SHORT-TERM RENTALS: AN ANALYSIS OF METROPOLITAN PUBLIC RESPONSES

NOTE n°128

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BARCELONA, BERLIN, NEW YORK, PARIS

In the mid 1990s, the supply of short term rentals (STR) began to increase in large cities. Throughout the years, these rentals grew more and more popular due to their affordability and convenience: they met growing demand from both from tourists and professionals for more flexible and spacious accommodations at the heart of major urban areas. In the last decade, their development has been hastened by the emergence of internet platforms. These websites facilitate the matching of the local STR supply with national and international demand on a whole new level, unlike ever before.

But while STRs are meeting new types of demand from travelers and diversifying the accommodation supply, they are also creating unwelcome competition for the hotel industry. The conversion of residential units has also arguably affected cities' housing stocks, reducing options for locals and driving scarcity when units are used for STRs throughout the year. In such cases, the upswing of STRs heightens tensions on the housing market and can contribute to the increase of real estate prices and rents.

The development of the STR market thus provokes several concerns and embodies a new public policy problem due to its impact on the real estate and tourist market, as well as its impact on local residents' everyday lives (price increases, reduction of the available stock of primary residences, quality of life disturbances, etc.).

The nature, intensity, and the perception of the modern STR market varies from one local context to another. It is therefore essential to understand how, beyond the Parisian context, other large cities have organized their means of intervention for answering these urban and social problematics. The cases of Barcelona, Berlin, New York and Paris are thus presented in a comparative approach. The insertion of STRs into the real estate and tourist contexts of each city is described first. Then, the regulations elaborated by each city and their implementation are compared.

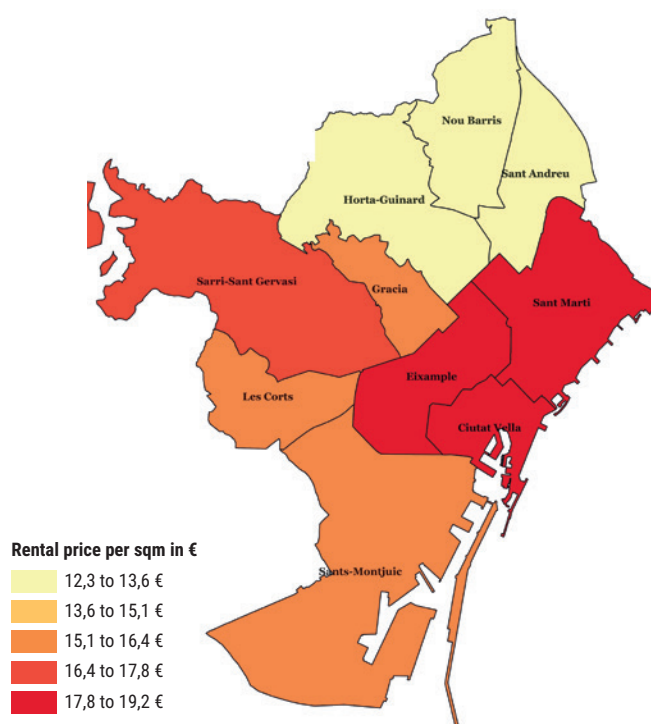# Socio-demographic trends, housing market and tourism

Barcelona context

Barcelona is home to 1,620,000 inhabitants extended over 102 square kilometers, making it one of the most densely populated cities in Europe. Cataluña's capital acquired a huge international visibility by hosting the Olympic Games in 1992, and by organizing the Universal Forum of Culture in 2004. In 2017, 9 million tourists visited the city.

There is a strong homeownership culture in Barcelona, with sixty percent of primary residences owned and very little social housing. Sales prices have increased since 2014 due to the city's economic recovery and a burst in touristic activities, attracting investors. Between 2014 and 2018, sales prices have increased by 41%. Meanwhile average rents rose by 18% in 2016. Barcelona and Spain in general suffered a great deal after the 2008 crisis and

many people struggled to afford living in their homes due to their high level of debt. Thus, the short-term rental of properties appeared as a good way to earn additional revenues while increasing housing costs have played a role in the persistence of this activity.
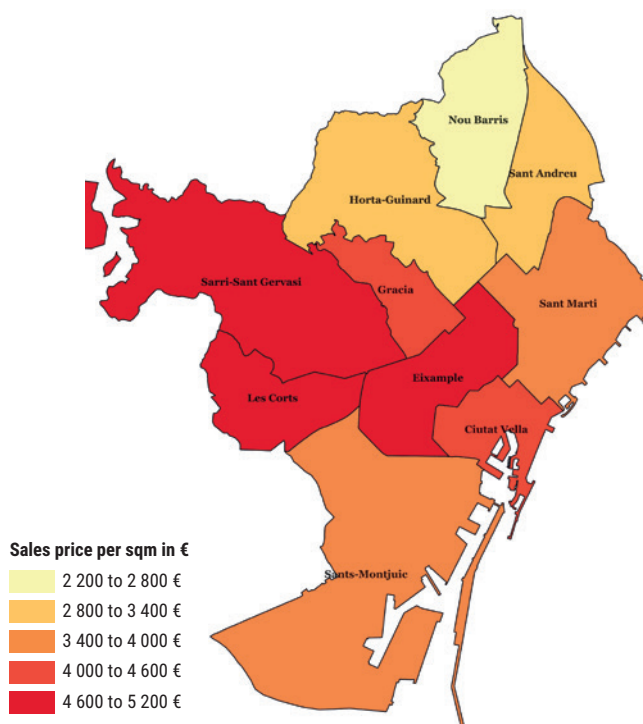
Barcelona is characterized by a strong economic dependence on the touristic sector, which generates 15% of the city GDP while disturbing the residents' daily life. Some neighborhoods such as Ciutat Vella, Gracia or Eixample suffered a population loss while, in the particular case of Ciutat Vella, touristic accommodations have outnumbered the residences.

HOME AVERAGE RENT PRICE

Rental price per sqm in €
- 12,3 to 13,6 €
- 13,6 to 15,1 €
- 15,1 to 16,4 €
- 16,4 to 17,8 €
- 17,8 to 19,2 €

Source : Idealista (2018)

HOME AVERAGE SALES PRICE

Sales price per sqm in €
- 2 200 to 2 800 €
- 2 800 to 3 400 €
- 3 400 to 4 000 €
- 4 000 to 4 600 €
- 4 600 to 5 200 €
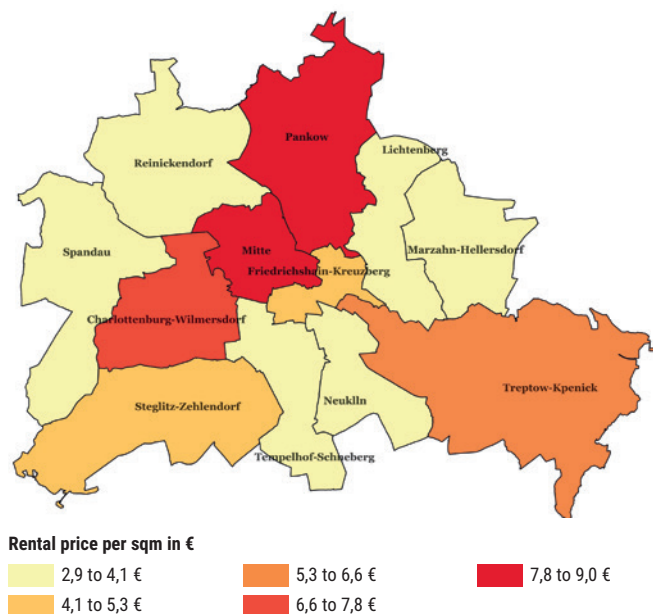
Source : Idealista (2018)

Berlin context

As both the capital city of the German federal State and one of its federated states, Berlin gathers nearly 3.7 million inhabitants across 892 km². Throughout the last ten years, the city-state has become increasingly attractive for workers, young people, and tourists. Overnight stays by visitors has grown 50% since 2009, and a hotel occupancy rate close to 60% indicates that Berlin has become a major tourist destination in Europe. The upswing of tourism in the city makes it a favorable location for tourist apartments, especially in residential neighborhoods experiencing gentrification.
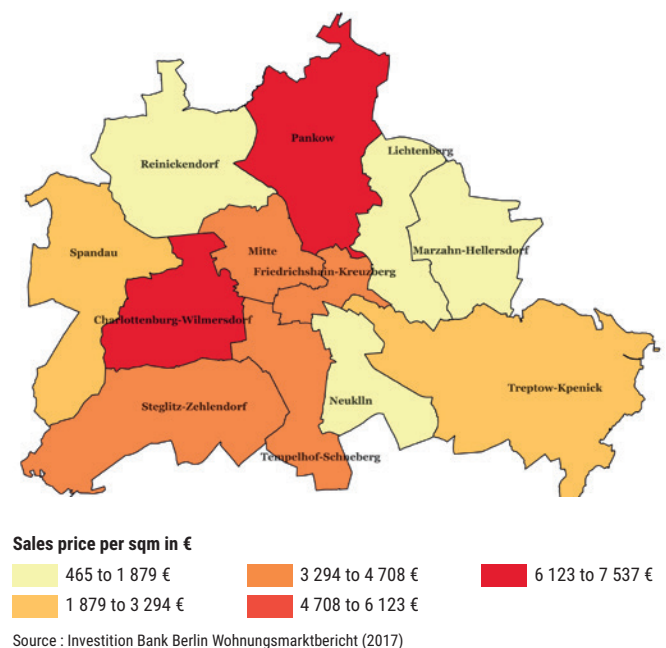
In the 1990's, the contrast between the slow demographic growth of Berlin and its proactive building policy resulted in an oversupply of housing; but since 2009, the real estate market has been subject to growing pressure. This pressure manifested in a fast increase of the price per m² for housing. Between 2010 and 2016, the median rent has thus increased by 80% while the net income per household only grew by 22%.

With 85% of the primary residences comprised of rental units, the German capital remains more affordable than most European metropolises, and is therefore a first-choice location for real estate investors. In this context, renting out properties as STRs can not only enable residents to compensate for the hike in their housing expenditures, but can also be a strategy for real estate investors wishing to accelerate their returns on investments. The recent spikes in rent have made the central districts inaccessible to households with modest incomes, a trend that political actors try to curb by fostering new construction and dedicating more space to affordable housing.
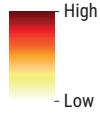
HOME MEDIAN RENT PRICE

Rental price per sqm in €

2,9 to 4,1 €	5,3 to 6,6 €	7,8 to 9,0 €
4,1 to 5,3 €	6,6 to 7,8 €	

Source : Investition Bank Berlin Wohnungsmarktbericht (2017)

HOME MEDIAN SALES PRICE

Sales price per sqm in €

465 to 1 879 €	3 294 to 4 708 €	6 123 to 7 537 €
1 879 to 3 294 €	4 708 to 6 123 €	

Source : Investition Bank Berlin Wohnungsmarktbericht (2017)

DENSITY OF LISTINGS OFFERED ON THE AIRBNB WEBSITE

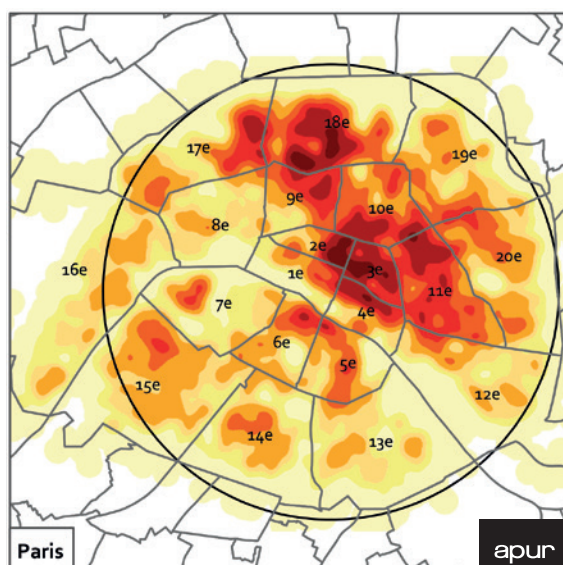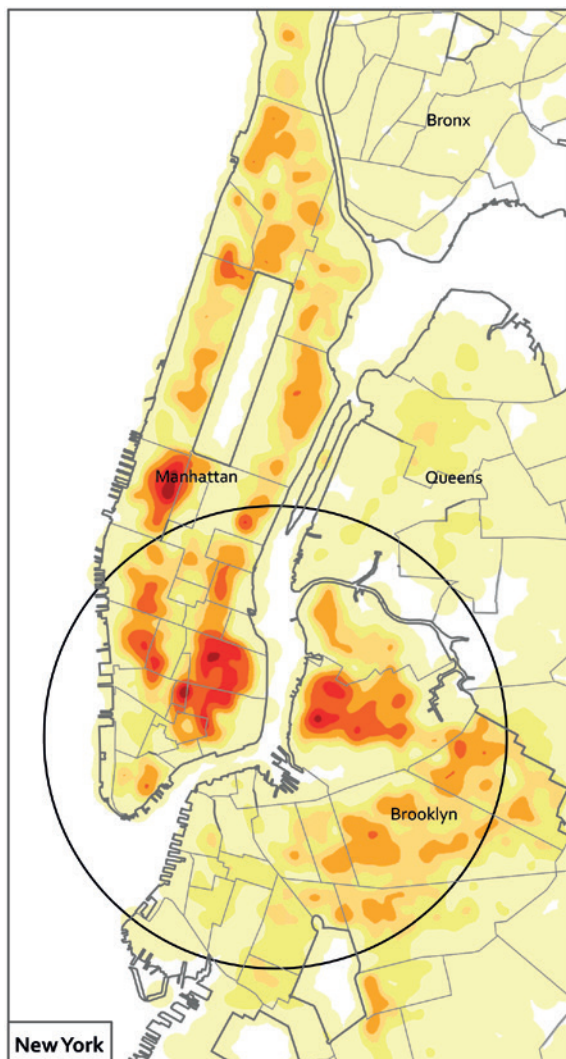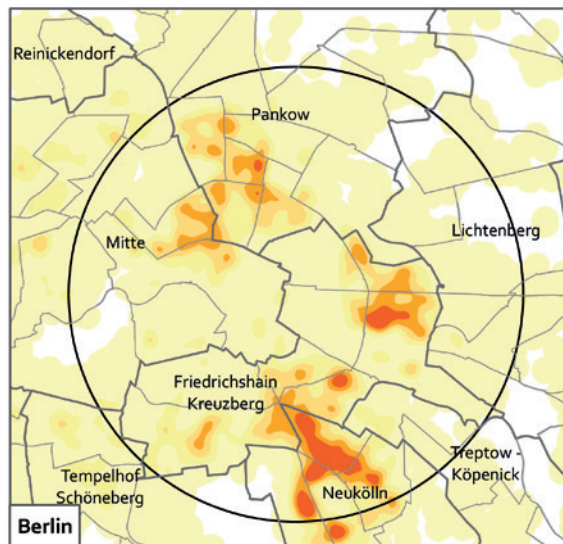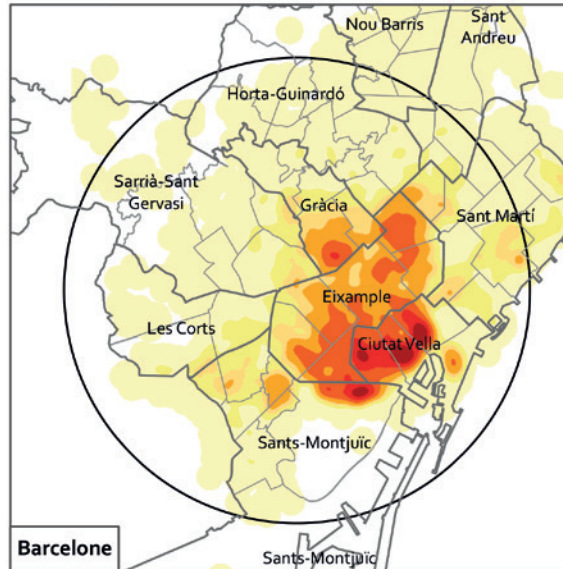|	New York	Berlin	Barcelona	Paris
Number of listings	48 851	20 575	18 529	59 944

Density of listings

High

- Low

—— Radius 5 km

Sources: Data Inside Airbnb: march 2018 (New York, Paris),
february 2018 (Barcelone), may 2017 (Berlin)

As the display of New York's, Berlin's, Barcelona's and Paris' city
boundaries shows us, the four cities cover areas of very different
sizes, and are thus unequally affected by the development
of Airbnb activity. Paris is the city with the most listings
(approximately 60 000 on 105 km²), followed by a much vaster New
York City (50 000 listings on 780 km²). Berlin and Barcelona have
a more limited number of listings (approximately 20 000), with two
different geographical patterns, concentrated in Barcelona and
spread out in Berlin.

Barcelone
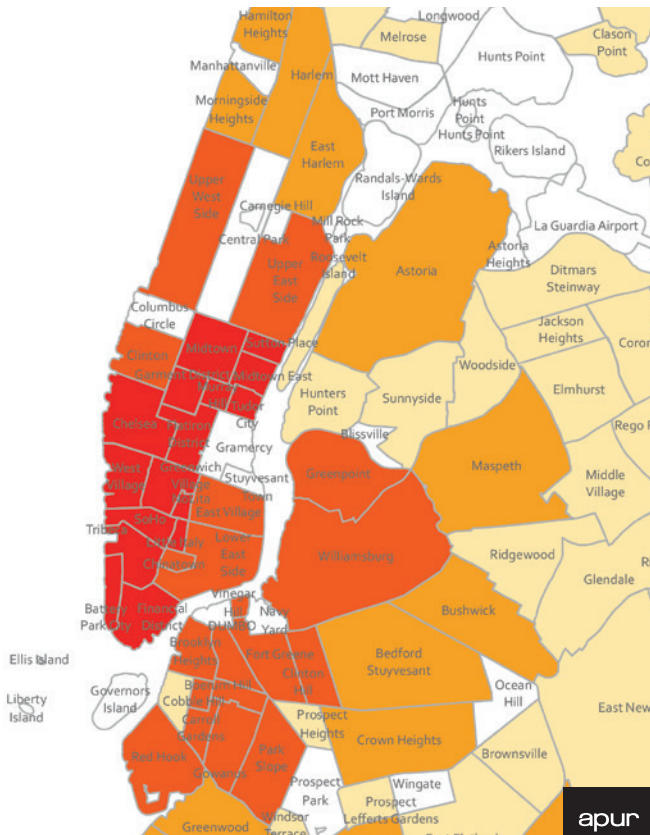

Berlin

New York

Paris

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New York context

New York City is the financial capital of the United States. It has over 8.6 million inhabitants spread out over 784 square kilometers. Two-thirds of New Yorkers rent their homes, and over half spend more than 30% of their income on rent. With an average rent increase between 35 and 80% in low-income neighborhoods over the last 15 years, poor families are facing increasing struggles to keep or find affordable housing. The gentrification occurring in these neighborhoods has become a major political issue.

A perennial destination for both business and leisure travelers, the city received 36 million visitors in 2016. Income from tourism in New York is estimated at 20.2B€ and generates an additional 11B€ in tourist and sales

taxes. The traditional hotel industry is characterized by its comparatively expensive prices, but also by its very high occupancy rates (86% in 2016).

Therefore New York City's short-term rental market can be viewed through two overlapping lenses: a perpetual housing crisis, where high demand and insufficient supply leads to the constant increase of prices; and a shift in the lodging industry ecosystem, which is seeing a diminishing of the hotel industry's monopoly thanks to the increase of short term rentals.

HOME MEDIAN RENT PRICE

Rental price per sqm in €

	11 to 21 €		32 to 42 €
	21 to 32 €		42 to 53 €

Source : Zumper (2017)

HOME MEDIAN SALES PRICE

Sales price per sqm in €

	1 300 to 4 600 €		9 000 to 13 700 €		18 000 to 26 700 €
	4 600 to 9 000 €		13 700 to 18 000 €		

Source : Trulia (2017)

Paris context

With 2 200 000 inhabitants in 2016 and an area of 105 square kilometers, Paris is the most populated French city, as well as the de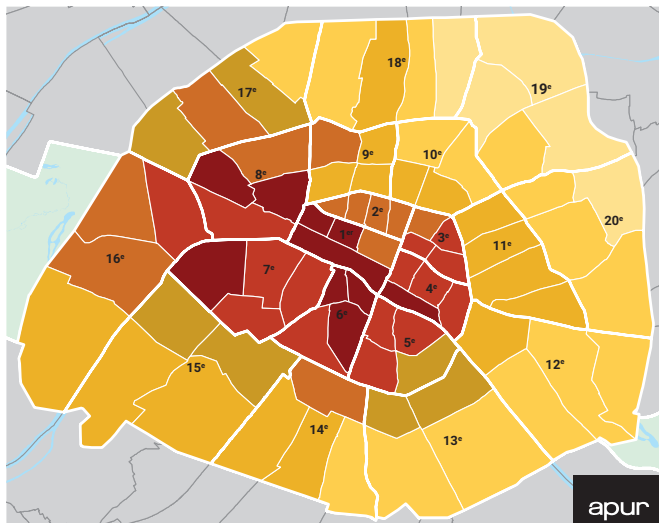nsest one of the four studied. While the population constantly grew since 1999, it started decreasing in 2012 and has continued to do so ever since. This recent development is due to demographic factors (a decrease in births and a continuous net loss of new population each year), but also to the housing context, notably the increase of unoccupied units. This category brings together vacant units, seasonal housing, and secondary residences and has increased by close to 30,000 units in 5 years, likely due to the development of short-term rentals.

This decline in the number of main residences worsens a housing market that is already plagued by important tensions and high prices. While 62% of Parisians rent their housing, rents have gone up by almost 20% between 2009 and 2016, going from an average of 19€/m² to 23€/m². The sales prices
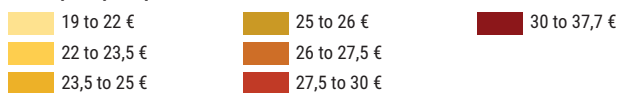
of old apartments have also increased since 2015. In 2017, they overtook their highest historical level and culminated around 8940€/m².

At the same time, Paris is a major touristic destination with more than 35 million touristic overnight stays (2015). The occupancy rate of the city's hotels is thus close to its saturation point (almost 80%). The Parisian hotel industry has also recently seen a progressive increase in the quality and cost of its offerings. All these factors create a fertile ground for the development of accommodation solutions alternative to traditional hotels, of which short-term rentals are one of the most important.

AVERAGE RENT PRICE FOR A ONE-BEDROOM HOME

Rental price per sqm in €

- 19 to 22 €
- 22 to 23,5 €
- 23,5 to 25 €
- 25 to 26 €
- 26 to 27,5 €
- 27,5 to 30 €
- 30 to 37,7 €

Source : OLAP (2016)

HOME MEDIAN SALES PRICE

Sales price per sqm* in €

- Less than 8 000 €
- 8 000 to 10 000 €
- 10 000 to 12 000 €
- 12 000 € or more

* Median sales price for a two-bedrooms apartment in 2017 (€/sqm)

Source : Chambre des Notaires de Paris (2017)

MAIN DEMOGRAPHIC, REAL ESTATE AND TOURISTIC EVOLUTIONS

	NYC	Berlin	Barcelona	Paris
Population 2016	8 537 700	3 670 600	1 608 700	2 199 800
% change in population (2010-2016)	+ 4,2 %	+ 8,4 %	- 0,7 %	- 2,0 %
Number of dwellings	3 469 240 (2017)	1 916 500 (2016)	827 600 (2017)	1 362 200 (2014)
Number of dwellings (2011-2017)	+ 3,5 %	+ 2,6 % (2010-2016)	+ 1,4 %	+ 0,7 % (2009-2014)
Rent (2010-2016)	+ 21 % (Median)	+ 53 % (Median)	+ 42 % (Average)	+ 15 % (Average)
Housing sale price (2011-2017)	+ 98 % (Median)	+ 89 % (Median)	+ 9 % (Average)	+ 9 % (Median 2012-2018)
Number of overnight stays in hotels (2011-2016)	+ 19 %	+ 39 %	+ 21 %	- 14 %
Average price for one night stay in a hotel for 2 people (2017)	250 €	93 €	129 €	164 €
Average price for one night stay in a STR entire rooms on Airbnb (2017)	205 €	79 €	154 €	104 €
Number of Airbnb listings	48 851 (march 2018)	20 575 (may 2017)	18 529 (february 2018)	59 944 (march 2018)
% change in Airbnb listings (2015-2017)	+ 39 %	+ 24 %	+ 29 %	+ 69 %

Sources: Berlin-Brandenburg Statistical Office ; Investition Bank Berlin Wohnungsmarktbericht 2017 ; American Community Survey ; NYC Housing Vacancy Surveyue Survey ; NYC & Company ; Statistics of the Ayuntament de Barcelona ; Idealista ; Accomodation Price Index created by Camping & Co, based on UNWTO data ; Insee ; OLAP ; Chambre des Notaires de Paris ; Office du tourisme et des congrès de Paris ; Hôtel price radar 2018, published by HRS ; Inside Airbnb

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Methodology and sources

The explosion of STRs in the urban environment is explained through the growth of urban tourism since the end of the 1990s and the creation of online booking platforms, accelerated by the advent of the 2.0 web in 2005, which allowed the development of primary residences as rentals between individuals. Depending on one's location, different booking platforms share the STR market: the German platform Wimdu is the second most used platform in Berlin, while in Barcelona the Spanish website Niumba hosts most of the online listings. With the exception of the German website 9flats, these platforms have been periodically re-purchased by ever-bigger touristic booking platforms such as TripAdvisor, Expedia or Platinum Equity. Meanwhile, with more than four million STR listings worldwide in 2017, Airbnb is the biggest booking platform and does not belong to any of these consortiums.

Concurrent with the rise of these large international platforms, a plethora of STR booking websites have also developed locally. In Paris, websites such as Paris Attitude, 1000 et1Paris. com or My Flat in Paris propose home bookings whose listings can also be found on the platforms of international notoriety.
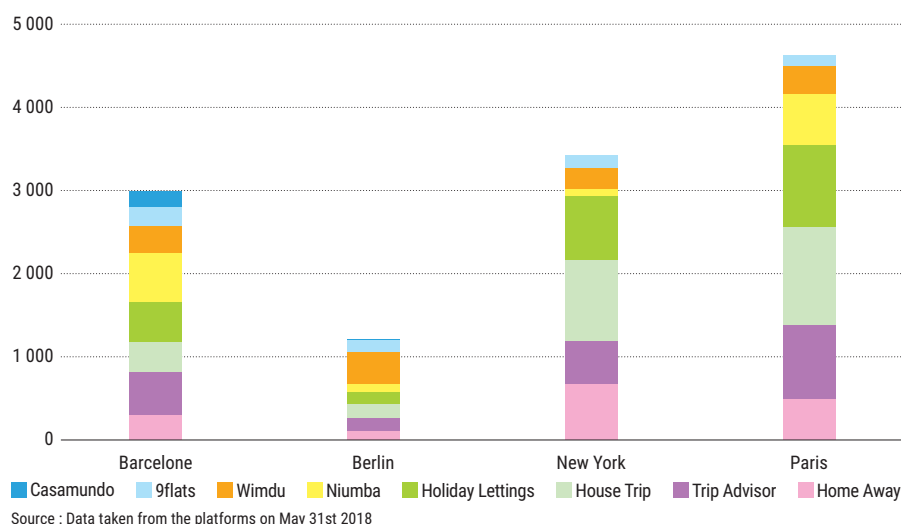
The study of STR is greatly constrained by a lack of data, but certain techniques nonetheless allow an overview of this market. The first is simulating a booking so that one can count the number of rentals available on each of these booking platforms. This technique allows us to study each booking platform, but presents many biases. One problem is that the same housing can be listed on multiple platforms and thus may be counted multiple times. Another is that some listings could be deleted and therefore not show up on the simulation dates. Also, the listings already booked or which do not exist yet do not appear on the platforms and thus are not counted. This simulation technique was used for the following platforms: Casamundo, 9Flats, Wimdu, Niumba, Holiday Lettings, HouseTrip, TripAdvisor and HomeAway. A simulated booking was done for the weekend of July 26-28, 2019. New York and Paris are home to the most available rentals offered, with 3 429 and 4 630 listings available respectively between these dates. Barcelona counts

MAIN PLATFORMS (AND THEIR PARENT COMPANIES) OF THE SHORT-TERM RENTAL MARKET

NUMBER OF ADS PROPOSED ON THE 8 LARGEST PLATFORMS FOR A SHORT-TERM RENTAL, EXCLUDING AIRBNB (SIMULATION MADE FOR THE WEEKEND OF JULY 26TH-28TH 2019)

Source : Data taken from the platforms on May 31st 2018

2 997 listings during that period, while Berlin's offer is much more limited, with just 1 206.

Given the bias of the booking simulation, another technique is used to study the reach of the STR phenomenon: scraping, a computing technique which consists of pulling massive data from platforms' webpages. This technique gathers the information of the online booking platforms' listings, with free access. In the framework of this study, we have used the InsideAirbnb database. Created in 2015 by data activist Murray Cox, InsideAirbnb makes available the data coming from the booking platform Airbnb's scraping. The downside of the Airbnb data use is that it only describes one booking platform. However, Airbnb is the most used platform in each of

the four cities studied, and considering just one booking website helps to avoid double-counting listings.

These numbers are relevant to examine the state of play of the STR phenomenon in these cities. There are about 60 000 listings in Paris and 49 000 listings in New York in March 2018, 20 500 listings in Berlin in May 2017, and 18 500 listings in Barcelona in February 2018.

Regulation and enforcement

Barcelona

Starting in the 1990s, consecutive municipal governments have strongly supported the development of the touristic sector. The number of tourists have drastically increased ever since, together with the number of STRs. In that context, associations of neighbors manifested their discontent starting in 2012 and demonstrated massively in the summer 2014, stipulating that the tourism boom was not only disturbing their daily life but also led to an increase in housing costs.

The first major regulation attempt regarding STRs was implemented in 2012 by the regional government (Generalitat): a decree defining the STR as 'housing for touristic use' and requiring an authorization for any individual willing to rent out her/his apartment for less than 31 consecutive days. At the same tim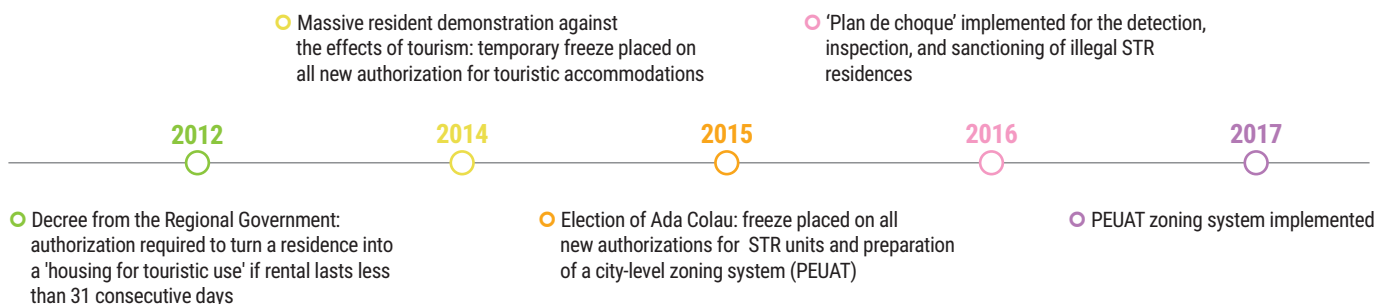e, the Generalitat implemented a tourist tax that owners must pay once they receive their license number: 2,25 euros per night, with 30% going to the city and 70% to the Generalitat.

At the municipal level, Ada Colau's government, elected in 2015 on promises to regulate tourism more severely and address the housing crisis implemented a Special Intervention Plan (PEUAT : Plan Especial Urbanistico de Alojamiento Turistico) in order to freeze the number of authorizations delivered and monitor their spatial repartition across the city. The plan creates four zones, setting the maximum number of authorizations at 9 600. The first zone covers the touristic old town where no new authorization for touristic accommodations will be allowed. The second zone covers the residential areas, where the number of authorizations has to be maintain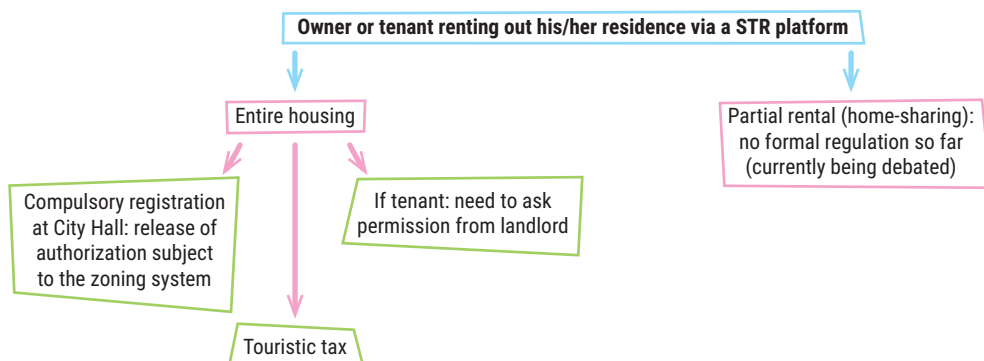ed (as one accommodation closes, another can be opened). The other two zones cover the periphery and allow limited growth in the accommodation number. This PEUAT is a highly controversial law: some resident associations believe it is not radical enough, while owner associations representing STR operators argue it is too constraining and breaches the competition rules of the European Union.

In order to enforce this regulation, more and more resources have been mobilized. In late 2014, a team of inspectors operating previously at the district level was centralized at the city level, which allowed more efficiency in neighborhood coverage. Starting in 2016, the new municipal government implemented a 'shock plan' to increase the means and reinforce the sanctions. The City Hall hires an outside company to localize the listings which do not have an authorization number by scraping

KEY DATES FOR STR REGULATION

○ Massive resident demonstration against the effects of tourism: temporary freeze placed on all new authorization for touristic accommodations

○ 'Plan de choque' implemented for the detection, inspection, and sanctioning of illegal STR residences

2012   **2014**   **2015**   **2016**   **2017**

○ Decree from the Regional Government: authorization required to turn a residence into a 'housing for touristic use' if rental lasts less than 31 consecutive days

○ Election of Ada Colau: freeze placed on all new authorizations for STR units and preparation of a city-level zoning system (PEUAT)

○ PEUAT zoning system implemented

BARCELONA PROCEDURES FOR STR

Owner or tenant renting out his/her residence via a STR platform

Entire housing

Partial rental (home-sharing): no formal regulation so far (currently being debated)

Compulsory registration at City Hall: release of authorization subject to the zoning system

If tenant: need to ask permission from landlord

Touristic tax

platforms' data—130 platforms were analyzed between 2016 and 2018. A new team of 40 people (the « visualitzadors ») is in charge of investigations: they examine listings and their photographs, observe the buildings, and send the addresses to the 36 accredited inspectors who then conduct field inspections to check whether or not the lessor abides by the regulation. If they do not, inspectors can trigger a legal procedure. At first, these inspectors mainly intervened in response to complaints or denunciations from residents. Now, in addition to the team of visualitzadors and inspectors, there is a dedicated hotline and a website for residents to report suspected illegal touristic rentals. In 2017, out of 4963 total files submitted to Court, 3015 were penalized (sanciónes) and 2388 received orders to stop operation. Fines are up to €30 000 for misusers and have helped discourage the occasional fraudsters, but the 'more organized' actors have

developed strategies to avoid penalties. In 2016, Barcelona City Hall imposed 600 000€ fines on STR platforms Airbnb and HomeAway for continuing to advertise illegal listings. In June 2018, City Hall came to an agreement with Airbnb in order to create a technological tool to force the owners to write down their license numbers and sought their agreement to provide the City Hall with homeowners' identity data. If they refused, they would not be able to put the listing on the web. This agreement paves the way for an effective regulation since the lack of reliable data makes the work of inspectors long and complex.

Berlin

Following the repeated complaints of the population of Berlin, the regulation of STRs has mainly been addressed as a housing issue by the city's political actors. In a context of growing housing pressure, the government of the capital therefore considered that using a dwelling as a STR was a misuse of the residential space.

Although the housing supply of Berlin had been firmly monitored since the 1970s, several protections were abrogated by the Constitutional Court at the beginning of the 2000s. The important tourist and demographic attractiveness gained by the city over the last decade has brought the need for new regulations of STRs to be put on the agenda.

A law forbidding the misuse of the residential space (Zweckentfremdungsverbot Gesetz) was thus amended in 2013 by the Berlin Senate Department for city development and housing. Enforced in

May 2014, this law deals with the issues pertaining to vacant housing, secondary residences and any commercial use of a dwelling that is not legitimized by public interest. Regarding STRs, this law made renting an entire property repeatedly over a significant amount of time without authorization from the district administration officially illegal, with a 2-year grace period for hosts to acquire this approval. The granting of this authorization depends on the situation of the applicant and his motivations for renting out a dwelling as a STR. Determining the prevalence of a private interest over public interest is therefore the task of the district administration in charge. When applicants are renters, they also have to get the approval of their landlord. In 2016 and 2018, the regulation was sensibly modified and strengthened by a second law. A clear distinction between renting out less than half of a main residence and renting it entirely
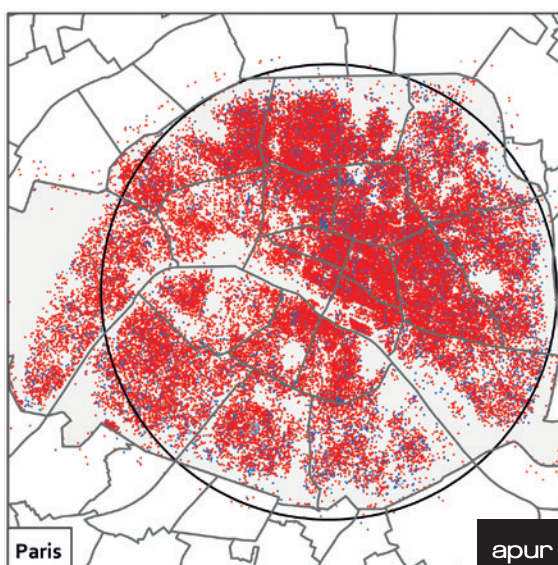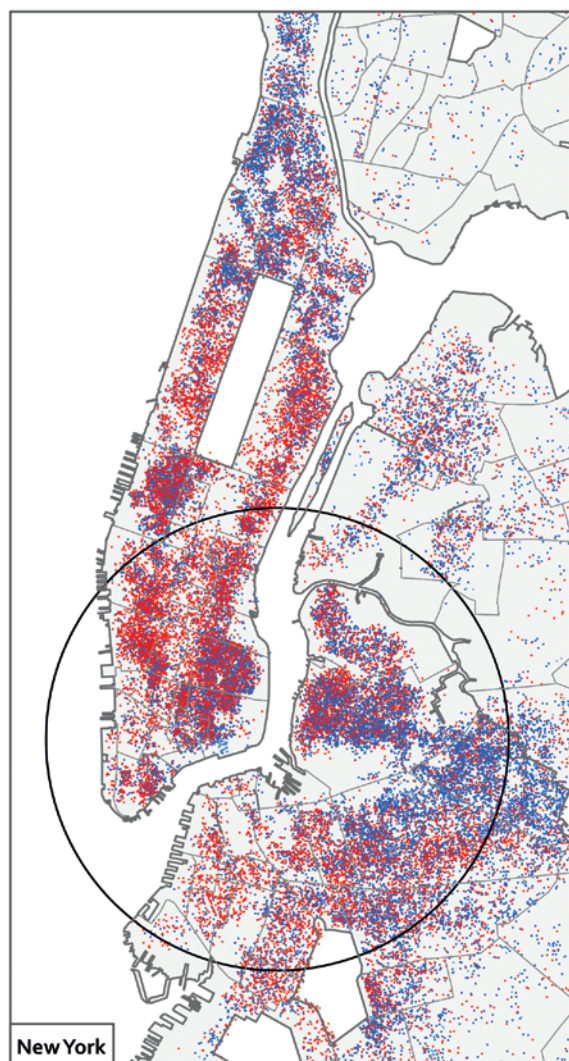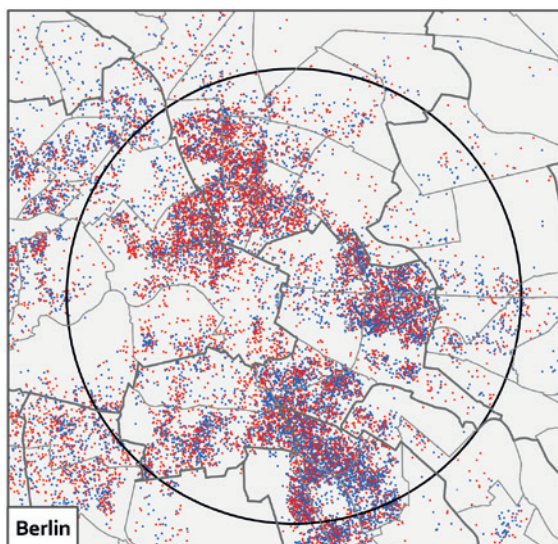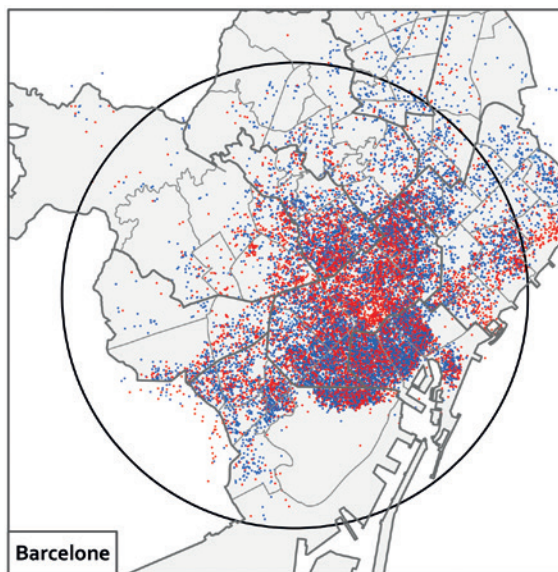
TYPE OF ACCOMODATIONS OFFERED
ON THE AIRBNB WEBSITE

	New York	Berlin	Barcelona	Paris
▮ Entire home	24 096	10 284	8 627	52 056
▮ Private room	23 519	10 011	9 724	7 361
▮ Shared room	1 236	280	178	527
Number of listings	48 851	20 575	18 529	59 944

—— Radius 5 km

Sources: Data Inside Airbnb: march 2018 (New York, Paris),
february 2018 (Barcelona), may 2017 (Berlin)

Paris starkly distinguishes itself from the other cities regarding
the type of properties offered on Airbnb. In a French capital where
55% of housing units are apartments of 1 to 2 rooms, the majority
of housing units listed are entire homes (87%). In the other three
cities, private or shared rooms represent half of the listings.

Barcelone

New York

Berlin

Paris

apur

was established, the first case being legal and the second illegal without a declaration and authorization. Thus, starting in August 2018, people wanting to rent out their entire main residence will have to register online with the district administration and apply for authorization to rent without day limits, provided that a host indicate the days during which he plans to rent out his flat as an STR. In the case of secondary housing, the authorization will legalize STRs for a maximum of 90 days per year. Symbolically, the maximum fine has been raised up to 500 000 euros, i.e. ten times more than its initial threshold. By the end of December 2017, nearly 130 000 people had registered for a secondary residence in a city that, as a reminder, has a housing stock of more than 1.9 million units.

At the city level, the control of hosts is managed by a task force of 60 people spread in each of the 12 districts according to their respective needs.
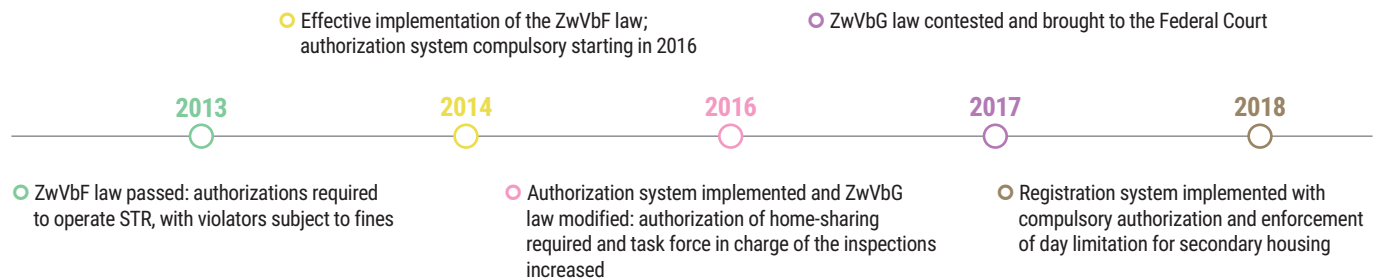
Their home department can vary from one district to another, ranging from the office in charge of public order to the office in charge of housing. These employees' missions are to identify the potentially illegal hosts, to inspect their dwellings, and, if necessary, to gather information for taking them to court. Approximately 2.5 million euros per year are specifically devoted to the financing of these task forces.

Misusers are notably identified thanks to residents' complaints, who can either fill out a form on the website of the district or directly call the administration via a centralized hotline, which is open from Monday to Friday between 7am and 6pm. Presented as one of the major improvements of the 2018 law, the mandatory registration shall make controls easier and help the effective collection of tourist tax, which is currently supposed to be collected and paid by hosts to their district. Since these hosts rarely comply with this
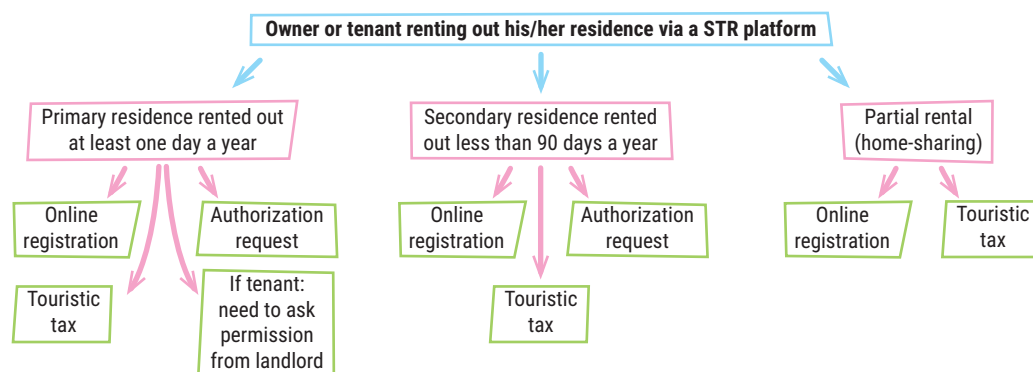
obligation, the new system will enable authorities to partly overcome the inaccessibility of the platform's data and to identify the hosts that do not respect the regulation.

By the end of 2017, nearly 4 000 residences converted to STRs had been brought back to the rental market, out of roughly 20 000 listings in Berlin on Airbnb's website alone. 2.6 million euros of fines have been imposed on residents accused of any misuse of housing space, with 168 000 euros having been paid so far.

KEY DATES FOR STR REGULATION

○ Effective implementation of the ZwVbF law; authorization system compulsory starting in 2016

○ ZwVbG law contested and brought to the Federal Court

2013   **2014**   **2016**   **2017**   **2018**

○ ZwVbF law passed: authorizations required to operate STR, with violators subject to fines

○ Authorization system implemented and ZwVbG law modified: authorization of home-sharing required and task force in charge of the inspections increased

○ Registration system implemented with compulsory authorization and enforcement of day limitation for secondary housing

BERLIN PROCEDURES FOR STR

Owner or tenant renting out his/her residence via a STR platform

Primary residence rented out at least one day a year
- Online registration
- Touristic tax
- Authorization request
- If tenant: need to ask permission from landlord

Secondary residence rented out less than 90 days a year
- Online registration
- Touristic tax
- Authorization request

Partial rental (home-sharing)
- Online registration
- Touristic tax

New York

In 2010, New York State Senator Liz Krueger received countless constituent complaints about loud parties and shady strangers in their neighboring apartment units, operating as "illegal hotels". The State legislature responded by passing the Multiple Dwelling Law (MDL) later the same year. The MDL made it illegal to rent out an apartment in "Class A" buildings (for permanent residences) with more than three units for less than 30 consecutive days in New York City, unless the owner or residing tenant is present. The law thus effectively outlawed the short-term rental of an entire flat, permitting only home-shares by default (there is no legal definition of the latter). Upon the MDL's passage, the Mayor's Office of Special Enforcement (OSE) was put in charge of enforcement. But the office's budget was only about 171 000€ in 2010, and had only a few employees. Since th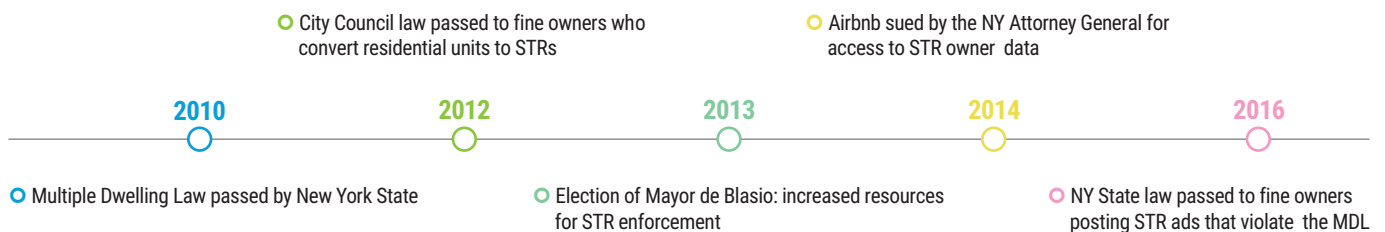e election of Mayor de Blasio in 2013, the OSE's budget and staff have increased: the office currently has a 5.6M€ budget and 48 employees. Inspections have intensified as a result: between 2014 and 2016, the number of complaints went from 1150 to 1416, while the number of violations filed went from 597 to 1580.

The office, however, pursues cases based solely off complaints forwarded from the city's 311 hotline, which fields calls on many other topics related to disturbances in public spaces and is not specifically dedicated to complaints about short-term rentals. 311 operators are not trained on the issue, and often confuse details when relaying information. OSE inspectors lack background training on STRs as well. Most importantly, OSE inspectors have considerable difficulties in locating illegal STRs and in building legal cases strong enough for the Environmental Control Board (ECB) t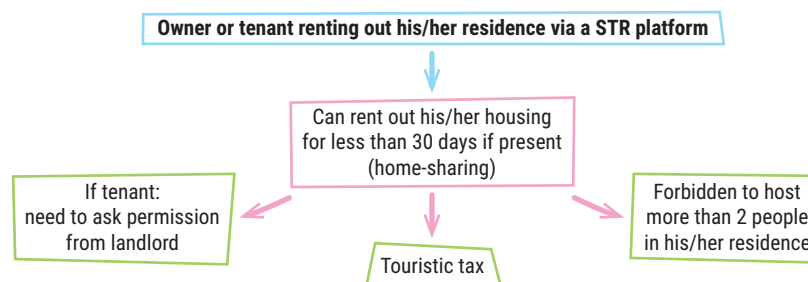o prosecute and fine transgressors. Illegal ads thus remain high. In 2017, it was estimated that 29 841 ads for entire home rentals on Airbnb in the city, plus at least 1 400 units that had multiple private room postings, were illegal. Moreover, in 2016, only 641 690€ were collected out of 4.39M€ of fines inflicted.

Other attempts to address illegal STRs have fallen flat. In 2014, the New York State Attorney General was able to force Airbnb to hand over anonymized data. The resulting report found that if the local hotel tax was applied to STRs, the city would have collected 9.37M€ in 2013. But in the absence of any individual data, the subpoena wasn't successful in its principle goal of facilitating better inspections of short term rentals. In 2016, a state bill made advertising units that violate the MDL illegal, with fines for hosts of up to 6 427€—but without the crucial data from the platforms, enforcement has been nearly impossible.

KEY DATES OF STR REGULATION

- City Council law passed to fine owners who convert residential units to STRs
- Airbnb sued by the NY Attorney General for access to STR owner data

2010 — **2012** — **2013** — **2014** — **2016**

- Multiple Dwelling Law passed by New York State
- Election of Mayor de Blasio: increased resources for STR enforcement
- NY State law passed to fine owners posting STR ads that violate the MDL

NEW YORK PROCEDURES FOR STR

Owner or tenant renting out his/her residence via a STR platform

Can rent out his/her housing for less than 30 days if present (home-sharing)

If tenant: need to ask permission from landlord

Touristic tax

Forbidden to host more than 2 people in his/her residence

COMPARING THE REGULATION OF SHORT TERM RENTALS (ENTIRE DWELLING)

	NYC	Berlin	Barcelona	Paris
Level of government in charge of passing regulation	City, State of New York	City-State (Länder)	Autonomous Region, City	City, State
Rental of a primary residence	Forbidden	Subject to authorization	Subject to authorization (*De facto* ban because total number of authorizations has been frozen)	Allowed
Rental of a secondary residence	Forbidden	Subject to authorization	Subject to authorization (*De facto* ban because total number of authorizations has been frozen)	Forbidden
Mandatory registration	No	Yes	Yes	Yes
Authorization	–	Yes	Yes	–
Day limitation for a STR without authorization	–	–	–	- primary residences: 120 days per year - other dwellings: 0 day
Day limitation for a STR with authorization	–	90 days per year for a secondary residence	–	–
Restriction according to geographical zone	No	No	Yes	No
Tourist Tax (collected by)	Yes (renters)	Yes (renters)	Yes (renters)	Yes (some platforms including Airbnb + renters)
Call number to report disturbances	Yes	Yes	Yes (STR specific number)	No
Online reporting	No	Yes	Yes	No
Maximum amount of fines for renters (euros)	21 400	500 000	30 000	50 000

Reading guideline: cells filled with a dash mean that the situations are non applicable

MEANS AFFECTED TO THE IMPLEMENTATION OF THE REGULATION

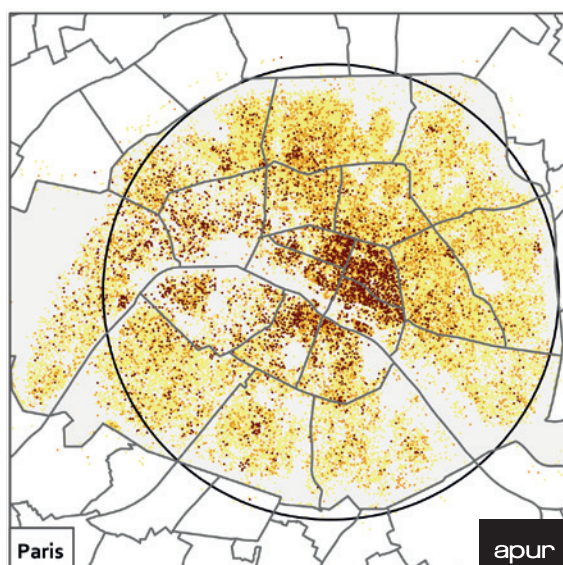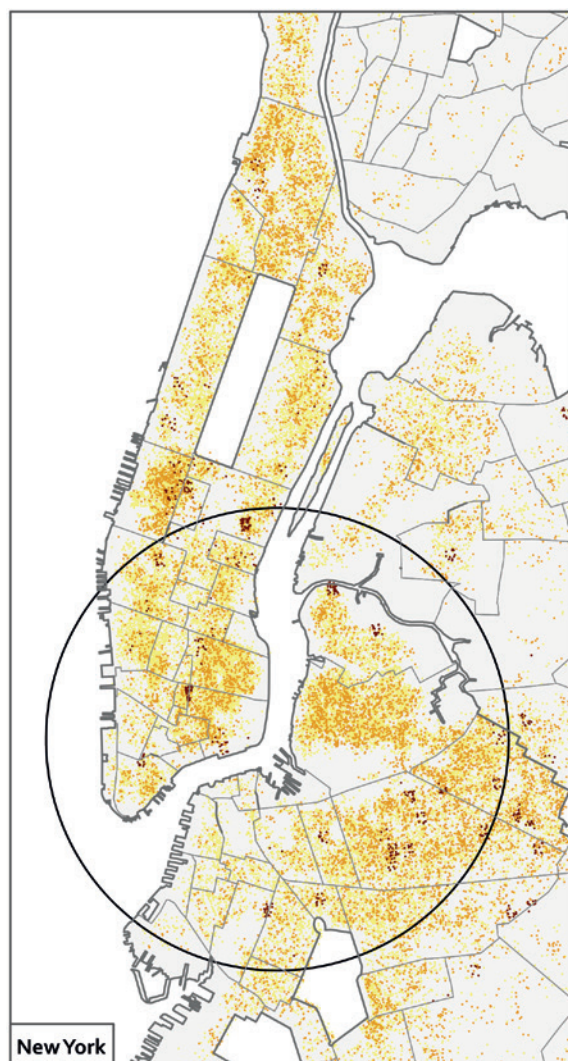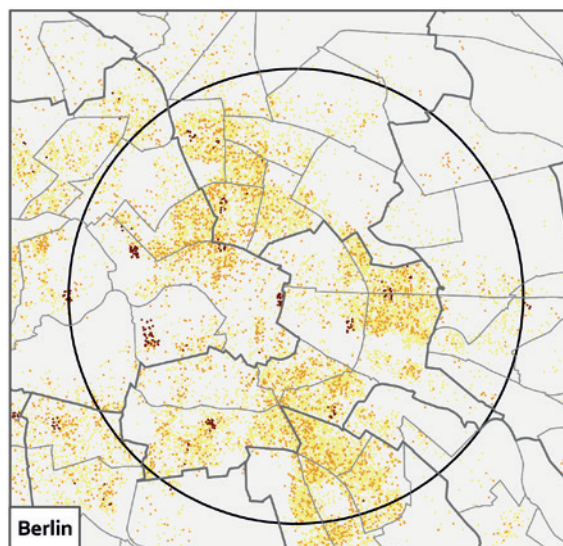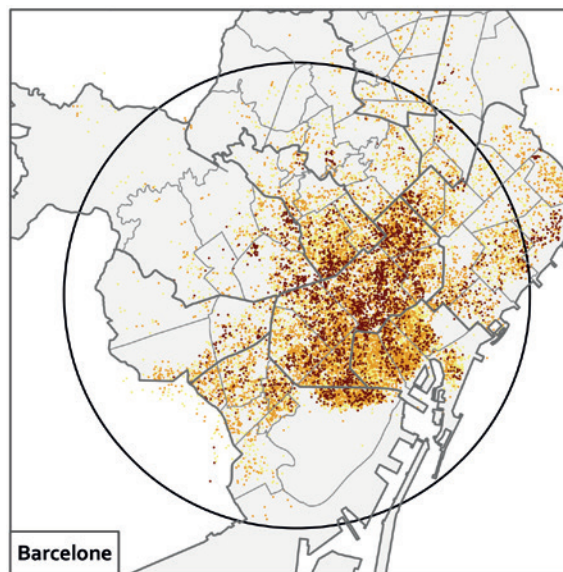|	NYC	Berlin	Barcelona	Paris
Administration level in charge of implementation	City	Districts	City	City
Office in charge	Office of special enforcement (OSE)	Varies from one district to another	Office of Urbanism, Office of Tourism	Special office in the Direction of Housing and Habitat of the City of Paris
Number of employees in charge of inspecting STRs	48	60	76	29
Missions	Investigations, Inspections, Preparation of legal pursuits	Investigations, Inspections, Preparation of legal pursuits	40 « *visualitzadors* », investigation and field work ; 36 inspecteurs, inspections	Investigations, Inspections, Preparation of legal pursuits
Agents working exclusively on the regulation of STR	No	No	Only the « *visualitzadors* »	29 agents in charge of several missions

NUMBER OF LISTINGS OFFERED ON THE AIRBNB WEBSITE BY HOST

	New York	Berlin	Barcelona	Paris
1	35 523	16 091	8 197	48 229
2 to 9	12 653	4 174	7 298	8 054
10 and more	675	310	3 034	3 661
Number of listings	48 851	20 575	18 529	59 944

—— Radius 5 km

Sources: Data Inside Airbnb: march 2018 (New York, Paris),
february 2018 (Barcelona), may 2017 (Berlin)

The average number of listing per host enables us to identify
individuals who own or manage several short-term rentals on
Airbnb. For these individuals, short-term rental is likely not an
intermittent activity that enables them to make some extra money
but rather a property-management strategy or a professional
activity. The maps show a concentration of ads posted by hosts
with more than 10 properties in touristic neighborhoods and/or
near metro stations or transportation hubs.

Barcelone

Berlin

New York

Paris

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During the budget sessions of 2018, City Councilors requested more OSE funding for data analysis, a specific STR hotline, more training for inspectors, and more lawyers to build stronger cases. Meanwhile, the City Council is considering a bill that would require STR platforms to share host addresses with the OSE, and the state is considering two different new STR bills: the first would require a registry of properties and hosts while the second would require the same while reducing the minimum required length of rental to less than 30 days, in order to acknowledge the current reality of STRs and reduce illegality.

Paris

Likely correlated to a Parisian housing market characterized by high prices and an erosion of main residences in favor of unoccupied units (secondary residences, vacant and occasional units), the development of short-term rentals progressively became a concern for the City Hall of Paris, which framed it from a housing perspective.

Regulation in Paris is based on both municipal rules and a national legal framework. The main legal texts regulating short-term rentals are the tourism code, the urbanism code and the construction and housing code. They state that short-term renting is a commercial activity distinct from housing, and thus requires a change in the legal use of a housing unit (*changement d'usage*). Renting out a housing unit for less than 120 days/year is authorized for a primary residence. On the contrary, in case of secondary residence it is compulsory to ask for a change in use. This procedure aims at protecting the housing stock by maintaining a balance between housing and commercial activity in tense areas. The municipal rules of the City of Paris (voted in April 2009) state that a landlord must provide the equivalent amount of housing space he is seeking to convert to STR use (compensation) in order to have his request for change in use approved. This means that for each square meter of housing transitioned to another function, the premises of an equivalent surface area must be converted into housing. The City Hall has put in place a designated area where a higher compensation applies, corresponding to the zones of the city that are most highly deficit in housing units. Inside this area, one must provide double the surface area (2 square meter of housing for 1 transformed square meter), unless the premise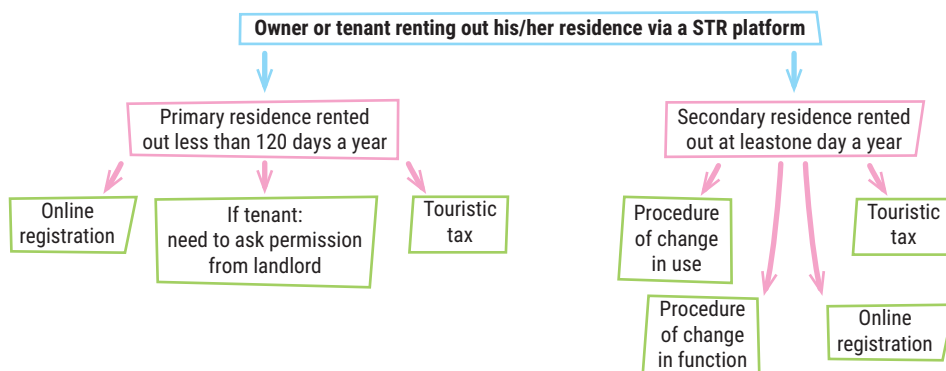s proposed as a compensation are social housing units. Since January 2018, municipal rules incorporate another restriction to the transformation of a housing unit into a short-term rental: the compensation should happen in the same administrative neighborhood where the transformed unit is located. Compensation can be carried out in two different manners: either by proposing premises that will be transformed into housing units, or by buying a compensation title (*commercialité*) from someone who has such premises and will transform them in housing units. In addition to the procedure of change in use, a person willing to use a housing unit that is not his main residence as a short-term rental must make an official demand of change in function (*changement de destination*) to the Direction of Urbanism of the City of Paris.

Following the adoption of the Law for a Digital Republic, the City of Paris has set

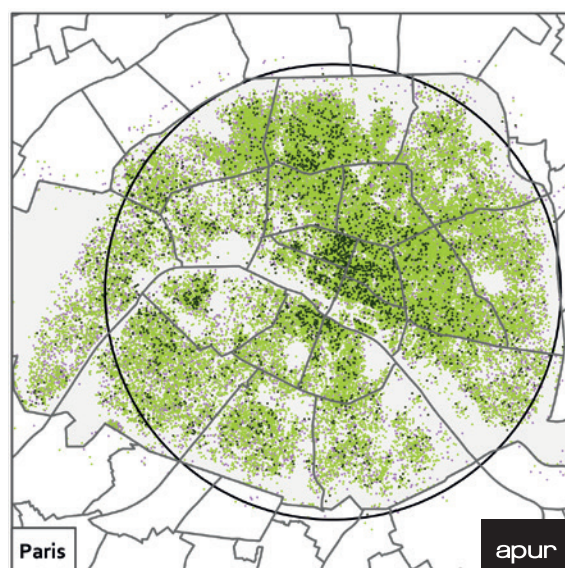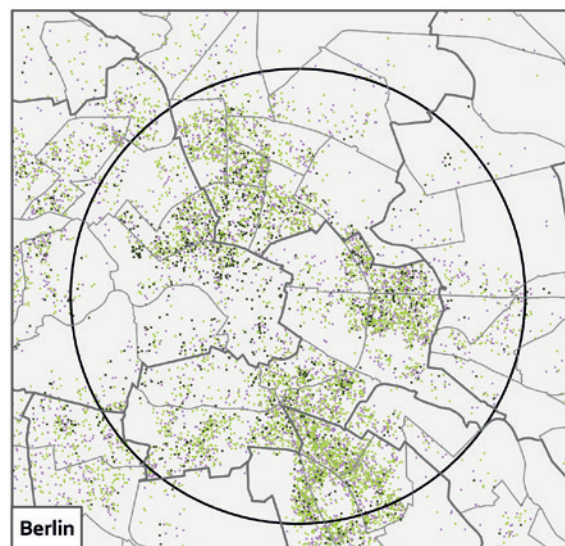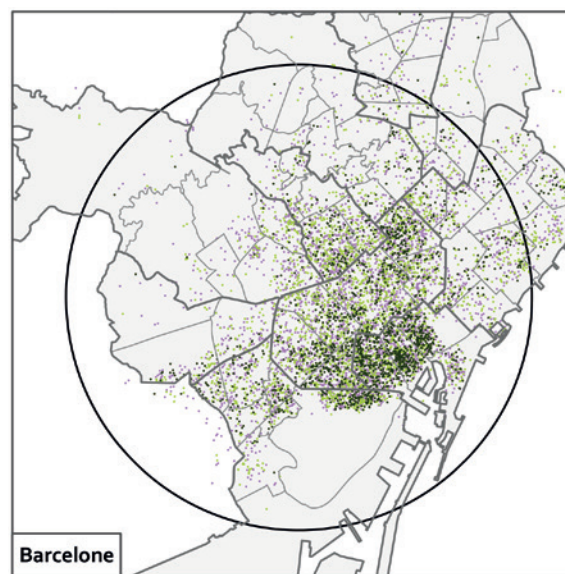## KEY DATES FOR STR REGULATION

○ Legal precedent: STRs are considered commercial activities and not housing

○ Touristic tax established to require payment by Airbnb to City Hall for STRs

○ Compulsory authorization implemented to require a number for each listing starting December 2017

2009 — 2010 — 2014 — 2015 — 2016 — 2017

○ Municipal regulation passed: with the change of use of a residential unit, there is compulsory compensation, due to the transfer of regulatory authority from the State to the City

○ The ALUR law passed to subject STRs to the change of use rule: platforms forced to inform those who rent out their residence of legal obligations

○ BPLH task force reinforced and maximum amount of the fines increased to 50 000 euros

PARIS PROCEDURES FOR STR

Owner or tenant renting out his/her residence via a STR platform

Primary residence rented out less than 120 days a year
- Online registration
- If tenant: need to ask permission from landlord
- Touristic tax

Secondary residence rented out at leastone day a year
- Procedure of change in use
- Procedure of change in function
- Touristic tax
- Online registration

NUMBER OR COMMENT (AVERAGE BY MONTH)
BY LISTING AVAILABLE ON THE AIRBNB WEBSITE

	New York	Berlin	Barcelona	Paris
None	10 870	4 394	3 622	14 078
Less than 3,34	34 197	15 065	12 954	42 626
3,34 or more	3 659	1 110	1 883	3 132
Number of listings	48 851	20 575	18 529	59 944

—— Radius 5 km

Sources: Data Inside Airbnb: march 2018 (New York, Paris),
february 2018 (Barcelona), may 2017 (Berlin)

The monthly average number of reviews by listing gives us an idea of the properties' occupancy. Cross-referencing this data with rental length would give us a more precise image, but we don't have this information. The deeper tint represents listings that are rented for more than 100 days a year (3,34 comments/month x 12 months x 2,5 average days of stay – the latter is probably an underestimation of reality).

Barcelone

Berlin

New York

Paris

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up an automatic declaration system for short-term rentals. The system delivers a registration number that must appear on online short-term rental ads since the 1st of December 2017. As of late May 2018, the City has recorded 18 259 short-term rental registrations. Some other innovations are introduced by this new law. Online platforms and other intermediaries must ensure that ads proposing main residences are not available more than 4 months a year. They are also required to provide the yearly number of booked nights for these ads. The law provides control and sanction methods that are still to be clarified in its enforcement decrees.

In the Paris administration, the Bureau for the Protection of Housing Premises (BPLH – attached to the Direction of Housing) is in charge of delivering authorizations of change in use and of monitoring the function of premises in Paris. The bureau has seen an increase in its size and now counts 29 agents, work principally on this issue, but who also carry out other tasks, such as the processing of all the demands of change in use (even when they are not STR-related). The budget of this bureau is approximately 1.5 million euro per year. Inspections are based on reports sent by mail by Parisians (2 117 of these were received between 2009 and August 2016) but also on "crackdown operations" that take place six times a year and aim at inspecting the highest possible units suspected of serving as short-term rentals in a given neighborhood in one half-day.

In 2017, the City of Paris inspected 4 300 housing units, approximately 5% of which were not compliant with the current rules. In the same year, 200 housing units were engaged in legal action with the aim of fining their hosts, whenever sufficient evidence (often difficult to gather) could be obtained. Following these inspections, the City of Paris pursues legal action against hosts suspected of breaching the law. In 2017, city authorities have gone to court over 212 housing units. The fines inflicted and collected this year amount to 1.3 million euro for 76 housing units, with an average fine of 17 400€.

Following these inspections and judicial proceedings, 1 000 housing units have seen their situation resolved between 2012 and 2018 (460 by procedures of change in use and 570 that were brought back to the housing market).