



BARCELONA



BARCELONA HOUSING AFFORDABILITY AND RISK ANALYSIS



FINAL DATA ANALYTICS
PROJECT



“Barcelona is Becoming Unlivable”

– Who Can Still Afford to Live Here?

- “Families pushed out to make room for tourists” – *El Periódico*, 2024
- “Barcelona’s ghost neighborhoods: Locals vanish, Airbnbs multiply” – *La Vanguardia*

“We had to leave our flat in Poble-sec after the rent went up by 40% in two years.”
– Maria, local resident



Project Objective

Can Short-Term Rentals Help
Explain Barcelona's
Affordability Crisis?



Main Question: How are short-term rentals affecting housing affordability in Barcelona?

Sub-Goals:



Affordability Trend

→ Is rent growing faster than income?



STR Distribution

→ Where are STRs most concentrated?



Causal Link

→ Are STR-heavy areas experiencing higher rents?



Vulnerability Check

→ Are vulnerable communities more exposed?

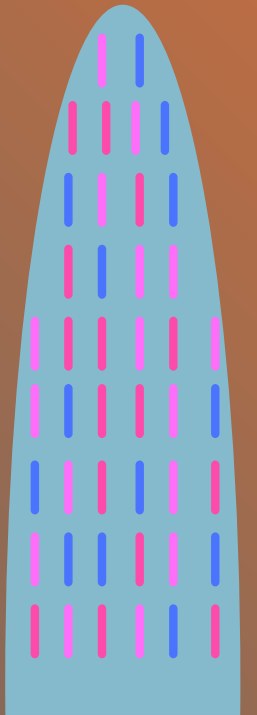


Housing Use & Tenure Shift

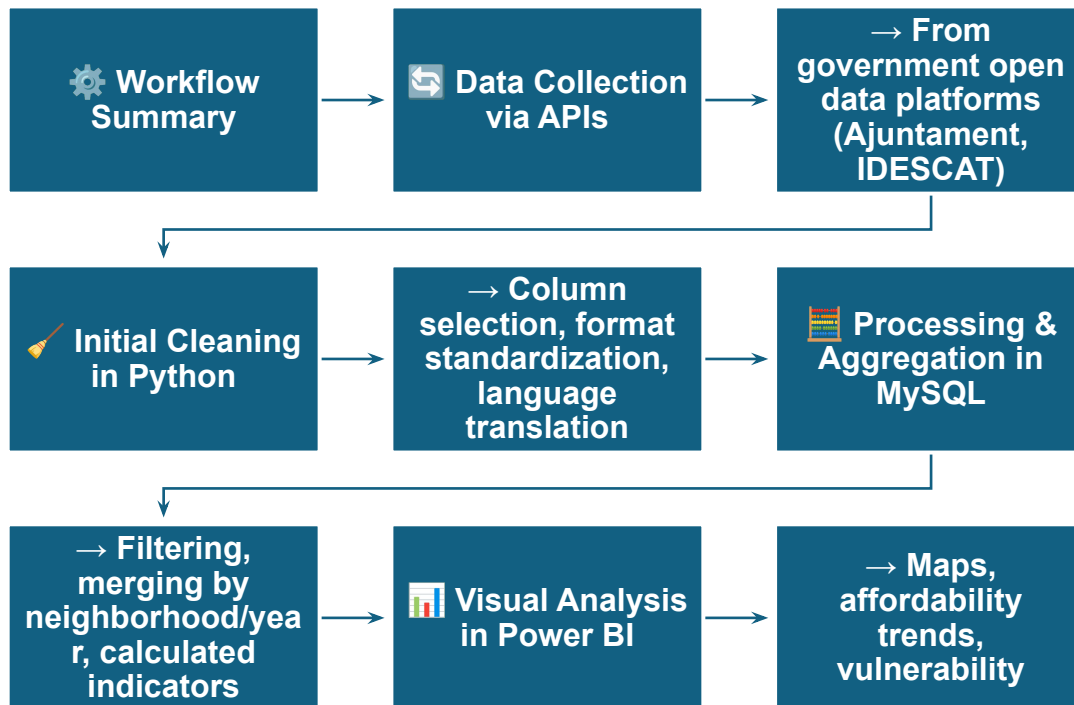
→ Is the city losing long-term residential housing to short-term and non-permanent use?

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Data Sources & Methodology

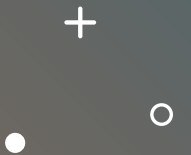
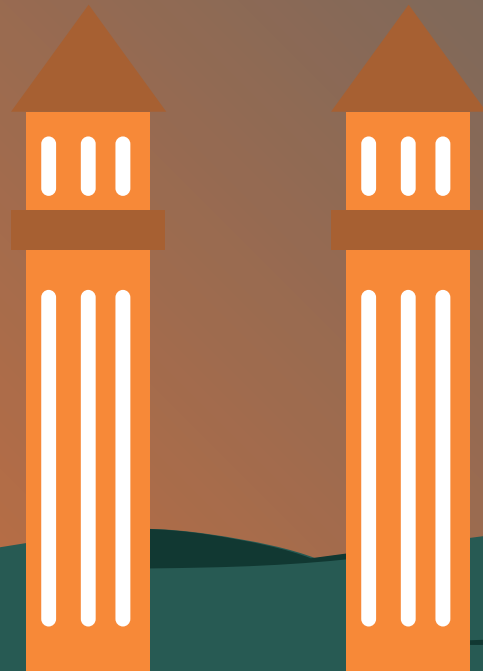


How We Turned the Problem into a Data Project



Dataset	Source	Years Used	Level
Airbnb Listings (STRs)	Inside Airbnb (March 2025)	2025	Neighborhood
Tourist Housing Establishments (STRs)	IDESCAT (Gencat Statistical Institute)	2015–2023	City Level
Rent Prices	Ajuntament de Barcelona	2014–2024	Neighborhood
Income Data	Ajuntament de Barcelona	2015–2021	Neighborhood
Unemployment Rate	Ajuntament de Barcelona	2011–2021	Neighborhood
Tenure Regime (Ownership vs Rent)	Ajuntament de Barcelona Census	1981–2021	Neighborhood
Housing Stock	Ajuntament de Barcelona Census	2001–2021	Neighborhood
Population Data	Ajuntament de Barcelona	1997–2024	Neighborhood

- + - Chapter-by-Chapter Analysis



Is Barcelona Really Facing an Affordability Crisis?

- *When Rent Outpaces Income: A City Becoming Less Livable*

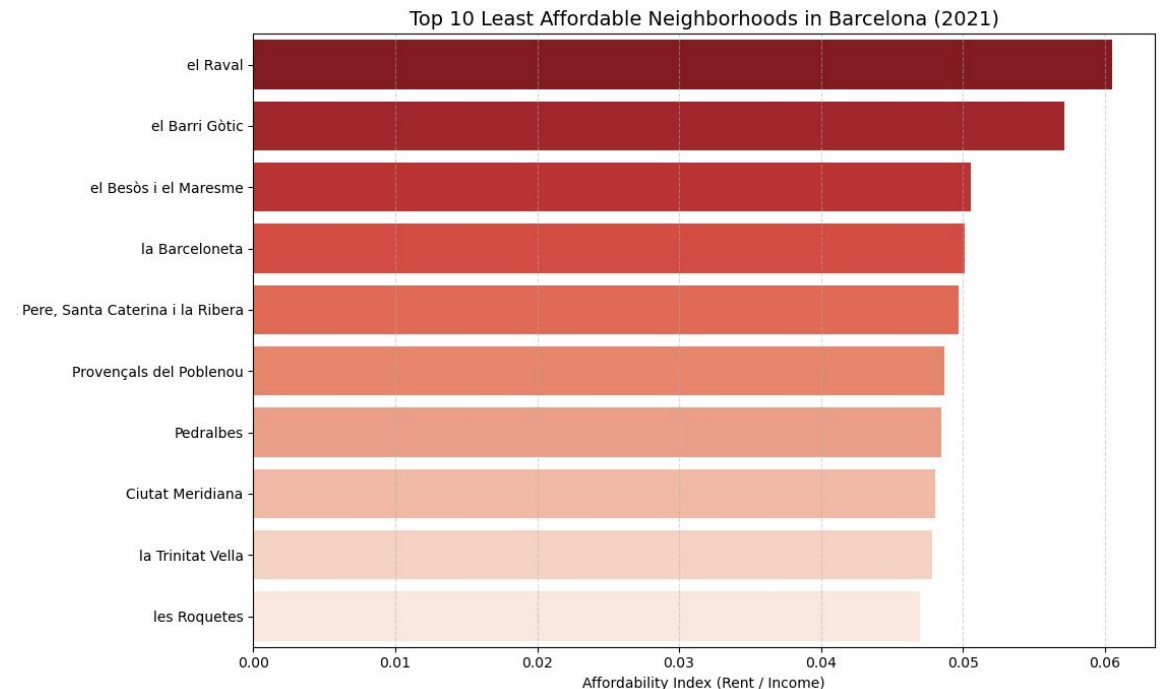
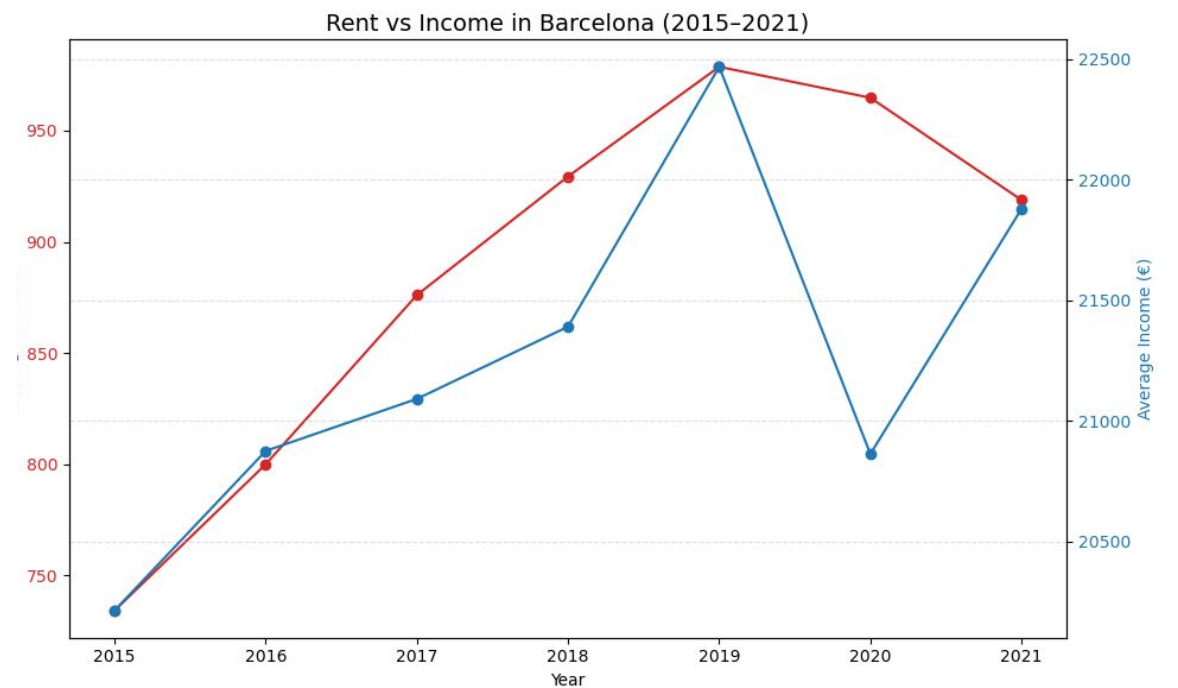
Chart 1 - Rent vs Income (2015–2021)

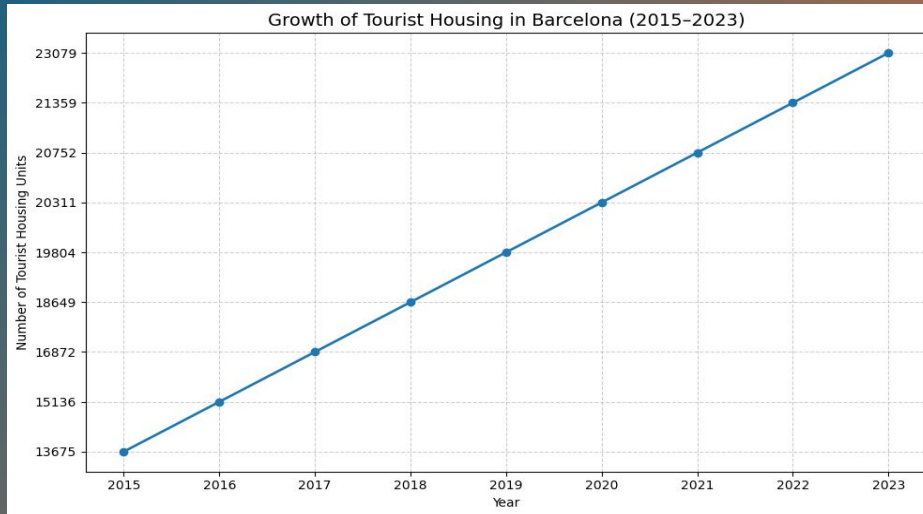
- Rent increased nearly every year, while income dropped in 2020 and recovered slowly.

Chart 2 - Top 10 Least Affordable Neighborhoods (2021)

- El Raval, Gòtic, and Barceloneta are the most unaffordable, all with high STR saturation.

□ Affordability is not just a citywide issue — it's a neighborhood-level crisis.





Where and How Have Short-Term Rentals Grown Over Time?

- *From Empty Homes to Tourist Havens: The Rise of STRs in Barcelona*

Chart 1 - STR Growth in Barcelona (2015–2023)

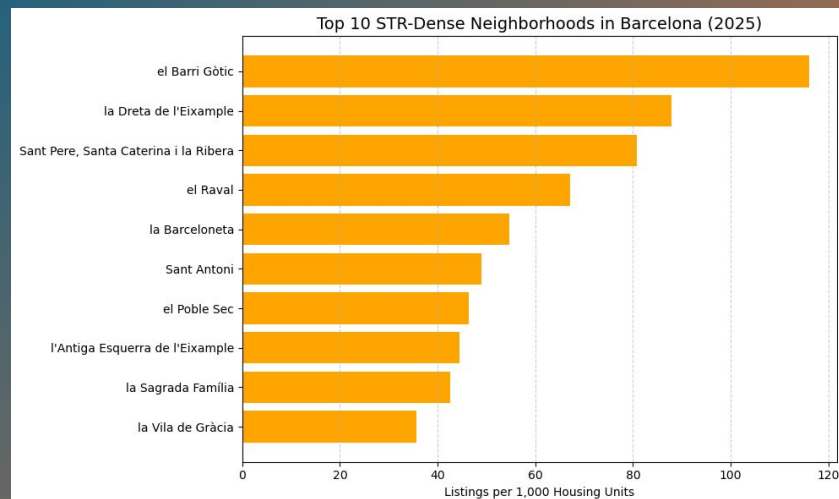
Official tourist housing units (IDESCAT)

STRs increased from ~13,600 to over 23,000 in 8 years — a 70% rise.

Chart 2 - Top 10 STR-Dense Neighborhoods (2025)

Listings per 1,000 housing units (Inside Airbnb, March 2025)

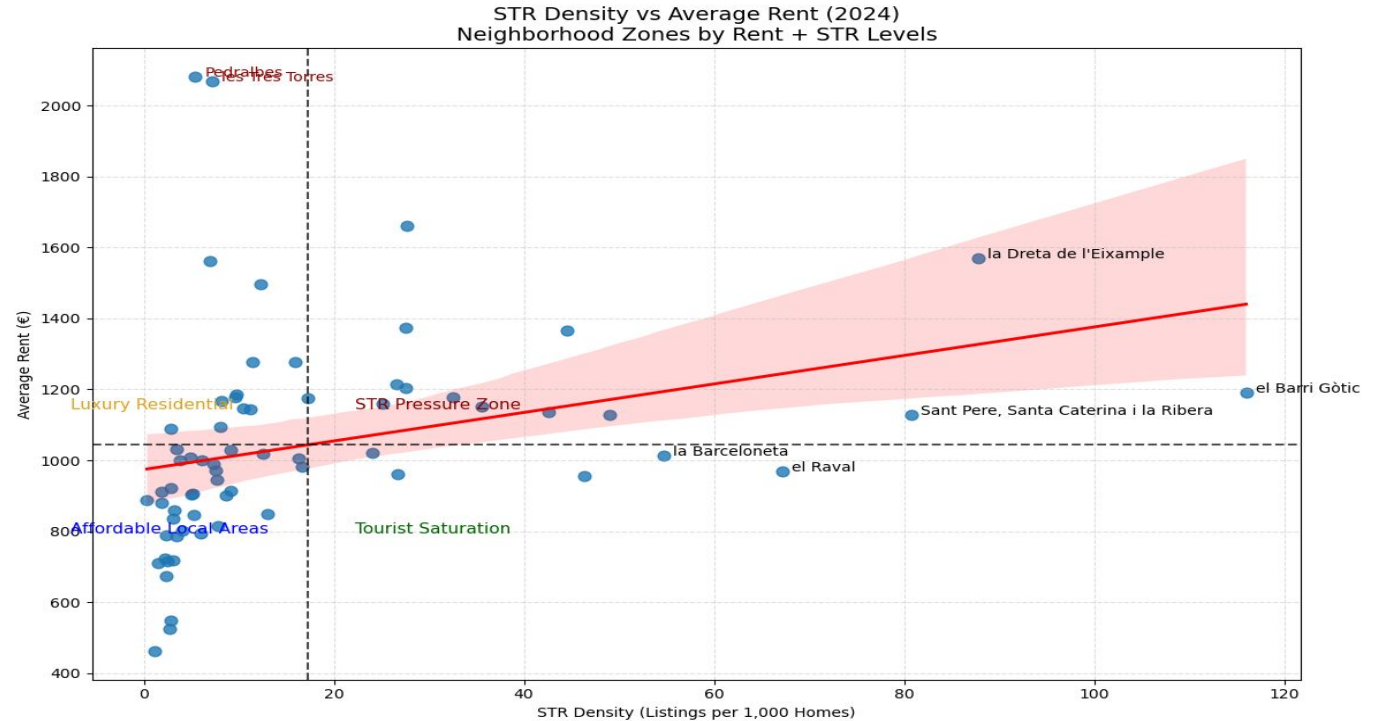
Highest concentrations are in Gòtic, Eixample, and El Raval — all tourist hubs with known affordability stress.



This leads us to the next logical question:
 👉 *Are these STR-heavy areas also seeing higher rents or faster rent increases?*

Do STRs Cause Higher Rents?

– *STR Saturation vs Rent Prices – A Pattern Emerges*



STR Density vs Average Rent (2024)

Each dot = a neighborhood

X-axis = STR Listings per 1,000 Homes

Y-axis = Average Rent (€)

Trendline + colored zones (pressure, luxury, affordable)

High STR presence is generally associated with higher rent — especially in central areas like Gòtic and Eixample.

This doesn't prove direct causality — but the correlation is strong and it aligns with patterns we've already seen in affordability and STR distribution.

Which Neighborhoods Are Most Vulnerable?

- Not All Vulnerable Areas Face STRs —
But Some Are Hit Hard

Top 10 Vulnerable Neighborhoods by STR Density

Based on listings per 1,000 residents

Vulnerability = low income + high unemployment (2021)

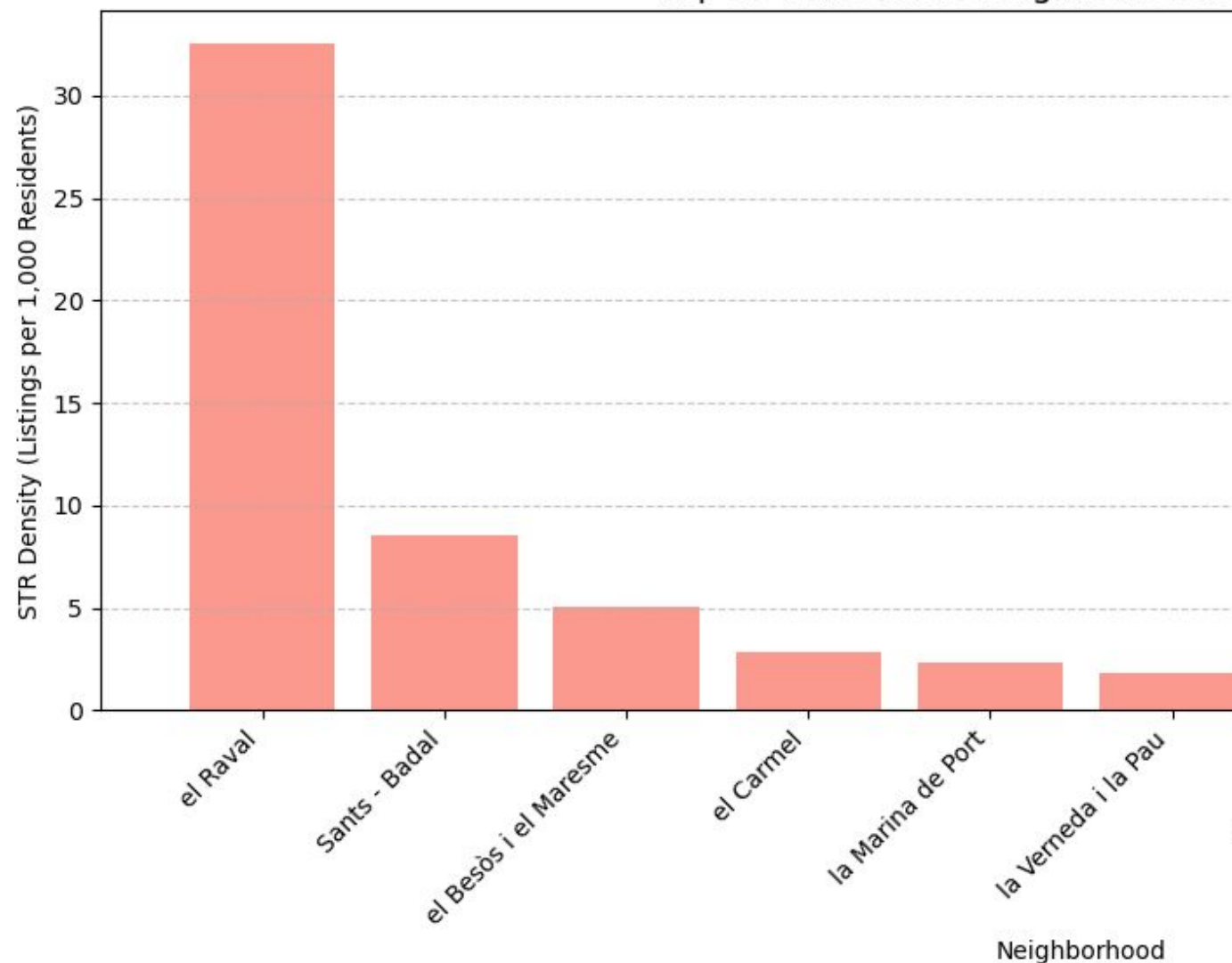
Key Insights:

El Raval stands out as both **highly vulnerable** and **heavily saturated** by STRs.

Other top vulnerable areas — like **el Besòs i el Maresme**, **el Carmel**, **la Marina de Port**, and **Sant Andreu** — have much lower STR density.

⚠️ **El Raval is an outlier** — and a **clear example** of unequal STR impact on vulnerable communities.

Top 10 Vulnerable Neighborhoods



What About Housing Use and Tenure?

-Barcelona's Housing Is Shifting — And It's Not Toward Locals

Share of Main Homes by Tenure Regime (1981–2021)

Ownership has dropped since 2001
Rental tenure is rising again, and “Other” (e.g. STRs, second homes) is growing

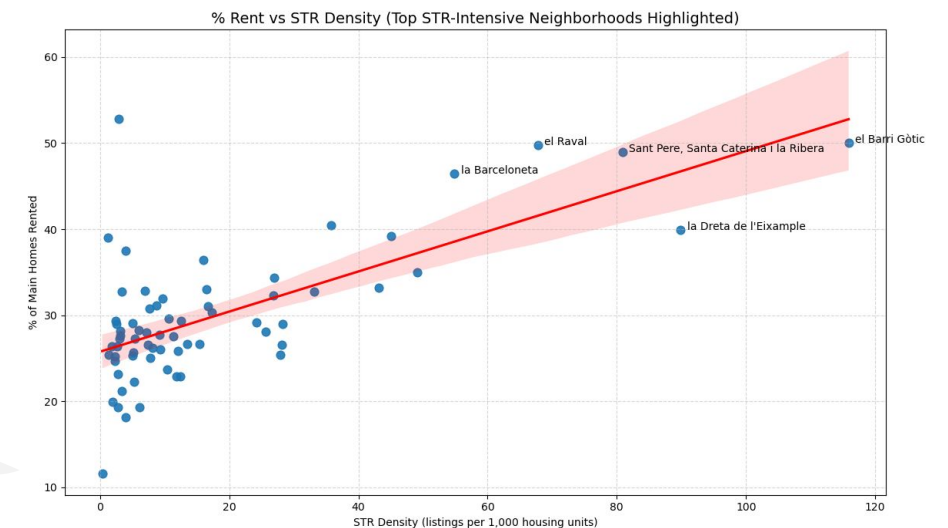
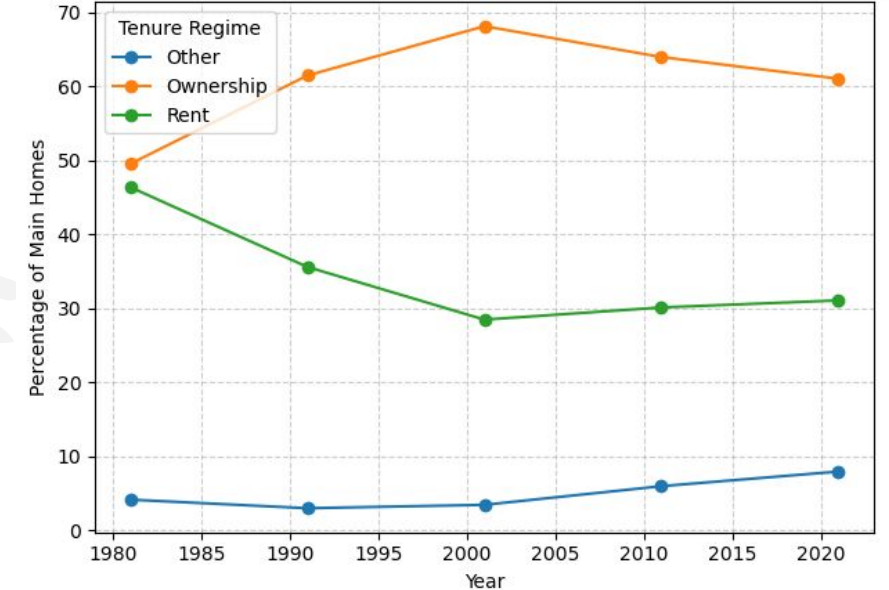
Ownership peaked in 2001. Since then, rental housing and non-residential uses have taken up a larger share.

% Rent vs STR Density by Neighborhood (2024)

Positive correlation: neighborhoods with more STRs also have more renters

Neighborhoods like Gòtic, El Raval, and Barceloneta have high STR density and high rental shares — a sign of residential instability.

Share of Main Homes by Tenure Regime (Barcelona, 1981–2021)



Summary & Risk Zones

*-Where Housing Pressure Is Highest —
and Most Unequal*

*High-Risk Neighborhoods: STR, Unaffordability,
Vulnerability*

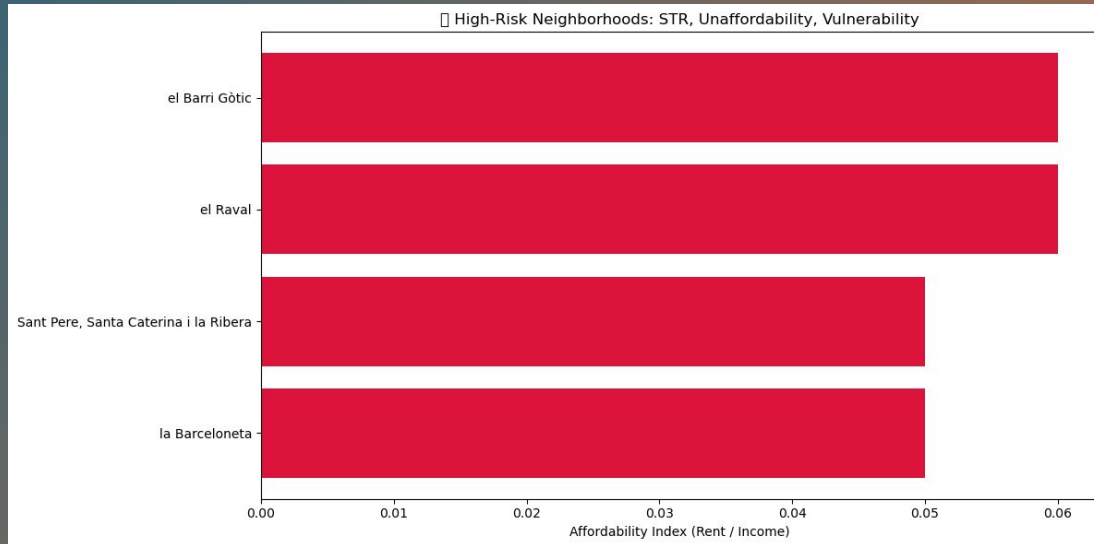
Based on Affordability Index (Rent / Income), filtered
by areas with high STR presence and/or low-income
profile

Most At-Risk Areas:

- **El Raval** and **Gòtic** – Highest unaffordability, STR saturation, and central location

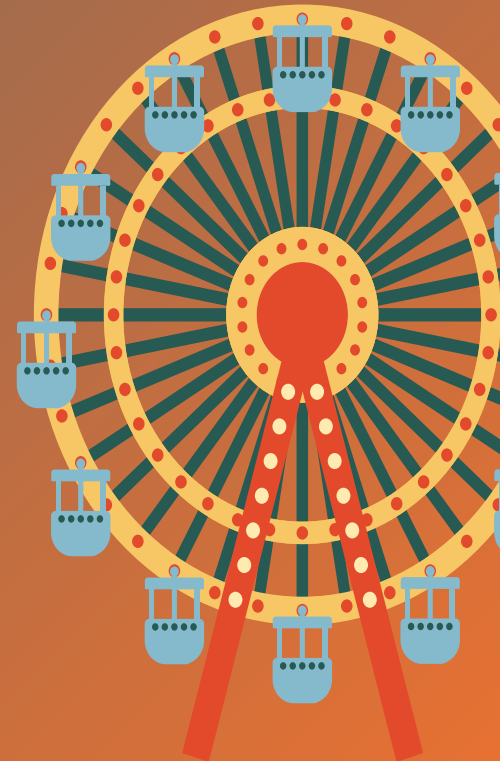
- **Barceloneta** and **Sant Pere i Santa Caterina** – Tourist exposure + economic pressure

These zones face the strongest and most layered housing stress.



Conclusion & Recommendations

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Conclusion & Recommendation



📈 Rents in Barcelona have outpaced income, especially in the city center.

🏠 STRs are concentrated in just a few neighborhoods, often those already facing housing stress.

🧠 Vulnerable communities, like in El Raval, are not only affected, they're disproportionately hit.

🏠 Ownership is declining, rental tenure is rising, and the share of primary residences is shrinking, signs of a city becoming less livable for locals.

💡 Recommendation:

Targeted STR regulations are needed — especially in neighborhoods where STRs overlap with vulnerability.



THANK YOU FOR YOUR ATTENTION !

ACABEM AMB EL NEGOCI DE L'HABITATGE

By Tolga UNAL