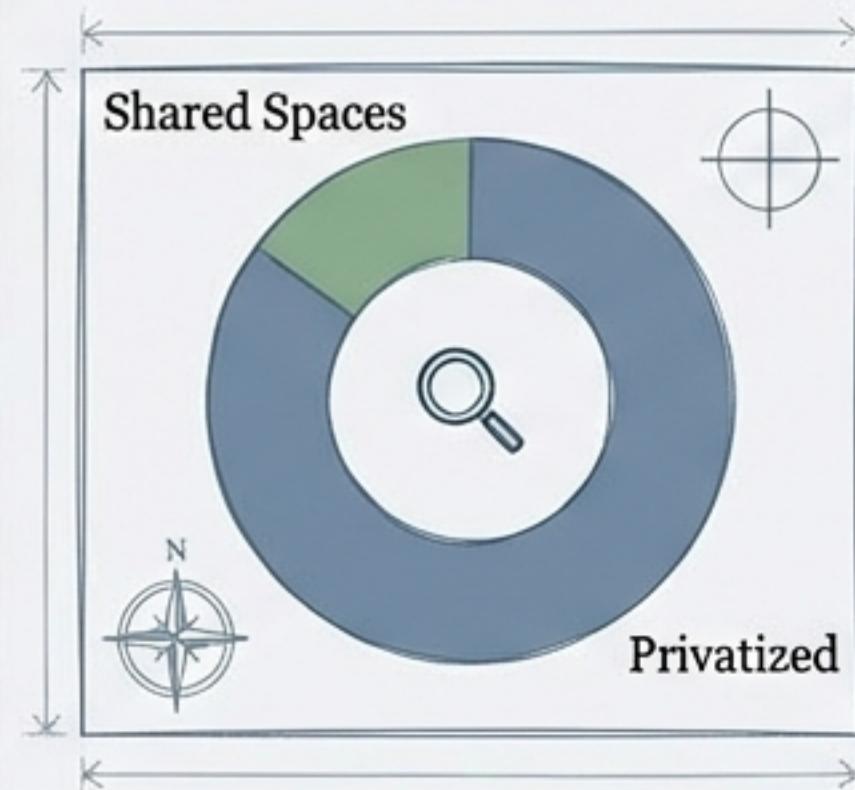


Question: Do cheaper listings get more reviews?
Spec: Scatter Plot (Price vs. Reviews).

Storyboard Theme III: Traveler Preferences

Analysing traveler booking habits, duration of stay, and recent engagement trends.

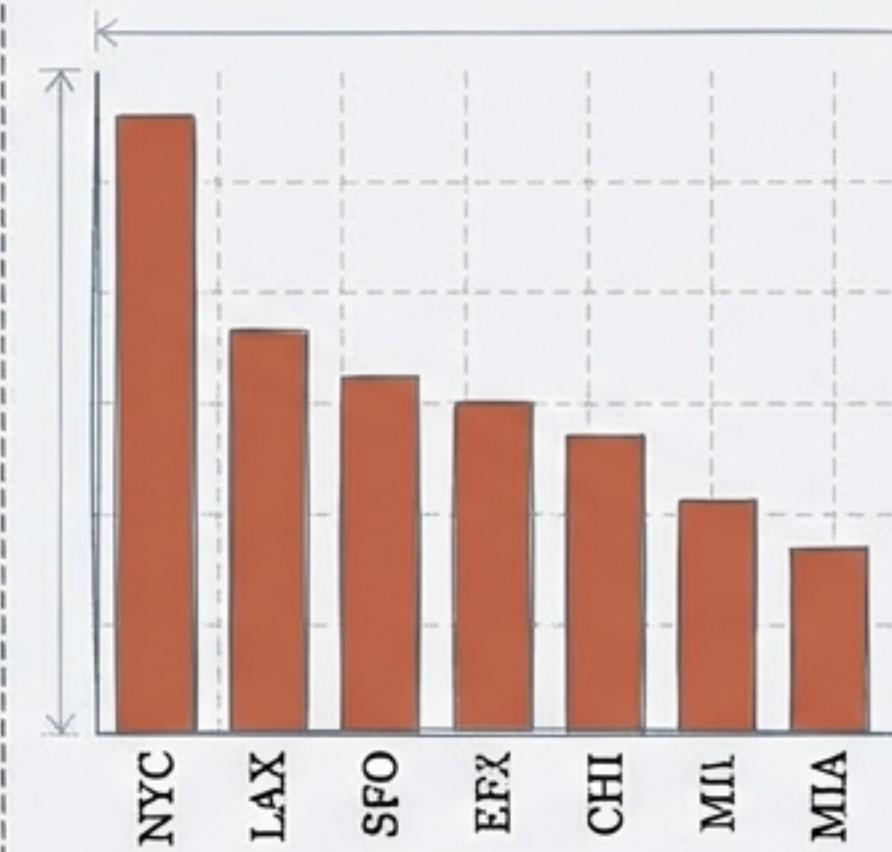
Frame 7: Room Type Share



Georgia: Privatized vs. Shared Spaces.

Interaction: Click slice to filter map.

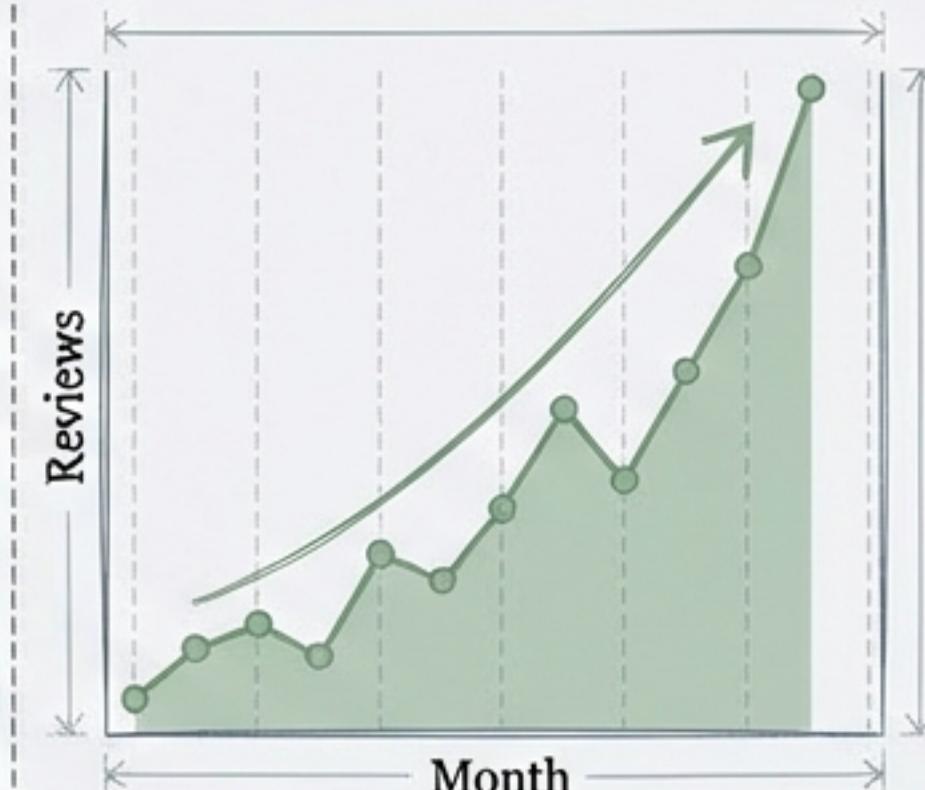
Frame 8: Stay Duration



Georgia: Avg Minimum Nights by City.

Implication: Distinguishes transit hubs from long-term stays.

Frame 9: Review Velocity



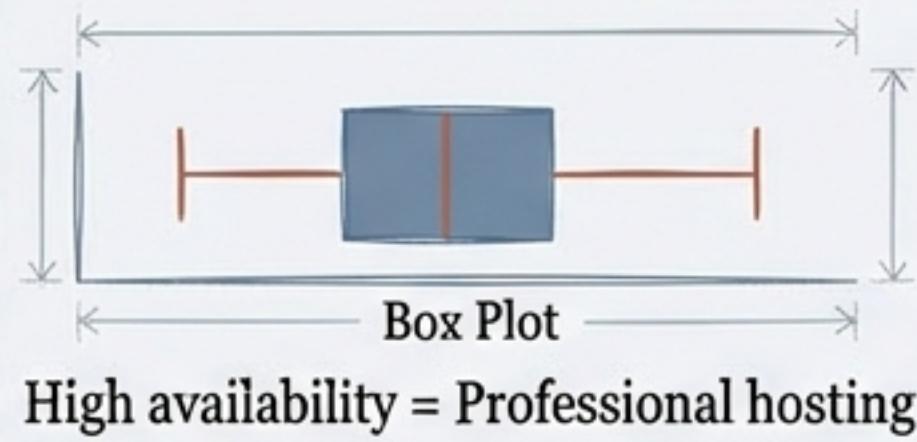
Georgia: Reviews per Month (Top 10).

Goal: Identifies currently trending properties.

Storyboard Theme IV: Housing vs. Tourism

Measuring Urban Impact and ‘Pseudo-Hotels’

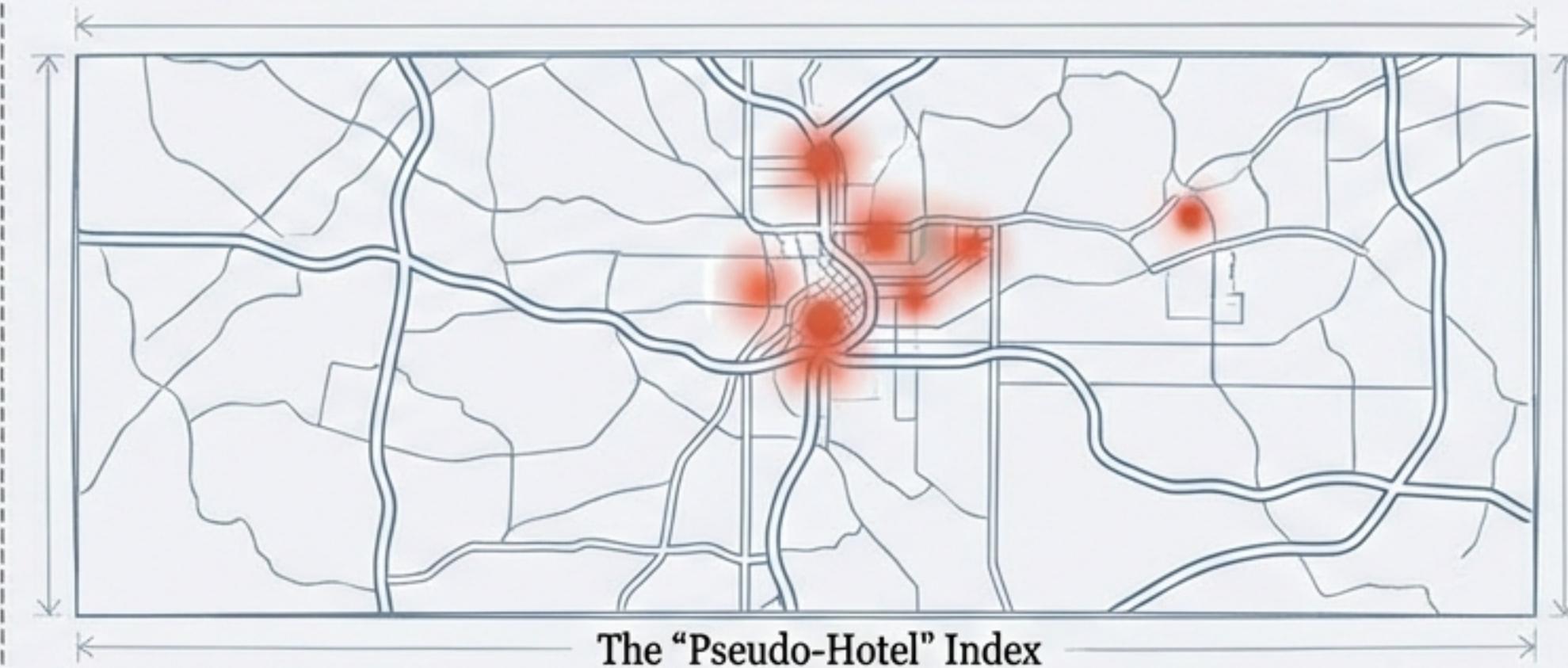
Frame 10: Availability Patterns



Frame 12: Relationship Matrix



Frame 11: The “Pseudo-Hotel” Index



Filter Logic: <30 min nights AND >200 availability.

Implication: These units are effectively removed from the residential housing market.

Technical Build Specification: The Core 5



1



Comparative Trend

Avg Price vs. Reviews by City

Purpose: Value spotting.

3



Geo-Spatial Context

Lat/Long Density

Purpose: Location analysis.

2

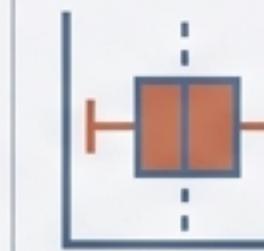


Geo-Spatial Context

Lat/Long Density

Purpose: Location analysis.

4

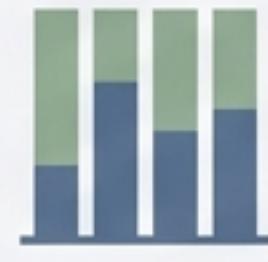


Occupancy Distribution

Availability_365 by Neighborhood

Purpose: Variance analysis.

3



Category Composition

Room Type trends

Purpose: Market composition.

5



Correlation Analysis

Price vs. Reviews

Purpose: Elasticity analysis.

Findings: The Economic Landscape



2-3X

Price Premium: “Entire Home/Apt” listings command 2-3x the price of private rooms, yet private rooms maintain higher review density in urban centers.

>40%

Supply Concentration: The Top 3 cities account for over 40% of total listings, confirming tourism clustering.

Geographic Variance: Coastal cities (NYC, LA) show highest price variance due to hyper-local demand. Inland cities are flatter.

Elasticity: Negative correlation between Price and Reviews. Super-luxury (>\$1000) is a low-volume niche.

Findings: The Human Factor



Tenure & Professionalization



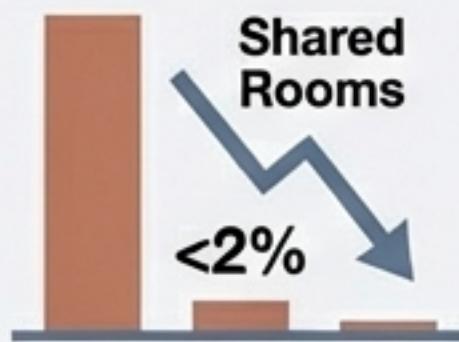
High availability (>300 days) correlates with Entire Homes. Casual “couch surfing” has been replaced by commercial hosting.

The “Hidden” Sublets



Listings with 30+ minimum nights bypass short-term laws, functioning as month-to-month leases.

Room Type Evolution



“Shared Rooms” are <2% of the market. The original “air mattress” economy is extinct.



The ‘Gem’ Index

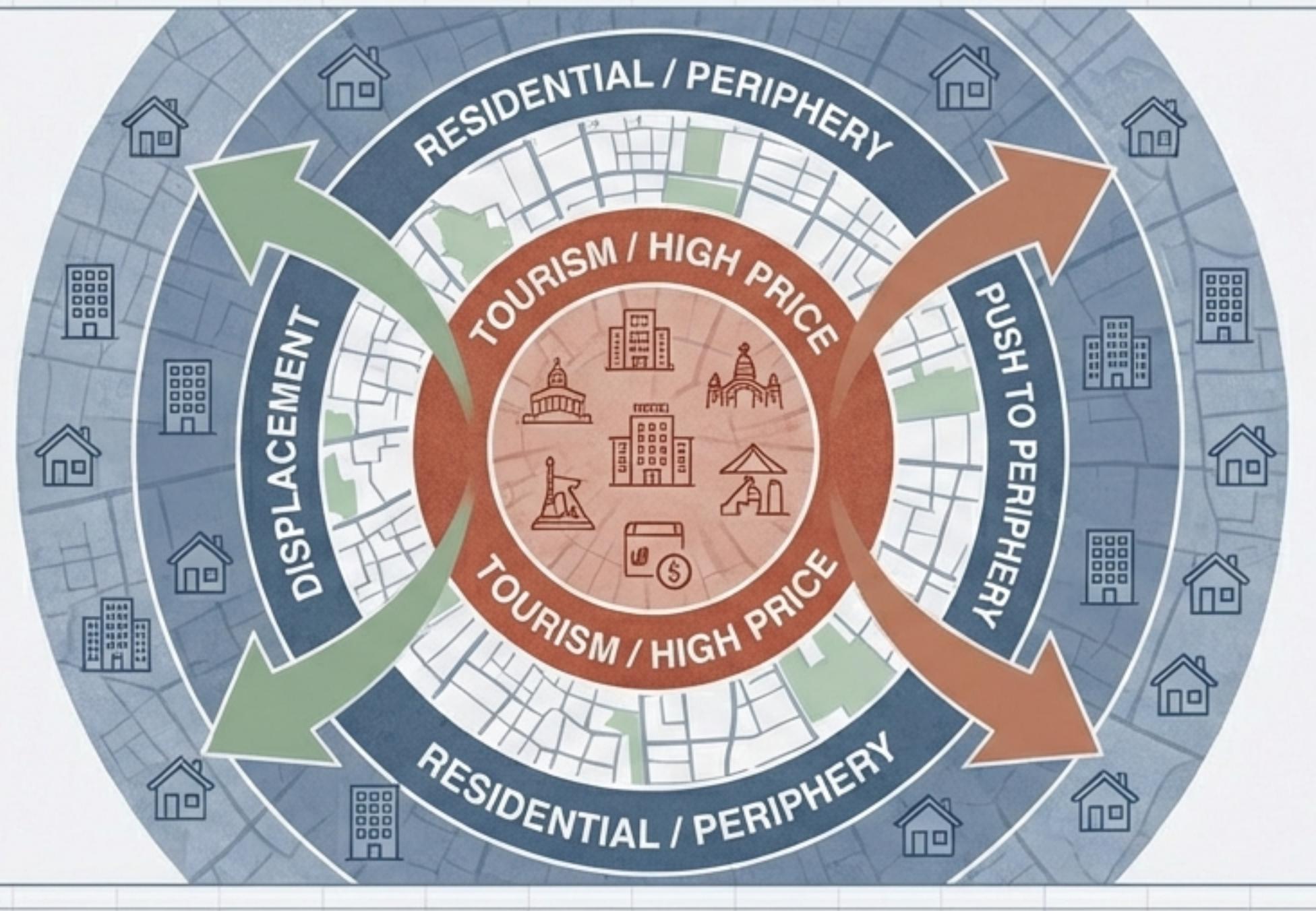
HIGH REVIEWS/MONTH + LOW AVAILABILITY = HIGH DESIRABILITY



Highly desirable units that are rarely vacant.



The Bigger Picture: Tourism vs. Community



Urban Dynamics:

High-priced short-term rentals cluster in city centers, pushing residents to the periphery.

Travel Behavior:

Dominance of Entire Homes confirms the shift to a decentralized hotel network.
Privacy > Interaction.

Housing Tension:

High availability + Short stays =
Housing stock reserved for tourists. Units that could serve residents are monetized for transient yield.

Ready for Deployment



NEXT STEPS & DEPLOYMENT CHECKLIST



Approve Data Cleaning Logic (Section B) [Pending]



Execute Tableau Dashboard Build (Section E) [Next]



Begin Stakeholder Review Cycle [Future]

Empowering UrbanVista with data-driven clarity.

Full Variable Dictionary and Tableau Public guidelines available in Appendix.