

Short-term cities

Airbnb's impact on Canadian housing markets

David Wachsmuth
Danielle Kerrigan
David Chaney
Andrea Shillolo

*A report from the
Urban Politics and Governance research group
School of Urban Planning
McGill University*

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McGill
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Executive summary

This report presents the first comparative analysis of short-term rentals in major Canadian cities. It relies on the most comprehensive third-party dataset of Airbnb activity available, and new methodological techniques for spatial analysis of big data.

Across the Montreal, Toronto and Vancouver regions, 81,000 Airbnb listings have been active at some point in the last year, and 51,000 in May 2017. Montreal had the largest number for most of the year, but Toronto is now taking first place. These listings are heavily concentrated in the central cities of the three CMAs, and they are growing rapidly; the three cities have experienced a 50% year-over-year increase. A majority of listings in all three cities are entire homes rather than private rooms.

Airbnb hosts in Canada's largest three metropolitan regions earned a collective \$430 million in revenue last year, an average of \$5,300 per listing and a 55% increase over the year before. This growth is driven by Toronto, where total revenue nearly doubled year-over-year, and where average revenue per listing is also growing strongly. Revenue is highly concentrated among the most successful hosts; 10% of hosts earn a large majority of overall revenue.

There are now 13,700 entire homes rented 60 days or more per year on Airbnb in Montreal, Toronto and Vancouver, each of which is unlikely to be rented to long-term tenants. They account for one sixth of all Airbnb listings, and a majority of nights booked on the service. Even more worryingly, these listings are growing around 25% more rapidly than other categories of listings. Many neighbourhoods—above all in Montreal—have seen two or three percent of their entire housing stock converted to de facto hotels.

A third of all active Airbnb properties are “multi-listings”, whose hosts administer two or more entire homes or three or more private rooms. The most successful of these hosts earn millions of dollars per year running commercial short-term rental services across dozens or even hundreds of homes, most of which are no longer able to support a long-term resident. The “triple threat” is short-term rental listings which are full-time, entire homes, and multi-listings. Even though there are only 6,500 of these listings in Montreal, Toronto and Vancouver—8% of the total active listings—they account for 34% of total revenue. These listings are growing more rapidly than any other category of listing, and in Toronto their share of total revenue increased by 125% in a single year.

Airbnb has removed as many as 13,700 units of housing from rental markets in Montreal, Toronto and Vancouver. In some areas this represents more than

two percent of the total housing stock—a number comparable to the rental vacancy rate in the three cities. In general, these are neighbourhoods with above average rents, but there are significant economic pressures threatening further conversions of long-term rentals to de-facto Airbnb hotels in a number of more affordable areas—particularly those lying on mass transit lines. In the last year, conversions to short-term rentals have outpaced new home construction in a number of neighbourhoods.

Short-term rentals often operate in legal grey zones, able to avoid existing accommodation regulations and taxes, and are now increasingly being targeted with specific regulations. The Province of Quebec was the first major Canadian jurisdiction to legalize short-term rentals, implementing a regime focused on recovering tax revenues. Toronto and Vancouver, acknowledging the wide range of impacts from short-term rentals have both proposed more stringent regulations, including limiting short-term rentals to principal residences.

Cities should regulate short-term rentals according to three simple principles: 1) one host, one rental; 2) no full-time, entire-home rentals; 3) platforms responsible for enforcement. The City of Amsterdam provides an encouraging example of these principles in practice, while Fairbnb.ca's recent regulatory proposals for Toronto offers a closer-to-home example.

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1. Introduction

Short-term rentals are expanding rapidly across Canadian cities. In May 2016, there were approximately 50,000 Airbnb listings in the Montreal, Toronto and Vancouver regions which had been active at some point in the previous 12 months. A year later, there were over 81,000. In the same time period the number of entire homes rented more than 60 days a year has increased from 8,900 to 13,700 across the three cities. Meanwhile, Airbnb revenue has become ever more concentrated among a small set of large-scale operators. Hosts with multiple full-time, entire-home listings now earn more than a third of all platform revenue, despite only controlling eight percent of active listings. This growth poses a number of questions for policymakers and communities.

In the United States, a growing body of research by community groups, housing advocates and academics has begun sounding the alarm about the impact of short-term rentals on housing affordability (e.g., Barron et al. 2017; BJH Advisors 2016; Lee 2016; New York Communities for Change 2015; Samaan 2015; Wachsmuth and Weisler forthcoming). The Los Angeles Alliance

for a New Economy (LAANE), for example, estimated that short-term rental platforms were taking 11 units off the local rental market each day, accounting for a significant portion of new housing built since 2010 that was intended to slow rent increases (Samaan 2015). Barron et al. (2017) examined 100 cities across the United States, and found that, particularly in renter-heavy neighbourhoods, more Airbnb activity translated into higher rents for local residents.

In Canada, we know much less about how short-term rentals are changing our cities. The Toronto advocacy group Fairbnb.ca released an analysis of Airbnb's impact on Toronto, showing a troubling concentration of activity among a narrow segment of hosts and laying out sensible principles for short-term rental regulation (Wieditz 2017). But there has not been comparable research carried out elsewhere in the country. And, above all, there has been no *comparative* analysis which can contextualize developments in individual cities with respect to their peers.

Even so, municipal and provincial governments in Canada are increasingly responding to the challenge of short-term rentals with new regulations or regulatory proposals. The Province of Quebec legalized and imposed constraints on short-term rentals in April 2016, and over summer 2017 both Toronto and Vancouver proposed significant new oversight and restrictions on short-term rentals. The City of Ottawa has a staff report on short-term rental regulations due in Fall 2017, and the Province of Nova Scotia launched a review of Uber and Airbnb in Spring 2016.

To aid future regulatory efforts, and to improve public debate around short-term rentals, this report provides the first detailed comparison of Airbnb's activities in Canada's three largest metropolitan areas: Montreal, Toronto and Vancouver. Airbnb is not the only short-term rental platform, but it is by all accounts the dominant one, and Airbnb's activity is a close proxy for the short-term rental market more generally. We draw on 37 million data points spanning three years and 100,000 property listings, and employ geographic information science spatial analysis to identify spatial and temporal patterns.

Estimates and uncertainty

As described in the next chapter, the analysis in this report rests heavily on data which has been "scraped" from Airbnb's public website by the consulting firm Airdna. Much of this data (for instance, concerning how many active hosts are using the platform, daily asking prices, and details about listings such as number of bedrooms) is unambiguous. But from late 2015 onward, Airdna has had to estimate one of the key parameters used to calculate occupancy rates and revenue (whether a non-available listing has been reserved or just blocked off the calendar). While they have an enormous historical dataset and a

sophisticated model to perform this estimation, it is inevitable that the estimates will not be exact.

We have attempted to mitigate this uncertainty with two strategies. First, the analysis presented in this report is almost exclusively conducted with large aggregates of listings, at which scales random error should be relatively minimal. Results are presented with conservative precision (i.e. where there is higher uncertainty, numbers are rounded to fewer significant digits). Second, the report presents many of its findings as trends—particularly comparisons between the last year of data (June 2016 to May 2017) and the previous year. Even where there is some uncertainty about the precise levels of the various estimates, the trends presented are much less subject to this uncertainty, because they have been derived using a consistent methodology over time. (In other words, an estimate of 5,000 homes taken off the long-term rental market may slightly overstate or understate the real figure, but if we find, using the same methodology, that the estimate was 3,500 for the previous year, then there is good reason to think that the underlying growth pattern is accurate.)

Our belief is that the analysis presented here is as accurate as can be achieved in the absence of first-party data from Airbnb. Still, the fact that Airbnb has been resistant to undertaking data sharing agreements is highly problematic, to the extent that publicly available data cannot be used to confidently assess the state of the short-term rental market, given the growing importance short-term rentals are assuming in our cities.

2. Data and methodology

This report presents the first comparative analysis of short-term rentals in major Canadian cities. It relies on the most comprehensive third-party dataset of Airbnb activity available, and new methodologies for spatial analysis of big data.

The analysis in this report was conducted using a comprehensive dataset of Airbnb activity in the Montreal, Toronto and Vancouver census metropolitan areas (CMAs). In Toronto and most of Vancouver, data for all Airbnb listings and activity between November 2014 and May 2017 was available; in Montreal as well as some of Vancouver's suburbs, a shorter period of August 2015 to May 2017 was available. Nearly 100,000 Airbnb listings in the three metropolitan areas were active at some point in these time periods, 81,000 of which were active at some point in the last twelve months (June 2016 to May 2017). In total, approximately 37 million data points concerning daily transactions were aggregated and analyzed in this report; Figure 2a provides a summary.

The data on Airbnb activity was obtained from the consulting firm Airdna, which has been performing daily "scrapes" of Airbnb's public website since mid-2014, and aggregating the information. The Airdna data has two parts: a "property file" which provides specific static characteristics of each property

| City | Total listings | Active last 12 months | Time period analyzed | # of data points |
|------------------|-----------------------|------------------------------|-----------------------------|-------------------------|
| <i>Montreal</i> | 36,774 | 31,449 | Aug. 2015 – May 2017 | 13.5 million |
| <i>Toronto</i> | 36,301 | 29,653 | Nov. 2014 – May 2017 | 14.4 million |
| <i>Vancouver</i> | 24,260 | 19,994 | Nov. 2014 – May 2017 | 9.5 million |
| <i>Total</i> | 97,335 | 81,096 | - | 37.4 million |

Figure 2a. Airbnb data analyzed

listing (such as number of bedrooms, cancellation policies, the listing title, etc.), and a “transaction file” which provides a complete list of daily activities for each property (the listed nightly price and whether the property was available, reserved, or blocked for each day). For 2014 and 2015, this transaction data was taken directly from Airbnb and is thus highly accurate. At the end of 2015 Airbnb stopped disclosing when a non-available property was reserved or was simply blocked from new reservations, which made it impossible to precisely measure occupancy and revenue earned. In response, Airdna developed a machine learning model to estimate this information based on a combination of its existing historical dataset of activity and other information which remained publicly available (e.g. reviews and ratings). While the activity dataset for 2016 and 2017 therefore cannot be fully accurate, we believe it is the most accurate third-party estimate available, and it enables us to estimate occupancy rates as well as revenues for each property over time. Revenue data was collected in USD, and converted to CAD month-by-month using the average exchange rate for the month as reported by the Bank of Canada.

Because short-term rentals exhibit high levels of seasonality, most analysis in the report is aggregated over one-year periods (usually the most recent twelve months of available data—June 2016 to May 2017). This is a simple alternative to calculating a seasonality index, which the relatively short data availability period in Montreal precludes.

In addition to the Airbnb listings data from Airdna, the other data sources in the report are the Canadian Census and the Canada Mortgage and Housing Corporation’s (CMHC) Comprehensive Rental Market Survey. For the Census, wherever possible 2016 data has been used; however, since the entire 2016 Census has not been released yet, in several cases 2011 data has been used instead. The CMHC data is from the October 2016 Comprehensive Rental Market Survey, supplemented with data from earlier years where necessary.

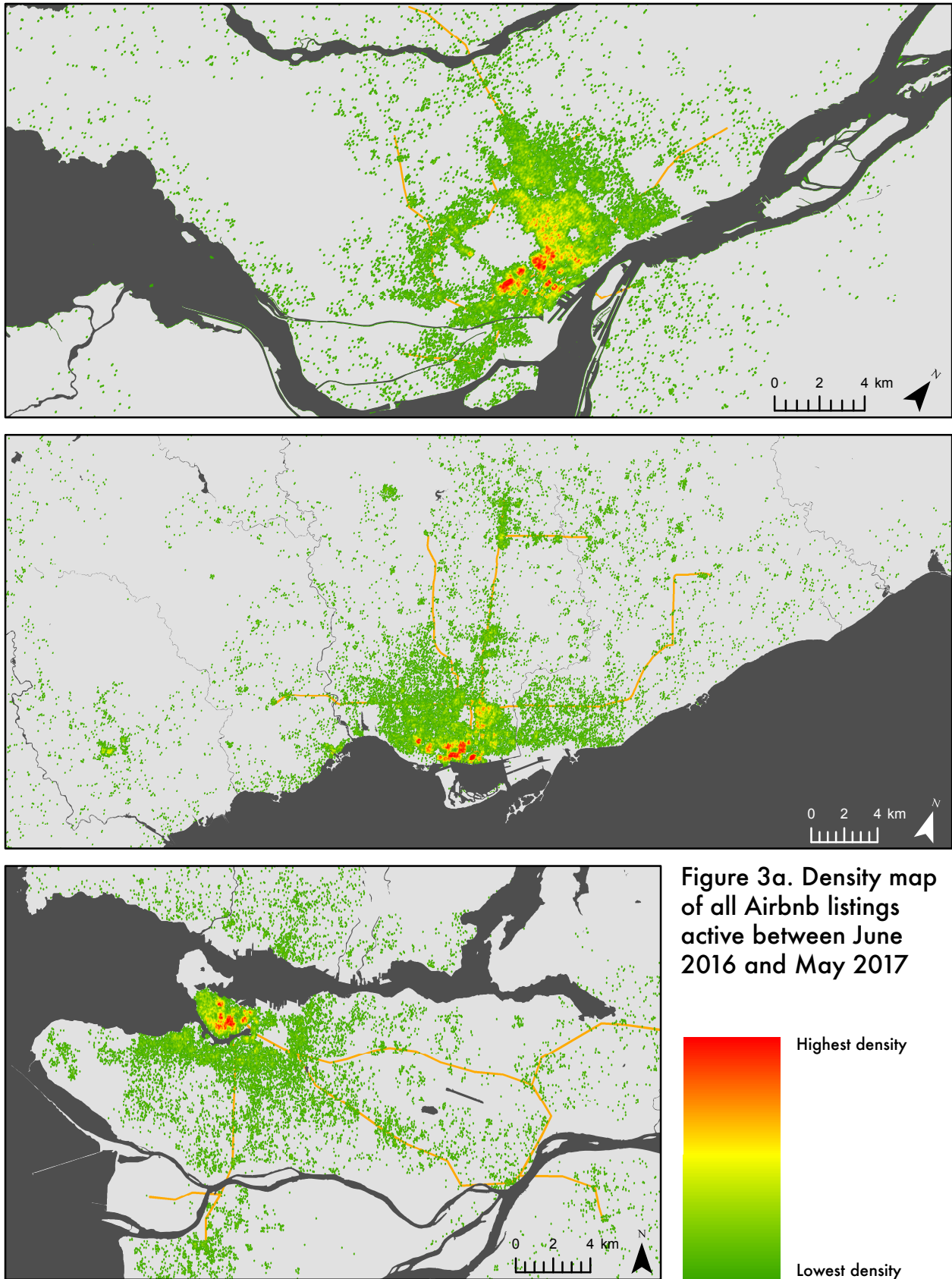
Results are displayed spatially in two ways in this report. Occasionally the Airbnb listings themselves are displayed directly on a map, but more commonly, listings are aggregated at larger scales—either “census tracts” defined by Statistics Canada or “neighbourhoods” defined by the Canada Mortgage and Housing Corporation. In either case, an inherent limitation of spatial analysis of Airbnb data is that the exact location of properties cannot be ascertained, because the publicly displayed X and Y coordinates of a listing on Airbnb’s website has been shifted from the real location by up to 150 m in a random direction. This randomness means that maps which show the exact locations of listings (or rely on these locations for their analyses) are misleadingly exaggerating the precision of the underlying spatial data. It also can lead to nonsensical situations, such as listings apparently located in the middle of a park or a body of water.

To overcome the spatial randomness, we use two techniques. For displaying listings on their own, we use a density map which aggregates the 150-m-radius areas from which each point might have been drawn, and uses a colour gradient to indicate areas with probabilities of more or fewer listings. For spatial analysis of the listings with respect to other housing and demographic variables, we have developed a Bayesian spatial inference technique which uses the distribution of housing units across a city to “weight” the probabilities that a given listing came from a given location. In practical terms, this means that a listing which has X-Y coordinates which place it in an area with relatively little housing but very close to an area with a lot of housing will be assigned a higher probability of being located in the highly populated area than the lightly populated one. This inference was carried out at the scale of dissemination areas (small, stable geographic areas of approximately 500 people defined by Statistics Canada), and the results aggregated to either census tracts or CMHC neighbourhoods.

3. Basic patterns of Airbnb activity

Across the Montreal, Toronto and Vancouver regions, 81,000 Airbnb listings have been active at some point in the last year, and 51,000 in May 2017. Montreal had the largest number for most of the year, but Toronto is now taking first place. These listings are heavily concentrated in the central cities of the three CMAs, and they are growing rapidly; the three cities have experienced a 50% year-over-year increase. A majority of listings in all three cities are entire homes rather than private rooms.

In the year ending May 2017, there were over 81,000 active Airbnb listings across the Montreal, Toronto and Vancouver CMAs (shown in Figure 3a). (An “active” listing is defined as a listing that was reserved or available for a reservation on at least one day during the time period. More stringent definitions of activity are used later in the report.) The Montreal CMA led the country with 31,449 active listings; with a total population of 4.10 million people living in 1.82 million housing units, this is one active listing per 130 people in the Montreal region, and one active listing per 58 homes. The Toronto CMA had 29,653 active listings—nearly as many as Montreal, although spread across a much larger population of 5.93 million. Toronto has one active listing per 200 people, and one active listing per 75 homes. The Vancouver CMA had the fewest active listings of the three cities at 19,994, but the highest in proportional terms because of the much smaller population of the region.



Data sources: Airdna, Statistics Canada, Canada Mortgage Housing Corporation; coordinate systems: NAD 1983 UTM Zones 10N, 17N, 18N

| City | Active listings | Homes per listing | % of listings in central city (% of pop.) | Central city homes per listing |
|-----------|-----------------|-------------------|---|--------------------------------|
| Montreal | 31,449 | 58 | 91% (41%) | 30 |
| Toronto | 29,653 | 75 | 87% (46%) | 46 |
| Vancouver | 19,994 | 51 | 64% (26%) | 24 |

Figure 3b. Listings active at least once in the last year

Vancouver had one active listing per 123 people, and one active listing per 51 homes. Put differently, Montreal and Toronto have similarly high absolute quantities of Airbnb listings, with Vancouver lagging noticeably behind. But Montreal and Vancouver have similarly high relative quantities of listings, with Toronto lagging noticeably behind.

The number of listings active in the past year has been trending up steadily in all three cities (Figure 3c). Montreal's active listings grew by 58% in the last year, while Toronto's grew by 60% and Vancouver's by 54%.¹ However, looking

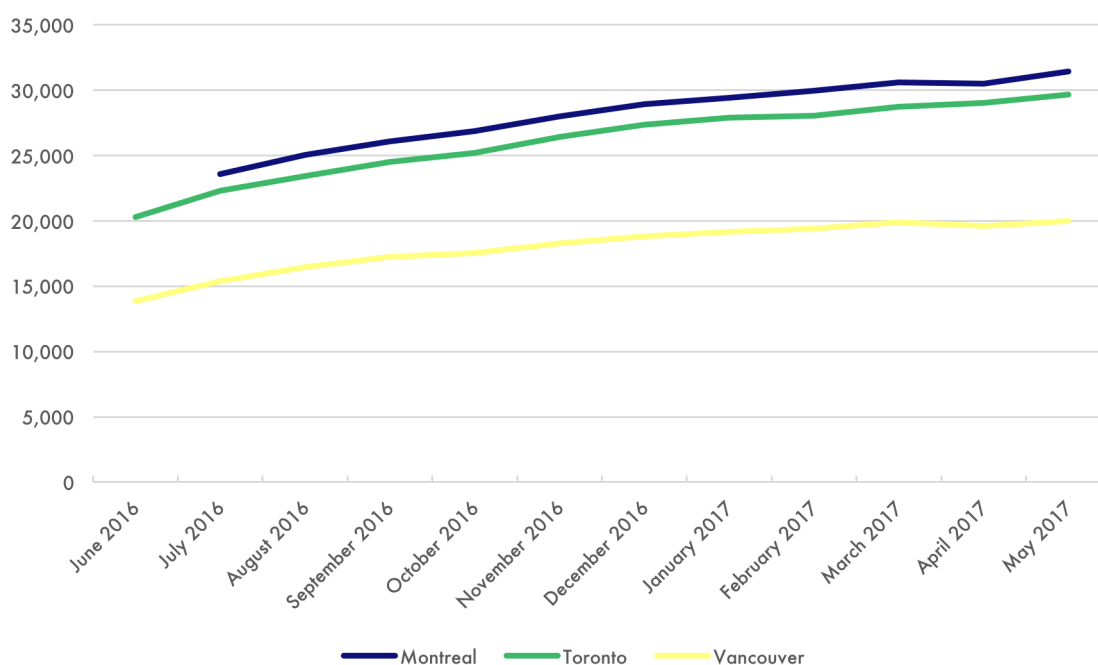


Figure 3c. Growth in listings active at least once in twelve-month period

¹ Here and in subsequent year-over-year comparisons, year-over-year growth rates for Montreal and several Vancouver suburbs are estimated from 22 months of data, because the 24 months necessary for full calculations are not available.)

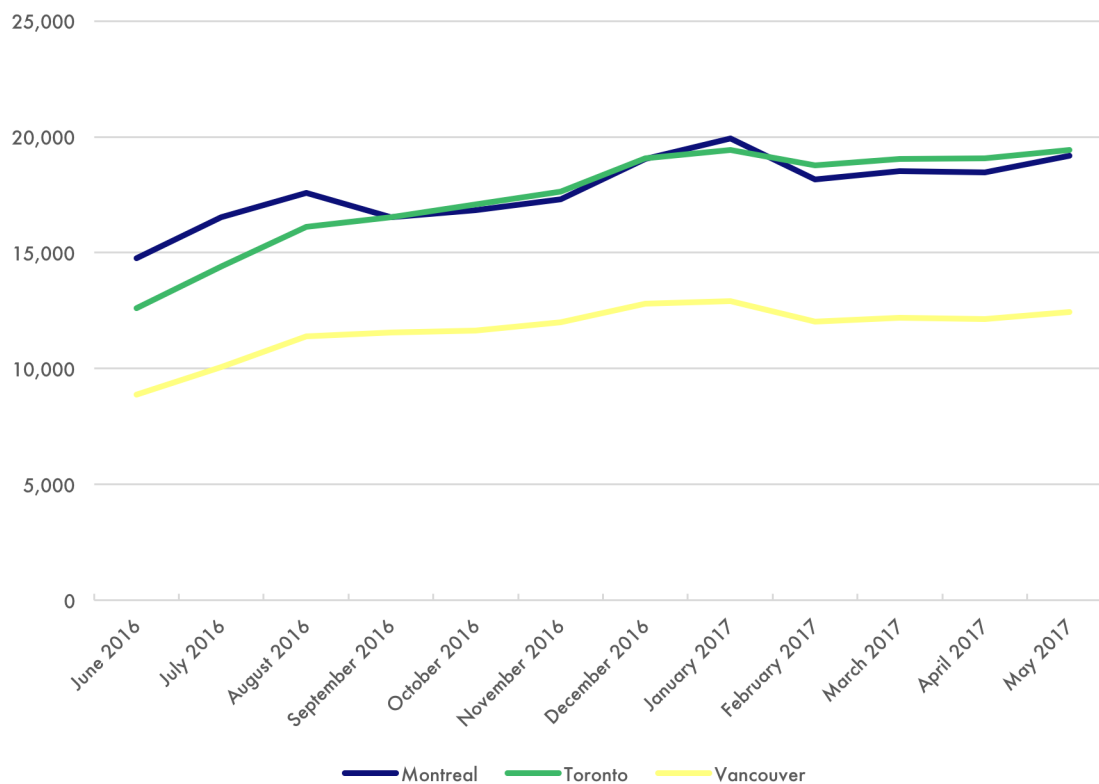


Figure 3d. Number of listings active in a given month

only at activity over a twelve-month period understates the volatility and churn in Airbnb listings. Airbnb listings exhibit a large amount of volatility and churn, due in part to rapid growth and in part to seasonality; of the total 81,000 listings which were active at some point over the year between the three regions, only between 45% and 65% of them were active in a given month (Figure 3d). Montreal began the year with more monthly-active listings than Toronto, but has since been narrowly overtaken by the latter. In May 2017, Montreal had 19,179 listings active that month, Toronto had 19,441, and Vancouver had 12,450. Booking activity is also highly seasonal: outside the summer months, fewer than half of the listings available in a given month get even a single reservation (Figure 3e).

As the map in Figure 3a shows, Airbnb listings are heavily concentrated in the central cities of the three CMAs. This pattern is strongest in Montreal: the City of Montreal has 41% of the population of the Montreal CMA, but 91% of the Airbnb listings. Toronto has a similar 87% of its listings in the central city where only 46% of the population resides. Vancouver is the outlier here—only 64% of its regional listings are in the central city—but this is largely explained by the fact that the City of Vancouver hasn't seen the same megacity merger that Montreal and Toronto both have, and only has 26% of the population of the Vancouver CMA. Figure 3b summarizes these details.

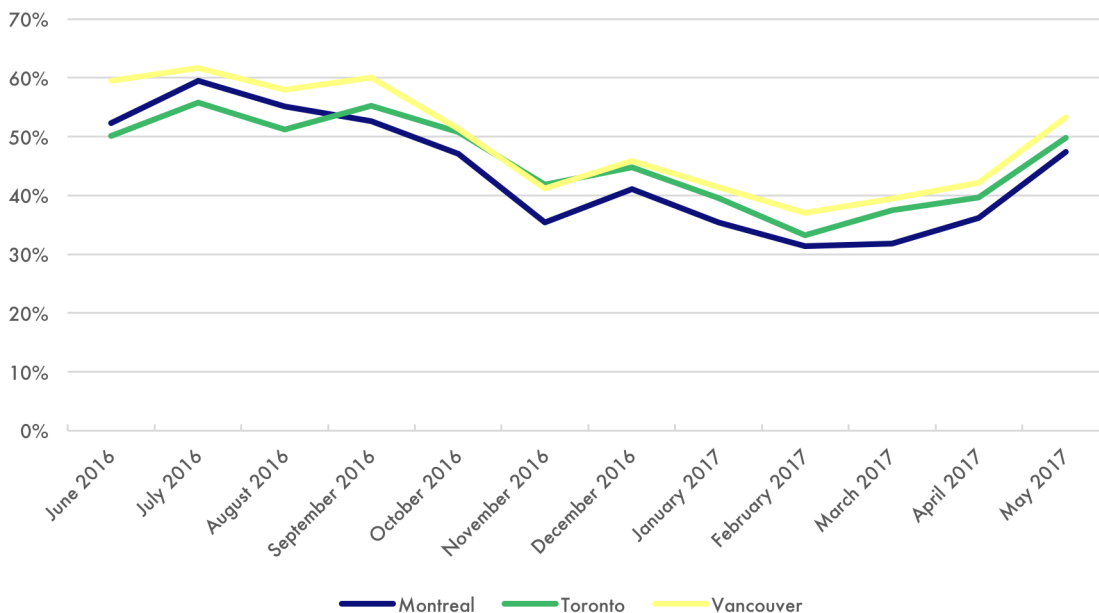


Figure 3e. Percentage of monthly active listings with at least one reservation

In each of the three Canadian cities, approximately three fifths of active Airbnb listings are entire homes, 30% are private rooms, and the remainder are shared rooms. However, the three cities have seen these proportions shift considerably in the last year; entire homes are becoming relatively less common in Toronto and Vancouver, but *more* common in Montreal (Figure 3f).

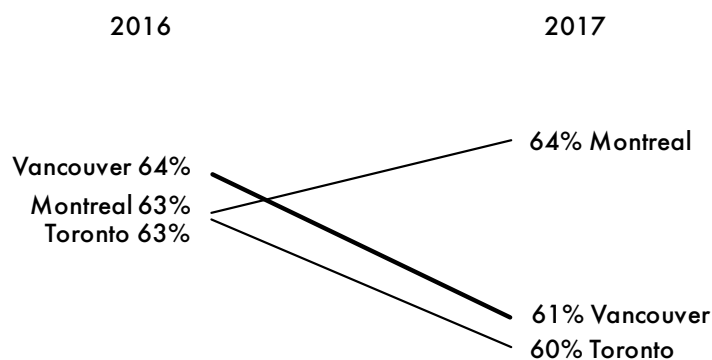


Figure 3f. Year-over-year change in the percentage of active listings which are entire homes²

² Here and in subsequent year-over-year comparisons, year-over-year growth rates for Montreal and several Vancouver suburbs are estimated from 22 months of data, because the 24 months necessary for full calculations are not available.)

4. Profiting off short-term rentals: Revenue generated on Airbnb

Airbnb hosts in Canada's largest three metropolitan areas earned a collective \$430 million in revenue last year, an average of \$5,310 per listing and a 55% increase over the year before. This growth is driven by Toronto, where total revenue nearly doubled year-over-year, and where average revenue per listing is also growing strongly. Revenue is highly concentrated among the most successful hosts, 10% of whom earn a large majority of overall revenue.

As fast as Airbnb is growing in Montreal, Toronto and Vancouver in terms of new listings, it is growing even faster in terms of revenue earned. Collectively, hosts in these three metropolitan areas earned \$430 million in revenue last year—a 55% year-over-year increase. Figure 4a summarizes key Airbnb revenue facts for Montreal, Toronto and Vancouver. The most significant observation is that, a year ago, Montreal generated significantly more revenue than either Toronto or Vancouver, but both of the latter have now passed the former. Toronto in particular has seen explosive overall revenue growth of nearly 100% year-over-year, substantially outpacing growth in new listings and therefore also driving an increase in average revenue per listing. In Vancouver, revenue growth almost exactly matched growth in listings, while in Montreal

| City | Total revenue (year-over-year growth) | Average revenue per listing (year-over-year growth) | Median revenue per listing |
|-----------|---------------------------------------|---|----------------------------|
| Montreal | \$131 million (23%) | \$4,200 (-22%) | \$1,000 |
| Toronto | \$162 million (94%) | \$5,500 (23%) | \$1,500 |
| Vancouver | \$137 million (49%) | \$6,900 (0.6%) | \$2,200 |

Figure 4a. Annual revenue earned by Airbnb listings

relatively modest revenue growth was outpaced by hosts adding new listings, leading to a decline in average revenue per listing.

Between the three regions, listings earned an average of \$5,300 last year. But focusing on this statistic is misleading for two reasons: first, the growth rate of Airbnb means many hosts joined in the middle of the last twelve months, and hence drag down average annual revenue; and second, Airbnb listing revenue is distributed unequally. Both of these facts are reflected in the far smaller median revenue per listing in Figure 4a. Examining the subset of listings which have been active for the *entire* year (i.e. they were active in both June 2016 and May 2017) provides a more accurate look at the profile of long-term Airbnb listings, and reveals a stark difference in median revenue per listing between the three cities (Figure 4b). The median listing in Vancouver who has been active for an entire year earns more than twice its counterpart in Montreal.

Aggregating revenue by individual hosts (many of whom control multiple listings, as chapter 6 discusses), and examining only hosts who earned any revenue over the last year, the top 1% of hosts earned \$89 million—more than 20% of the total. In all three cities the top 10% of hosts earned a majority of the

| City | Listings active in June 2016 and May 2017 (% of total active listings) | Total revenue (% of total revenue) | Average revenue per listing | Median revenue per listing |
|-----------|--|------------------------------------|-----------------------------|----------------------------|
| Montreal | 7,678 (24.4%) | \$70 million (54%) | \$9,100 | \$4,400 |
| Toronto | 7,197 (24.3%) | \$80 million (49%) | \$11,100 | \$5,800 |
| Vancouver | 4,839 (24.2%) | \$70 million (50%) | \$14,500 | \$9,300 |

Figure 4b. Annual revenue earned by Airbnb listings active throughout the year

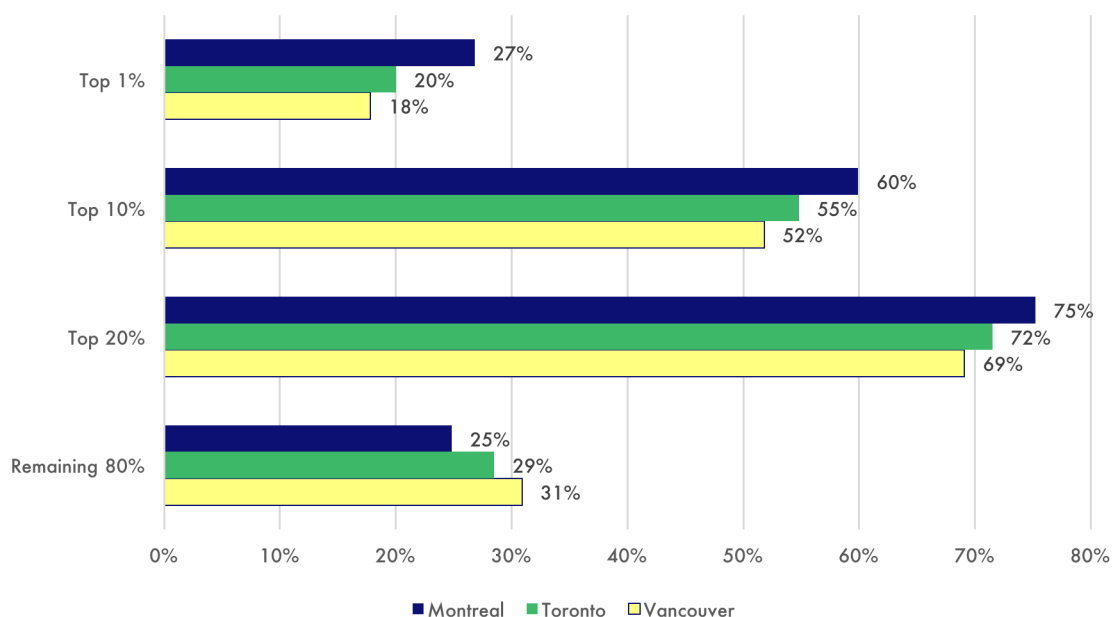


Figure 4c. Revenue shares among host percentiles

revenue, but revenue was most unequally distributed in Montreal, and least unequally distributed in Vancouver (Figure 4c).

The top five revenue generating listings in each city are summarized in Figure 4d. They are a very narrow segment of the overall short-term rental market, but between them generated \$2.6 million in revenue last year. (It is important to note that, because this population is extremely small, the uncertainty about these estimates is much higher than with the rest of the revenue estimates in

| City | Listing title excerpts | Average annual revenue | Average annual nights booked |
|-----------|---|------------------------|------------------------------|
| Montreal | "La Maison", "Bachelor Party Pad", "Luxury Penthouse", "Amazing 8BR Suites", "Chateau Bachelor Party" | \$228,000 | 124 |
| Toronto | "Luxury, Sophistication, "Contemporary and Spacious", "Stunning Downtown Home", "360 Platinum Suite", "Heritage Home" | \$145,000 | 236 |
| Vancouver | "Yacht", "House for Large Groups", "Modern New Home", "Spectacular Water View", "Luxury Oceanfront Mansion" | \$142,000 | 134 |

Figure 4d. The top five earners in each city



Figure 4e. Photo of one of the top Airbnb properties in Canada (source: Airbnb.ca)

the report, which are generally aggregating hundreds or thousands of listings.) Unsurprisingly, these listings self-describe as premium, luxurious accommodations (Figure 4e). And more than accommodations: One top listing in Toronto boasts “Property available for photoshoots & film. Previous clients include Drake, Samsung, Sony & Bell.” Meanwhile, one of Vancouver’s top earners is in fact a small yacht anchored off the coast of North Vancouver, which is operated by a former mayor from a nearby municipality.

Figure 4d reveals two facts. The first is that, despite generating the least overall Airbnb revenue among the three cities and the least revenue per host, Montreal has a significantly more active high-end short-term rental scene than Toronto or Vancouver, with average annual revenue for its top properties more than 50% higher than either of the latter two cities. And second, this is so despite the fact that Montreal’s top five properties are relatively infrequently booked—actually less often than the general population of full-time, entire-home listings (a category discussed in the next chapter). (Vancouver’s average is lowered substantially by the yacht, which was very infrequently booked but at very great cost; the other four properties were booked 164 nights a year, which is moderately higher than the city’s average for full-time, entire-home listings.) In fact, in Montreal not a single one of the top five properties was booked even half the year; they each sat available but un-booked for 200 or more days. But when they were rented, it was for a nightly average price of \$1800. In Toronto,

by contrast, the nightly price of the five top earning properties was \$600—a third of Montreal’s price—but the properties were each booked for approximately two thirds of the year. (For some international perspective, the top five Airbnb listings in New York City earned an average of C\$370,000 last year, at an average rate of just under C\$2000 a night.)

5. Housing removed from the market: Full-time listings

There are now 13,700 entire homes rented 60 days or more per year on Airbnb in Montreal, Toronto and Vancouver, each of which is unlikely to be rented to long-term tenants. These entire homes account for one sixth of all Airbnb listings, and a majority of nights booked on the service. Even more worryingly, these listings are growing around 25% more rapidly than other categories of listings. Many neighbourhoods—above all in Montreal—have seen two or three percent of their entire housing stock converted to de facto hotels.

In their public relations, Airbnb and other short-term rental platforms tend to emphasize small-scale uses of their services—the way, for example, that homeowners can help meet their mortgage payments by hosting occasional guests. But most regulatory scrutiny and research focus into short-term rentals has been trained on entire homes which are frequently rented or available on short-term rental platforms. For good reason—every home that is

converted to full-time Airbnb use is subtracted from the pool of actual or potential long-term rental housing units in a city.

Defining a “full-time” Airbnb rental is difficult. To begin with, there are different reasons you might be interested in defining “full-time” Airbnb occupancy. For instance, someone thinking about becoming an Airbnb host would want to feel confident that their unit would be rented enough of the time to justify not doing something else with it (such as renting it with a standard 12-month lease, or selling it to someone else). For housing researchers, on the other hand, an important reason to measure “full-time” Airbnb usage is in order to assess Airbnb’s impact on the long-term residential rental housing market. A frequent accusation levelled against the service is that it is effectively encouraging the conversion of apartments into hotels. To answer this accusation with evidence requires establishing a threshold which separates units on Airbnb that probably still have a long-term primary resident from units which are rented on Airbnb enough that they probably do not.

Of course, there is no single threshold that will accurately classify every case. There are probably people who travelled extremely frequently during a year, were able to keep a unit as their primary residence while still renting it on Airbnb for 200 days in the year. And there are probably people who listed their unit year-round but set too high a price or were in an area with insufficient demand, and it only rented 25 days in total despite being otherwise unoccupied by a long-term resident. Setting the threshold too low will generate many false positives—for example by counting as “full-time” an apartment which was on Airbnb for a few weeks after one long-term tenant moved out and before another moved in, or an apartment which the long-term inhabitant puts on Airbnb during periods of occasional travel. On the other hand, setting the threshold too high will generate many false negatives, and end up underestimating the impact Airbnb is having on housing markets.

In this report we use a combination of two metrics to estimate full-time Airbnb usage: the number of days per year that a unit is booked (“occupancy”), and the number of days that a unit is either booked or available to be booked (“availability”). We define “full-time” as 60 days of occupancy and 120 days of availability. 60 days of occupancy rules out most scenarios of occasional short-term rental, such as a landlord taking advantage of a one-month gap between long-term tenants, or a family leaving on a one-month summer vacation. And setting an additional constraint of 120 days of availability prevents the inclusion of listings which are rented relatively infrequently but with extremely high efficiency; for example, a homeowner who was out of town every weekend and listed her unit on Airbnb would only have 104 days of availability, and so would not be counted as “full-time” by our criteria even if she managed to rent the unit for 60 of those days. (The 60-day occupancy threshold has also been used by other short-term-rental researchers, such as InsideAirbnb’s Murray

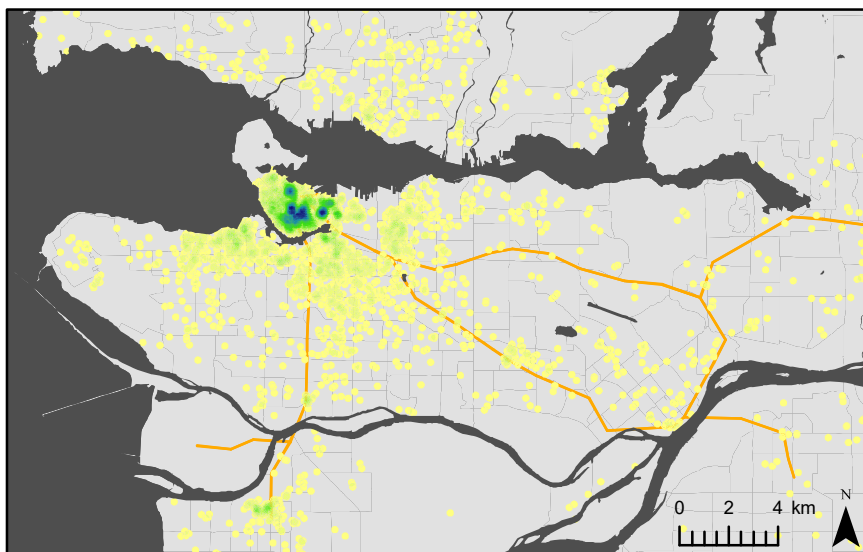
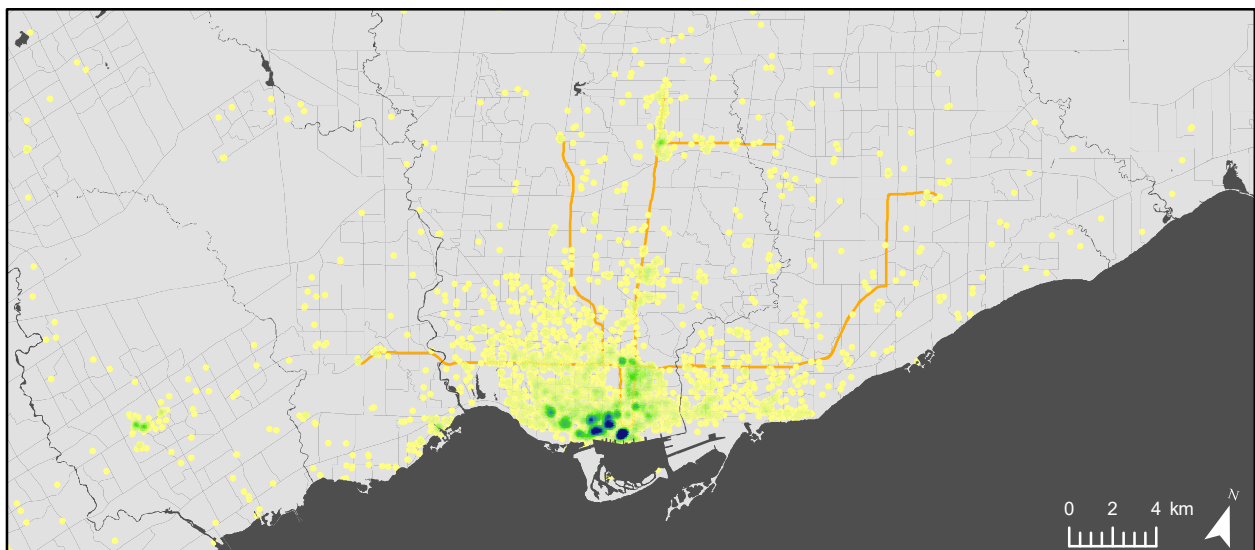
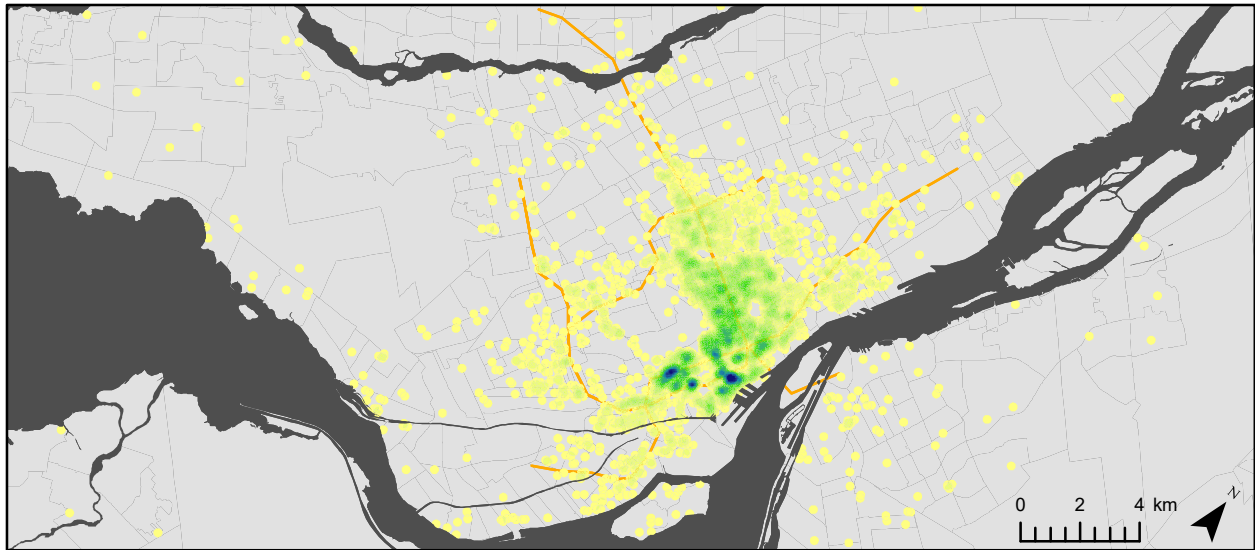
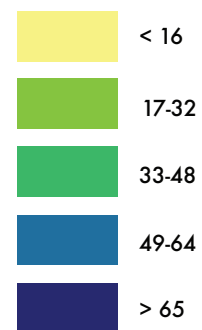


Figure 5a. Density map of entire-home listings rented 60 days or more



| City | Entire-home listings rented 60 days or more | Percentage of active listings | Average # of nights booked annually | Year-over-year growth rate |
|-----------|---|-------------------------------|-------------------------------------|----------------------------|
| Montreal | 4,970 | 16% | 137 | 24% |
| Toronto | 4,890 | 16% | 144 | 96% |
| Vancouver | 3,890 | 19% | 142 | 57% |

Figure 5b. Entire-home listings rented 60 days or more in a year

Cox, and it matches the limit on short-term rentals currently being pursued by Amsterdam and other cities worldwide.)

According to this definition, Montreal and Toronto each have nearly 5,000 full-time, entire-home Airbnb listings, while Vancouver has nearly 4,000; the distribution of these listings is shown in Figure 5a. (The three cities have a further 5,400 full-time private-room listings between them, which also represent a potentially problematic loss of rental housing, since many of these rooms will have previously hosted tenants living in roommate situations.) In total, there are as many as 13,700 homes across the three cities which can no longer have full-time residents living in them because they are serving as de facto hotels instead. And while the minimum threshold for “full-time” status

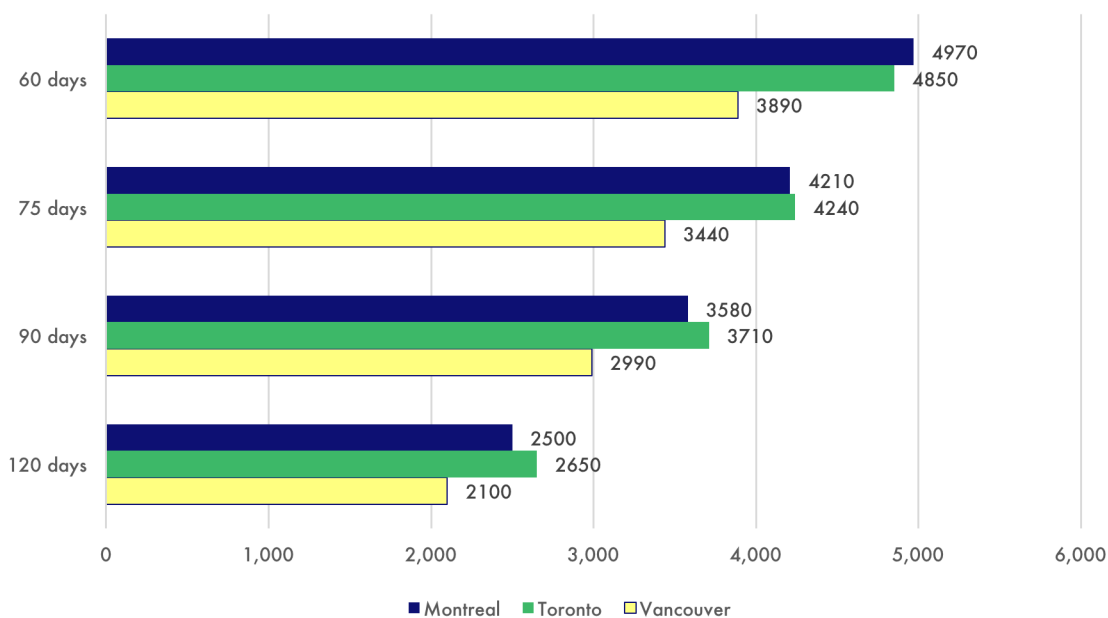


Figure 5c. Estimated entire-home listings at different “full-time” thresholds

was set to 60 days occupied and 120 days available, on average these listings were occupied 141 days and available 254 days (with 114 days available but not booked). Figure 5b summarizes key facts about these listings.

Setting more conservative thresholds for so-called “full-time” status correspondingly lowers the estimated counts of full-time, entire-home units, although the counts decrease more slowly than the threshold increases (Figure 5c). If the “full-time” threshold is increased by 50% to 90 days (while retaining the same 120-day availability threshold), for example, the full-time count only declines by 25%, from 13,700 between the three cities to 10,300.

In one year, active listings grew by 39%. By contrast, full-time, entire-home listings (using the 60 days occupied, 120 days available threshold) grew by 54% (Figure 5d). They are now more than one sixth of all active listings. Even more dramatically, out of the 3.6 million nights booked in the last twelve months on Airbnb in Montreal, Toronto and Vancouver, *more than half* (1.9 million) were booked in a full-time, entire-home listing.

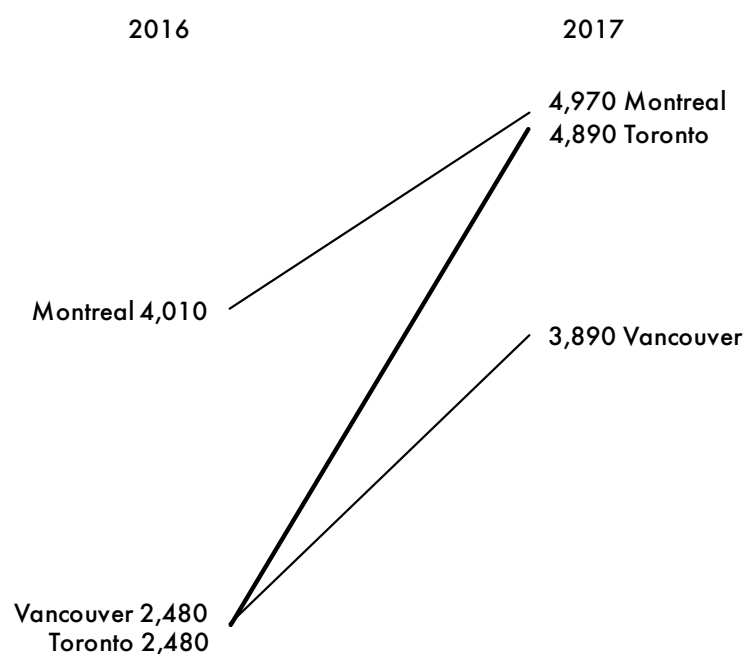


Figure 5d. Year-over-year growth in full-time, entire-home listings

The significance of the full-time, entire-home Airbnb listings in Canadian cities becomes even clearer when they are expressed as a percentage of total housing on a neighbourhood scale. Figure 5e demonstrates that there are several neighbourhoods across all three regions (with Montreal the most strongly affected) where Airbnb has removed as much as *two or three percent of all housing* off the primary residential market. Airbnb’s impact on Canadian housing markets will be explored more thoroughly below, in Chapter 7.

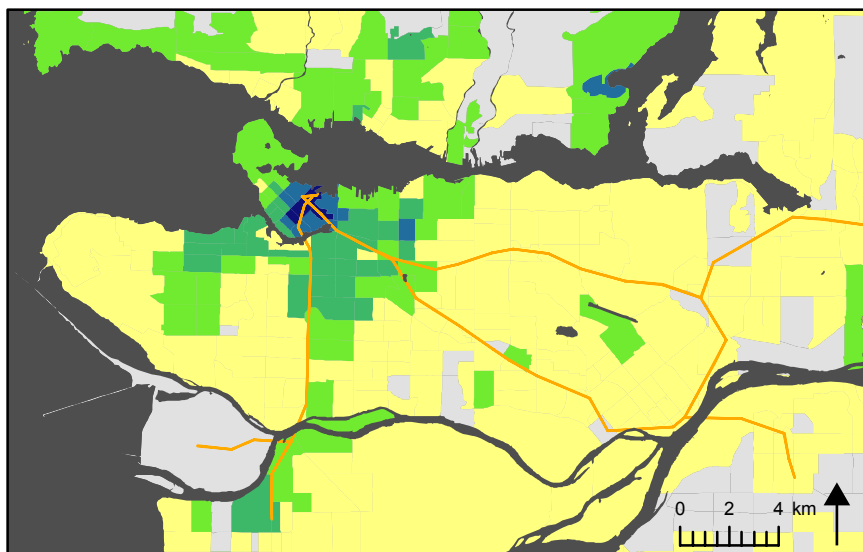
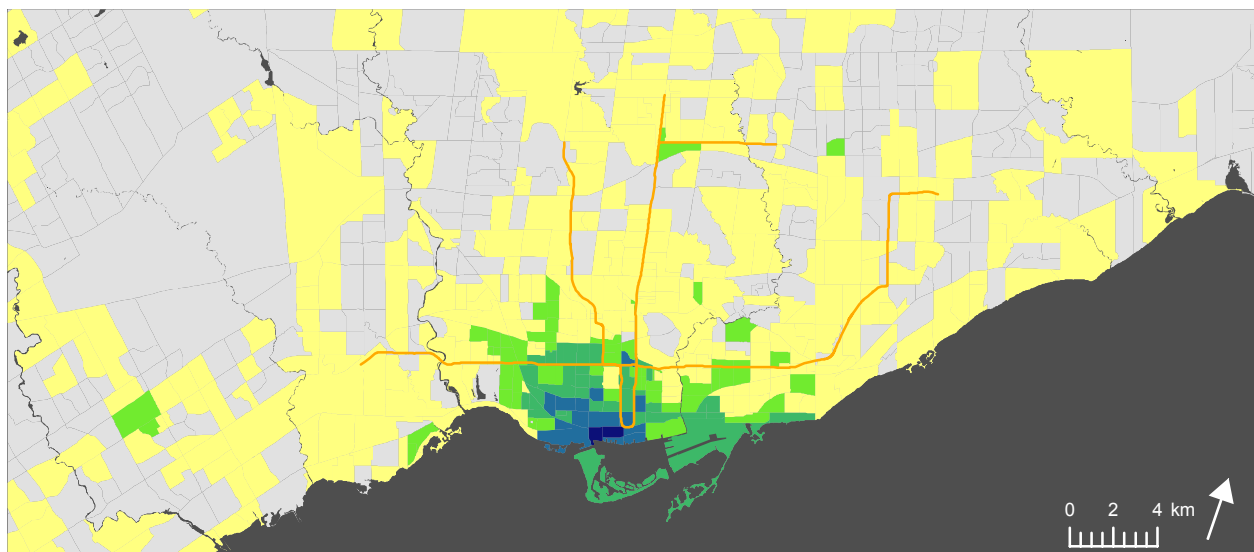
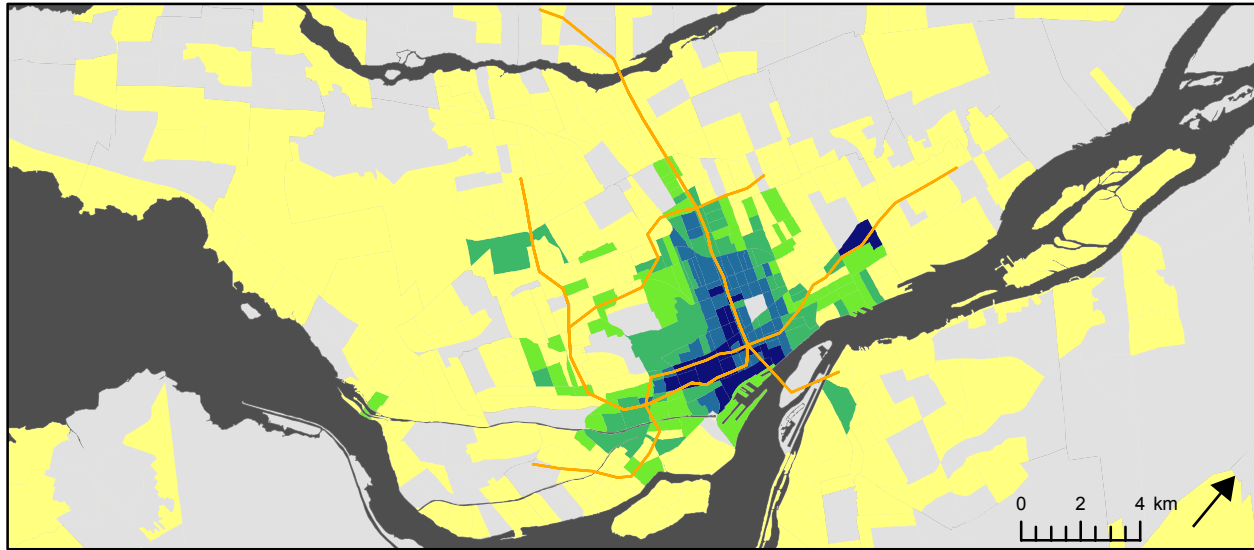
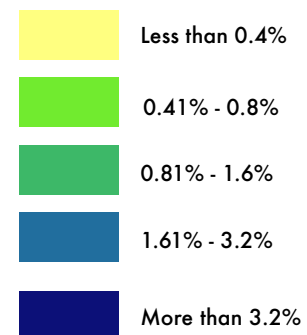


Figure 5e. Entire homes rented 60 days or more, as a percentage of total housing units



Data sources: Airdna, Statistics Canada, Canada Mortgage Housing Corporation; coordinate systems: NAD 1983 UTM Zones 10N, 17N, 18N

6. Airbnb as a business: Multi-listing hosts and the “triple threat”

A third of all active Airbnb properties are “multi-listings”, whose hosts administer two or more entire homes or three or more private rooms. The most successful of these hosts earn millions of dollars per year running commercial short-term rental services across dozens or even hundreds of homes, most of which are no longer able to support a long-term resident. The “triple threat” is short-term rental listings which are full-time, entire homes, and multi-listings. Even though there are only 6,500 of these listings in Montreal, Toronto and Vancouver—8% of the total active listings—they account for 34% of total revenue. These listings are growing more rapidly than any other category of listing, and in Toronto their share of total revenue increased by 125% in a single year.

| City | Active multi-listings (% of total) | Entire-home multi- listings (% of total) | Private-room multi- listings (% of total) |
|------------------|---|---|--|
| <i>Montreal</i> | 9,113 (29.0%) | 7,572 (37.5%) | 1,541 (14.4%) |
| <i>Toronto</i> | 9,924 (33.5%) | 6,660 (37.5%) | 3,264 (29.7%) |
| <i>Vancouver</i> | 7,338 (36.7%) | 4,682 (38.7%) | 2,652 (36.4%) |

Figure 6a. Multi-listings active at least once in the last year

While Airbnb may have begun as a “peer-to-peer” service connecting individuals, it and other short-term rental services have evolved into a significant platform for third-party businesses in the hospitality industry. Cleaning services and key exchange kiosks, for example, effectively leverage economies of scale in areas of particular inconvenience for hosts. More problematic for local housing affordability and availability, however, are businesses which have turned home sharing itself into a large-scale profit-making opportunity by operating multiple listings simultaneously. So-called “ghost hotels” (Wieditz 2017)—entire buildings which have been converted by their landlords into full-time Airbnb operations—are the most disruptive, but arguably even firms which operate more scattered sets of listings represent a worrying further commodification of housing. The largest multi-listing hosts in Canada administer large swathes of properties. For example, international vacation rental company Sonder has 184 active Airbnb listings in the Montreal region, which collectively earned \$2.4 million dollars last year. Its competitor Simplissimmo added 64 new Airbnb listings in late May 2017.

We define multi-listings conservatively as listings administered by hosts who have two or more entire-home listings or three or more private-room listings. Most analyses of short-term rentals have measured multi-listing hosts literally—as any host who is operating two or more listings. The problem with this definition, simple as it is, is that a homeowner with two spare bedrooms which she has listed as separate “private room” rentals is lumped in together with a commercial operator of 100 units or more. In order to avoid overstating the prevalence of commercial multi-listing hosts, we set a more aggressive threshold of three private rooms administered by the same host before we consider them multi-listings. (We leave the entire-home threshold at two, since by definition anyone administering two entire-home listings cannot only be occasionally renting out their primary residence.) In practical terms, this means that we have excluded more than 5,000 private-room listings whose hosts operate only one other additional listings—nearly half of the potential total. Spot checks revealed that many of these listing pairs were indeed likely located in the same housing unit.

In all three regions, a third of active listings are multi-listings, and in all three cases the proportion is considerably higher among entire homes than among private rooms (Figure 6a). Montreal has the smaller proportion of multi-listings, which is entirely explained by the very low prevalence of multi-listings among private-room rentals.

Consistently across the three metropolitan areas, multi-listings are growing more rapidly than Airbnb listings as a whole. And this growth is particularly concentrated among entire-home multi-listings, the quantity of which have nearly doubled in the past year, from just under 11,000 in the year ending May 2016 to just under 19,000 in the year ending May 2017. Moreover, as Figure 6b shows, an increasingly large share of all entire-home listings (itself a rapidly growing category) comprises multi-listings. The clear implication is that Airbnb is becoming more and more dominated by large commercial operators.

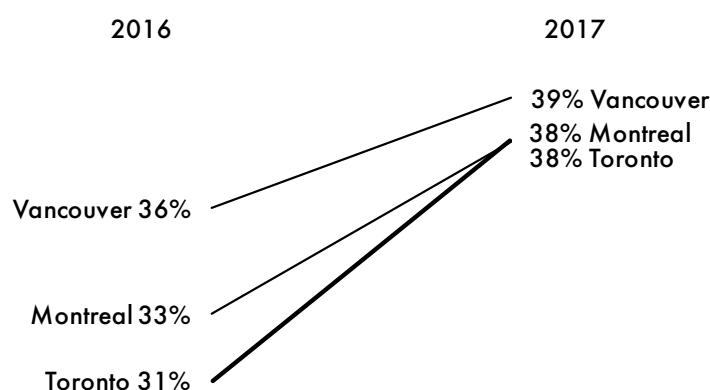


Figure 6b. Growth in the percentage of entire-home listings which are multi-listings

The geography of multi-listings reveals clear neighbourhood-level specializations among the largest multi-listing hosts, as well as considerable variety between cities. Figure 6c shows the listing distributions of the entire-home listings for the five largest multi-listing hosts in each city. Each listing controlled by a single host is connected to each other such listing by a thin line, to emphasize the spatial extent of a host's holdings. In the Montreal region, all the top multi-listing hosts have their properties concentrated in the central city, with not a single property reaching beyond the core subway-accessible area centred on the downtown and the Plateau Mont-Royal. While the top two hosts (in red and orange) have listings that span this entire area, the next three are all concentrated rather narrowly. The Toronto metropolitan region, by contrast, has its top multi-listing hosts spread out quite dramatically, with three separate nodes of activity identifiable. Downtown Toronto has the most activity (and the fifth-largest host, in purple, is completely confined to this area), but northern Toronto, particularly along the Sheppard Avenue subway line, has a large share of listings as well. Perhaps most notable is the third cluster to the west in the suburban municipality of

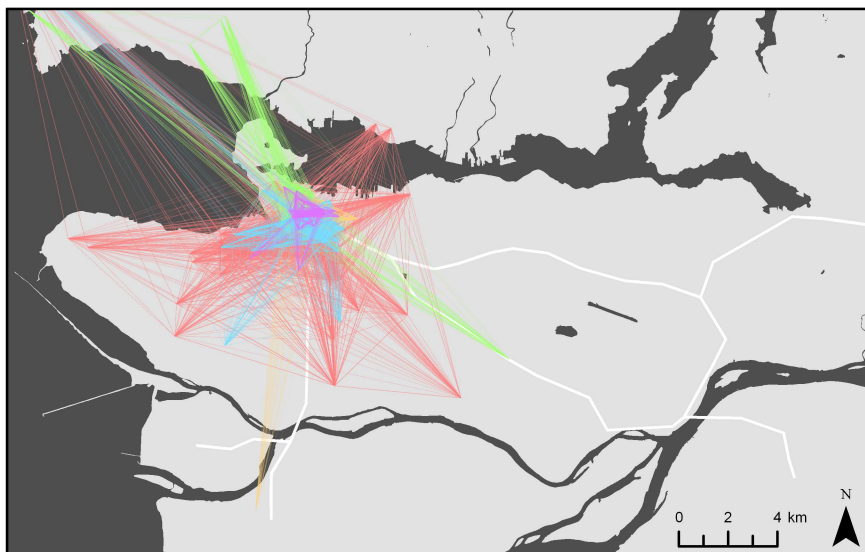
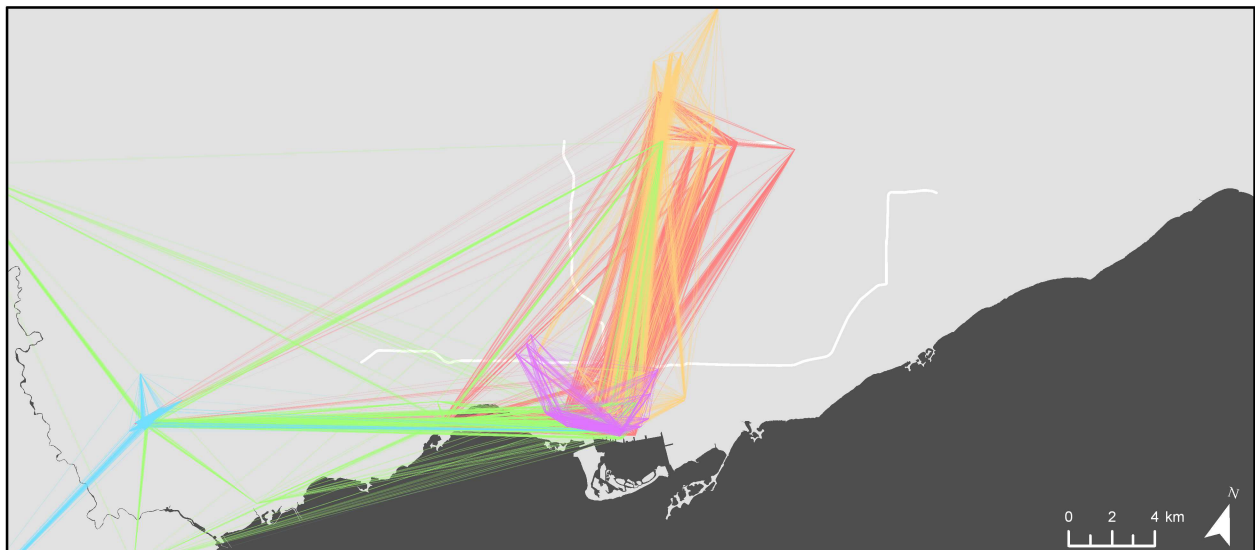
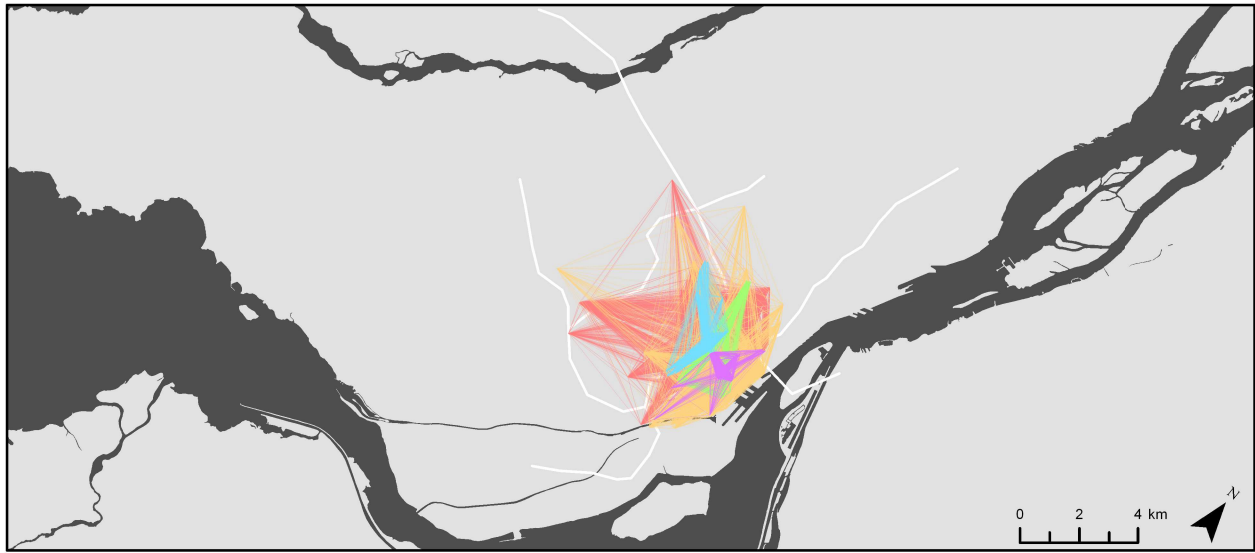


Figure 6c. Distribution of top entire-home multi-listings by host

- Biggest host
- Second-biggest host
- Third-biggest host
- Fourth-biggest host
- Fifth-biggest host

Data sources: Airdna, Statistics Canada, Canada Mortgage Housing Corporation; coordinate systems: NAD 1983 UTM Zones

| City | Top host | Number of listings | Approx. annual revenue |
|-----------|-----------------------|--------------------|------------------------|
| Montreal | Sonder | 184 | \$2.4 million |
| Toronto | Toronto Suite Rentals | 128 | \$1.3 million |
| Vancouver | “Oliver” | 50 | \$1.3 million |

Figure 6d. The largest multi-listing host in each metropolitan area

Mississauga. The fourth-largest host is almost entirely confined to Mississauga and a few listings further west, while the third-biggest host has substantial listings throughout the western suburbs. Finally, the Vancouver area has a level of concentration somewhat between the other two regions. Most entire-home multi-listings are concentrated on the downtown peninsula and the areas to the south, but there are several listings in the suburb of Richmond, and many more in the suburban areas of Northern Vancouver. (There is also a significant concentration of listings on Bowen Island, off the map to the northwest, which is a more traditional vacation destination, and thus has not been the focus of the report.)

Figure 6d lists the top multi-listing host by revenue in each city. (As with the top-five earners in each city discussed above, the uncertainty about these estimates is much higher than with the rest of the revenue estimates in the report, which are generally aggregating hundreds or thousands of listings.) While these hosts are in no way representative of the overall state of the short-term rental market, they indicate what is occurring at the top-end: increasing commercialization and concentration.

The triple threat

Among the 26,000 multi-listings in Montreal, Toronto and Vancouver, there is a small subset which are 1) full-time, 2) entire homes, and 3) multi-listings. These are the listings which represent the maximum commercialization and commodification of home sharing: they are being operated as a large-scale business, and they are taking long-term housing off the rental market. Because of their particularly severe impact on housing markets in the three largest Canadian cities, we refer to these listings as the “triple threat”.

There are only 6,500 such listings across the three largest Canadian cities. Vancouver has the highest proportional share—almost 9% of its total listings. But these 6,500 units each generate an average of \$22,600 in annual revenue, and together account for more than a third of all the money earned by Airbnb hosts (Figure 6e).

| City | # of "triple threat" listings | Percentage of active listings | Annual revenue | Percentage of total revenue |
|-----------|-------------------------------|-------------------------------|----------------|-----------------------------|
| Montreal | 2,400 | 7.6% | \$47 million | 36% |
| Toronto | 2,320 | 7.8% | \$54 million | 33% |
| Vancouver | 1,790 | 9.0% | \$46 million | 35% |
| Total | 6,520 | 8.0% | \$148 million | 34% |

Figure 6e. The "triple threat"

In addition to the disproportionate share of Airbnb revenue they currently command, the revenue of "triple threat" listings is growing much faster than any other category of short-term rentals on the platform (Figure 6f). The lowest year-over-year revenue growth rate (in Vancouver) was still over 75%. The highest growth has occurred in Toronto, which in one year went from the least revenue to the most revenue thanks to a revenue growth rate of 125%. In this category of listings like in many others, short-term rentals in Toronto appear to be outpacing their counterparts in Montreal and Vancouver.

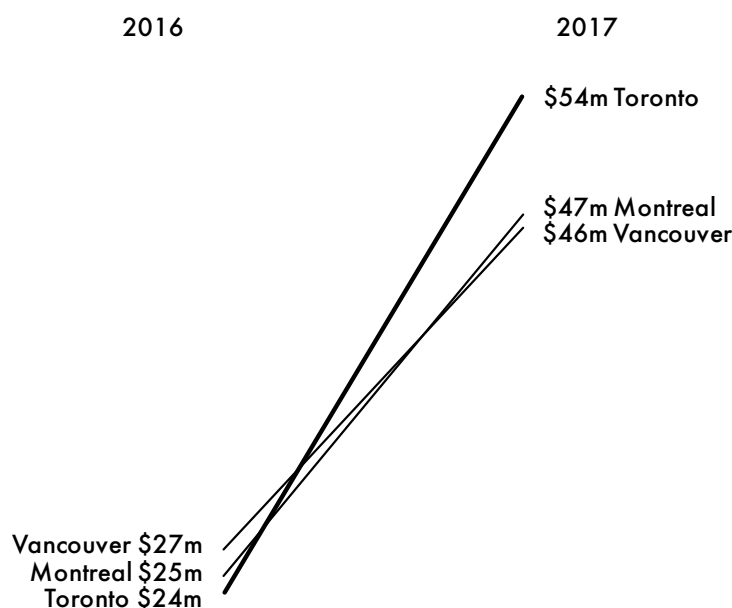


Figure 6f. Year-over-year revenue growth among the "triple threat"

7. Airbnb's impact on rental housing

Airbnb has removed as many as 13,700 units of housing from rental markets in Montreal, Toronto and Vancouver. In some areas this represents more than two percent of the total housing stock—a number comparable to the rental vacancy rate in the three cities. In general, these are neighbourhoods with above average rents, but there are significant economic pressures threatening further conversions of long-term rentals to de-facto Airbnb hotels in a number of more affordable areas—particularly those lying on mass transit lines. In the last year, conversions to short-term rentals have outpaced new home construction in a number of neighbourhoods.

There are 13,700 entire home Airbnb listings rented 60 or more days a year in Canada's three largest cities. Figure 7a shows their distribution relative to the total housing stock, and the core of blue at the heart of each of the three cities should be a cause for concern. These are areas where two or three percent of all the housing stock is being rented intensively on Airbnb. Although this

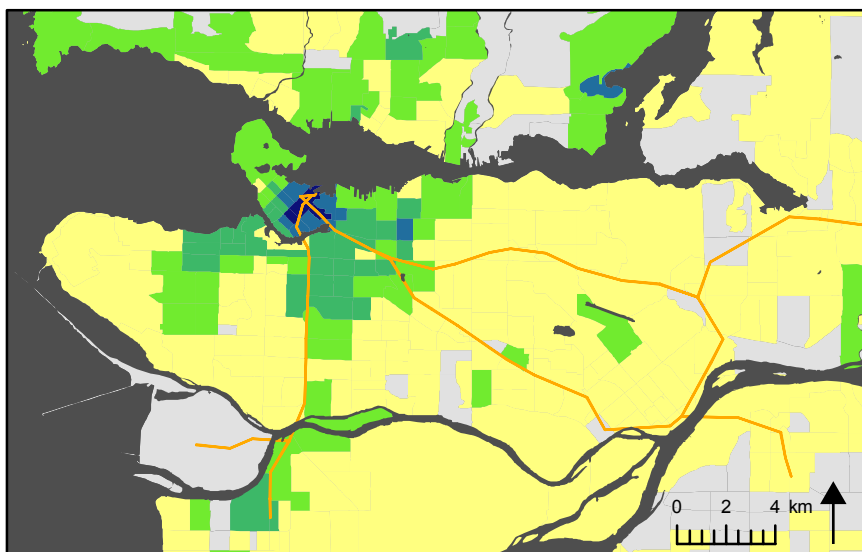
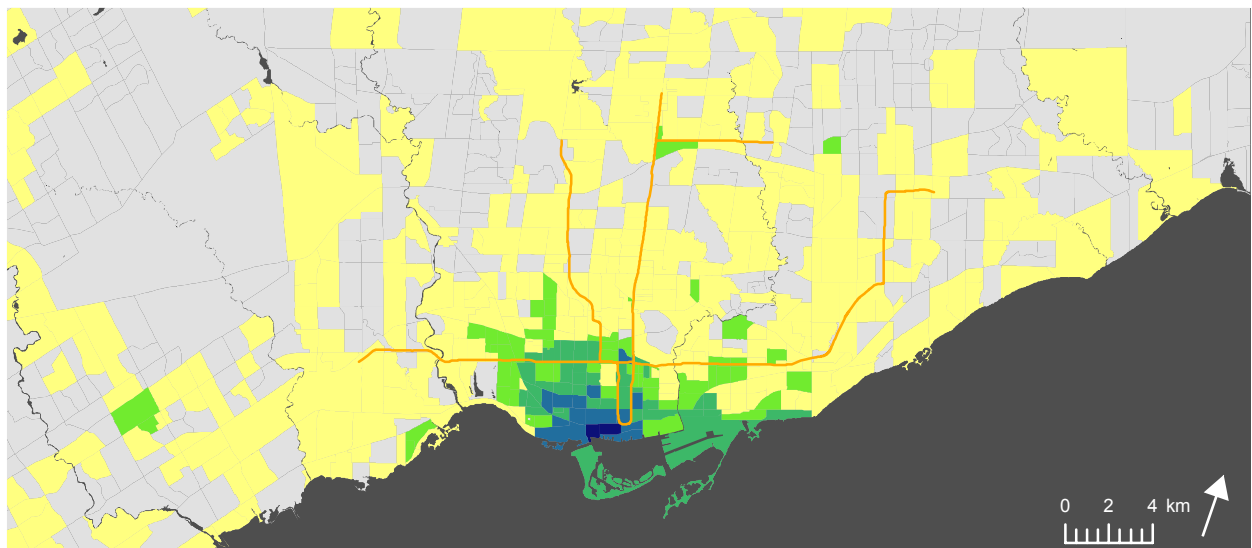
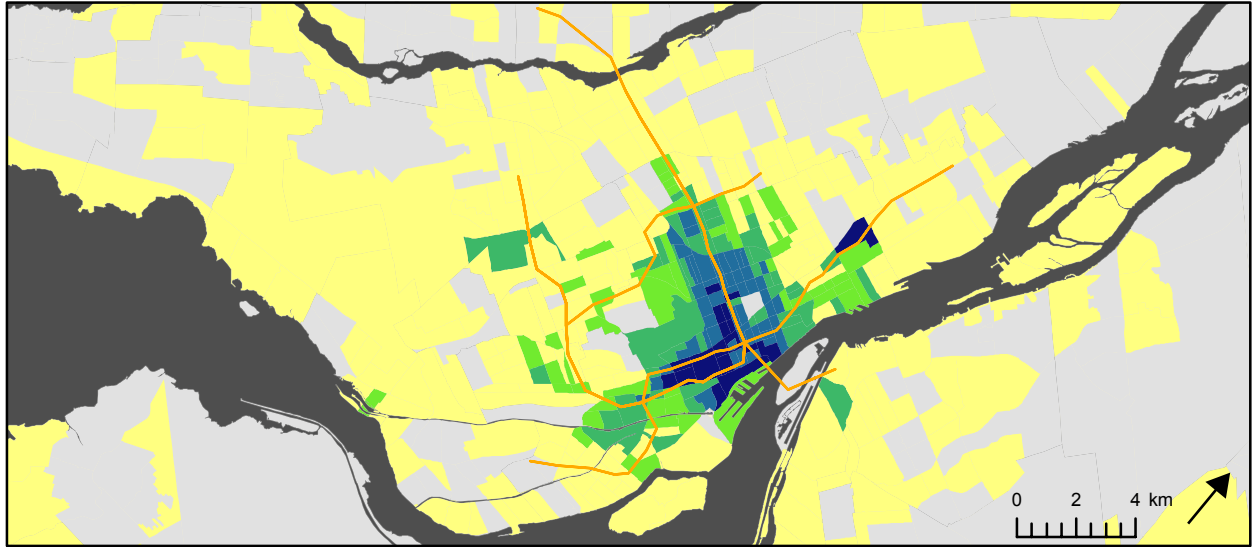
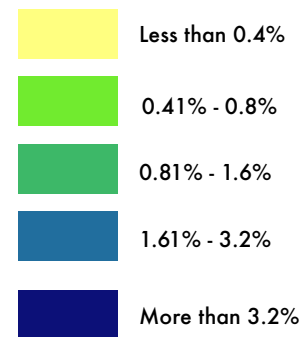


Figure 7a. Entire homes rented 60 days or more, as a percentage of total housing units



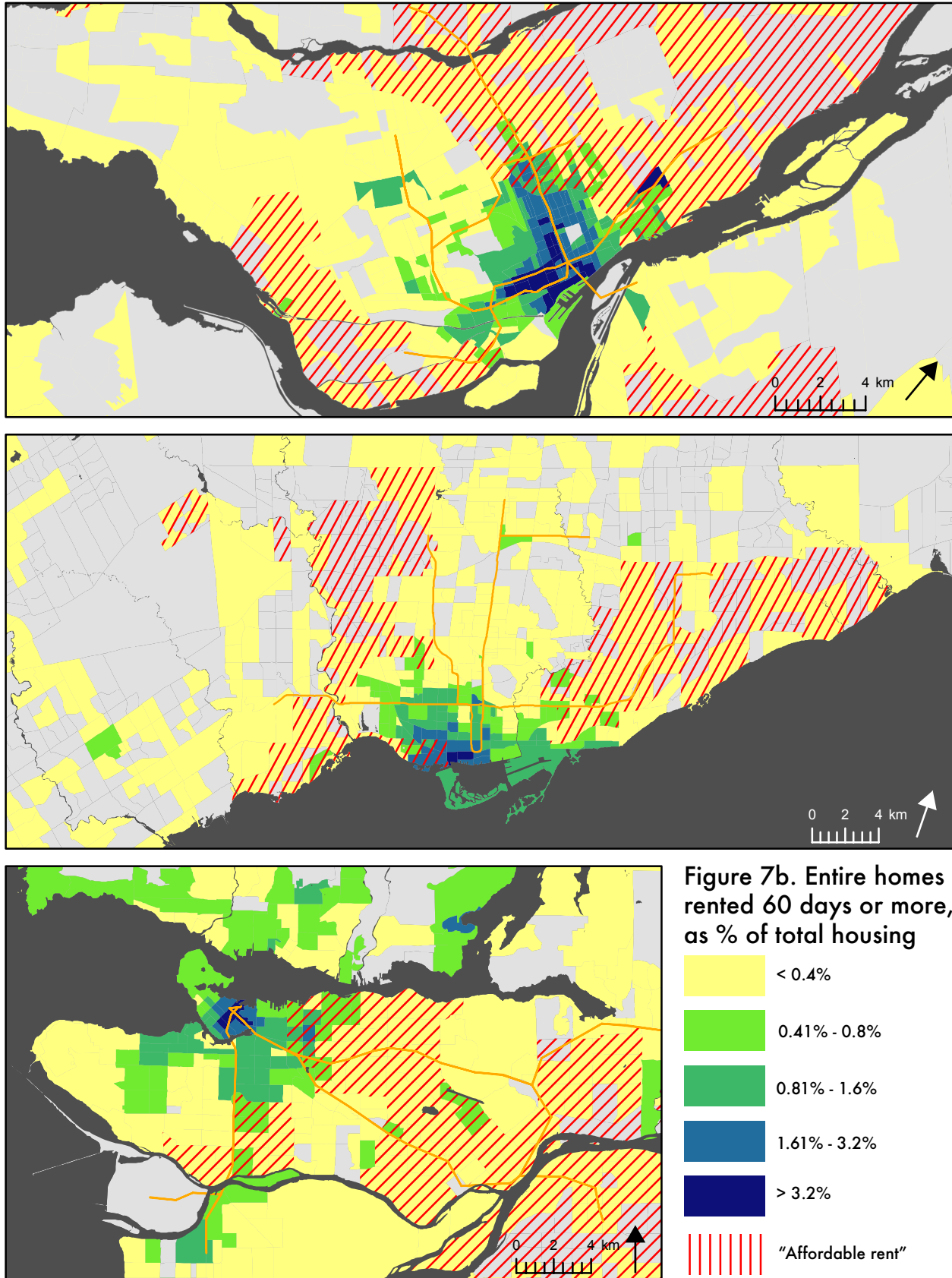
Data sources: Airdna, Statistics Canada, Canada Mortgage Housing Corporation; coordinate systems: NAD 1983 UTM Zones 10N, 17N, 18N

number appears small, it is comparable to the rental vacancy rates in each of the cities, and indicates that the neighbourhoods with the most Airbnb activity are seeing their available long-term rental housing significantly constrained by short-term rentals.

Figure 7b reproduces Figure 7a, but overlays neighbourhoods whose average rents across all bedroom types in the private purpose-built rental sector are half a standard deviation lower than the CMA-wide average. In Montreal that is \$691, in Toronto that is \$1120, and in Vancouver that is \$1084. This is a highly imperfect measure of rental affordability, for two reasons. First, a large amount of rental activity occurs outside the primary (purpose-built) rental sector—in social housing, single-room occupancy hotels, rented condominiums, secondary suites, and other unit types—and this activity is not counted in the CMHC survey from which the data here is drawn. The Downtown Eastside in Vancouver, for example, has an average rent of \$1123 in the CMHC survey—somewhat higher than the CMA average—despite the existence of a large below-market rental sector. (The 2016 Census release on housing, which could provide a better picture of all renters, is not available at the time of publication.) Second, affordable rental housing is not limited to neighbourhoods with relatively affordable average rents; in fact, the existence of secondary suites tends to provide some affordable housing options across the city.³ Still, subject to these qualifications, Figure 7b demonstrates that, in general, the neighbourhoods which have seen the most potential loss of long-term rental housing to Airbnb are not areas with relatively affordable rents in their purpose-built rental sectors.

This finding should be read in concert with Figure 7c, which compares the average revenue earned by a full-time, entire-home Airbnb host with the average long-term rent paid by a tenant living in a purpose-built rental unit. Yellow areas are those where, on average, Airbnb hosts do not earn significantly more per month than they could earn on the long-term rental markets. These areas do not have significant structural pressures on landlords to convert long-term rentals to short-term rentals. Areas in green and blue, however, are where landlords of purpose-built rental units could earn significantly more money by converting these units to short-term rentals. These are the areas where we should expect to see the greatest future pressure on rental housing stock. In Montreal, low prevailing rents in the purpose-built rental sector (average rents are under \$800, CMA-wide) mean that Airbnb listings are on average more profitable than long-term rentals in many neighbourhoods throughout the city. This fact probably goes some distance to explaining Montreal's long-standing position as the most active city for short-term rentals in Canada. In Toronto, high average rents in the purpose-built rental sector mean that there are only a few pockets of serious pressure on long-term rentals to be converted to short-term rentals, and these lie in almost

³ Our thanks to Ian Marjoribanks for highlighting both of these points.



Data sources: Airdna, Statistics Canada, Canada Mortgage Housing Corporation; coordinate systems: NAD 1983 UTM Zones 10N, 17N, 18N

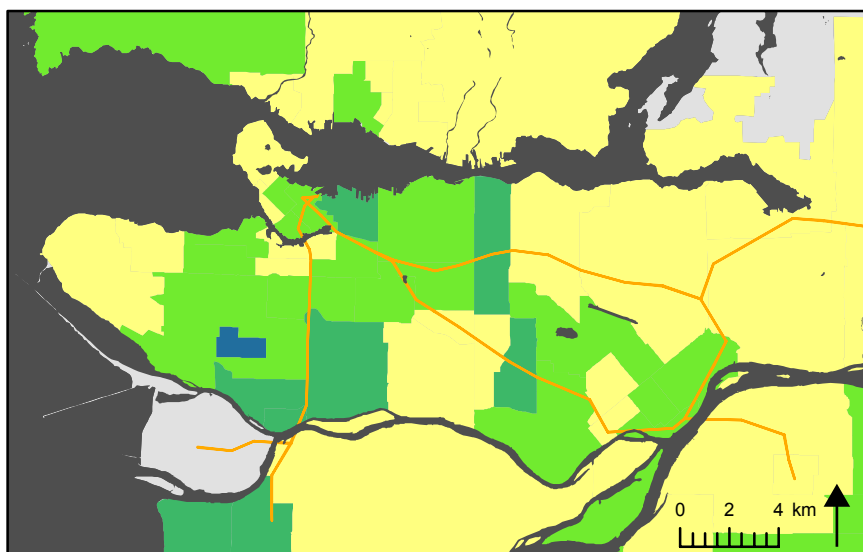
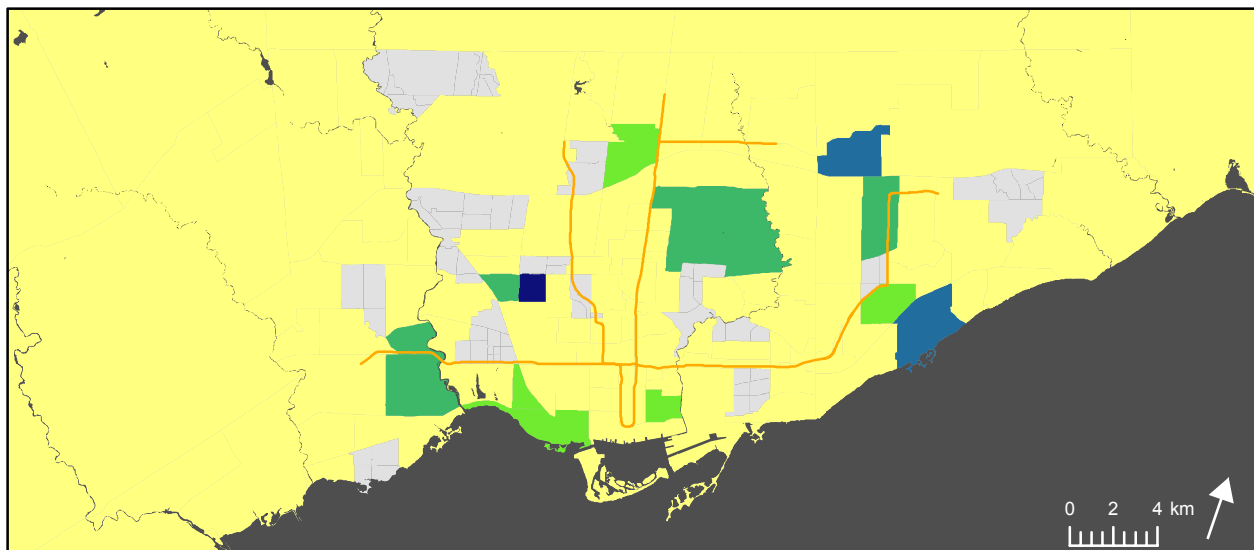
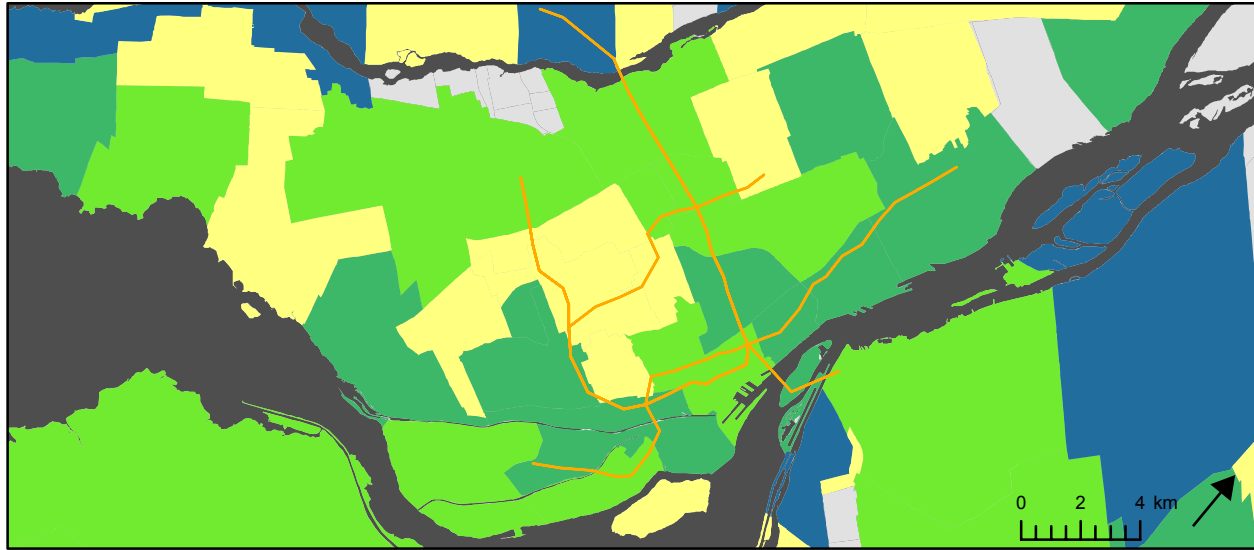
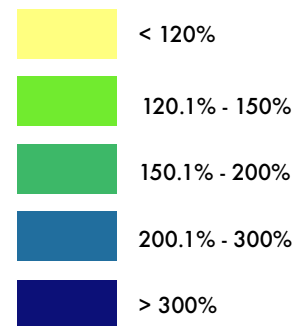


Figure 7c. Average full-time, entire-home revenue as a percentage of average long-term rent



every case at the edges of the City of Toronto, particularly at the ends of subway lines. To the east, Scarborough appears primed for future Airbnb growth, since, despite the relatively low level of existing activity, the hosts who are active in Scarborough are earning much more with their entire-home listings than they would be likely able to do in the long-term rental market. Vancouver's areas of greatest growth pressure lie along the SkyTrain, particularly in the south of the City of Vancouver and to the southeast in Burnaby. Like in Toronto, average rents are very high, but unlike in Toronto there appear to still be large sections of the city where short-term rentals are significantly more profitable than long-term rentals.

In summary, while Figure 7b demonstrates that most existing conversion of rental housing to short-term rentals has occurred in medium- and high-rent neighbourhoods, Figure 7c shows that there are significant economic pressures in a number of more affordable areas—particularly those lying on mass transit lines—which, in the absence of regulatory intervention, may threaten the loss of more affordable housing to de-facto Airbnb hotels.

Figure 7d compares the net change in entire home listings rented 60 days or more over the last year to 2016 housing completions. In other words, it provides a one-year snapshot of housing which was lost to Airbnb in comparison to new housing which was constructed. The figure demonstrates that many of the downtown core areas with the highest concentrations of entire-home listings rented 60 days or more have seen sufficiently rapid housing construction to outpace the loss of housing stock to short-term rentals. In these areas, such as Downtown Montreal, the Toronto Waterfront, and Gastown in Vancouver, the growth of entire home listings rented 60 days or more is equivalent to between 25% and 50% of new construction. By contrast, in well-established central-city neighbourhoods with less construction, such as the Plateau-Mont Royal in Montreal, High Park in Toronto, and Kitsilano in Vancouver, Airbnb growth is completely outpacing new constructions and actually reducing net available housing stock. In several Toronto and Vancouver neighbourhoods, Airbnb listing growth is greater than 200% of housing completions. More than twice as many homes may have been removed from these neighbourhoods by short-term rentals as have been added by new construction. In Montreal, where growth of Airbnb listings has been slower, no neighbourhoods cross this 200% threshold, but full-time, entire home Airbnb listing growth is still outpacing completions in several areas. These areas are likely to be experiencing displacement of long-term residents, upward pressure on rents, and a reduction in the ability of new residents to move into these neighbourhoods.

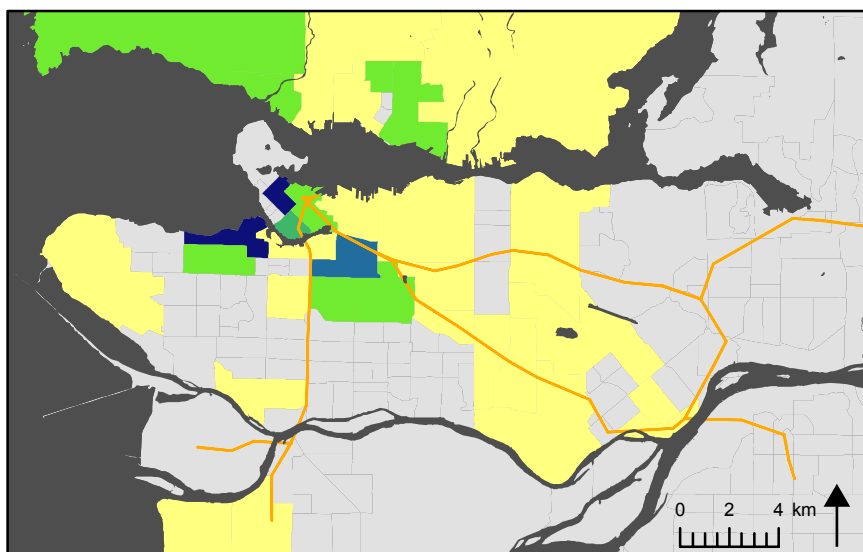
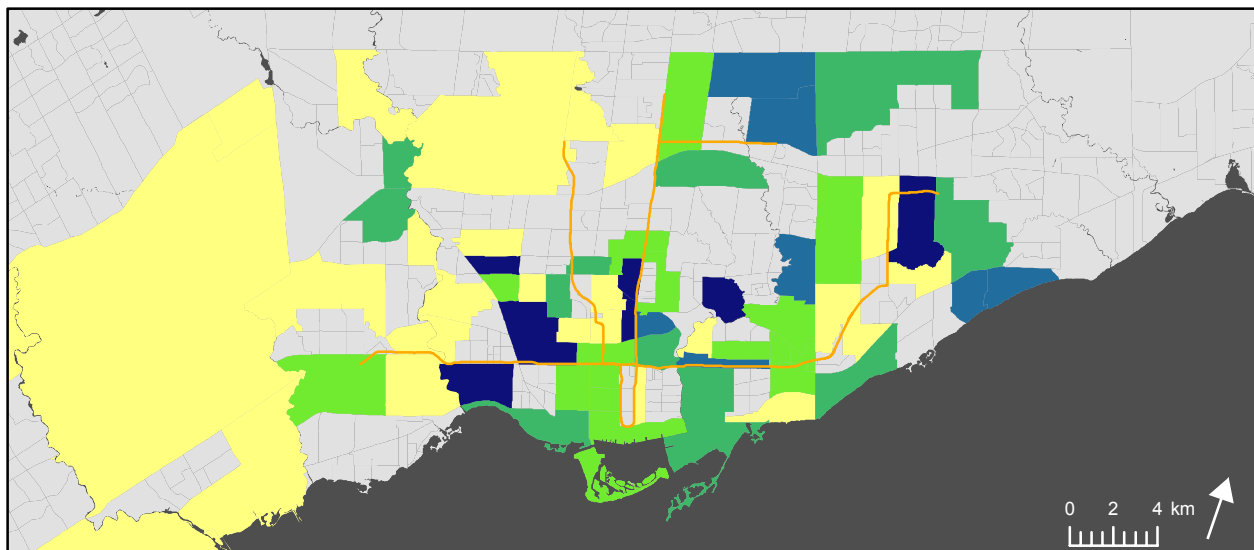
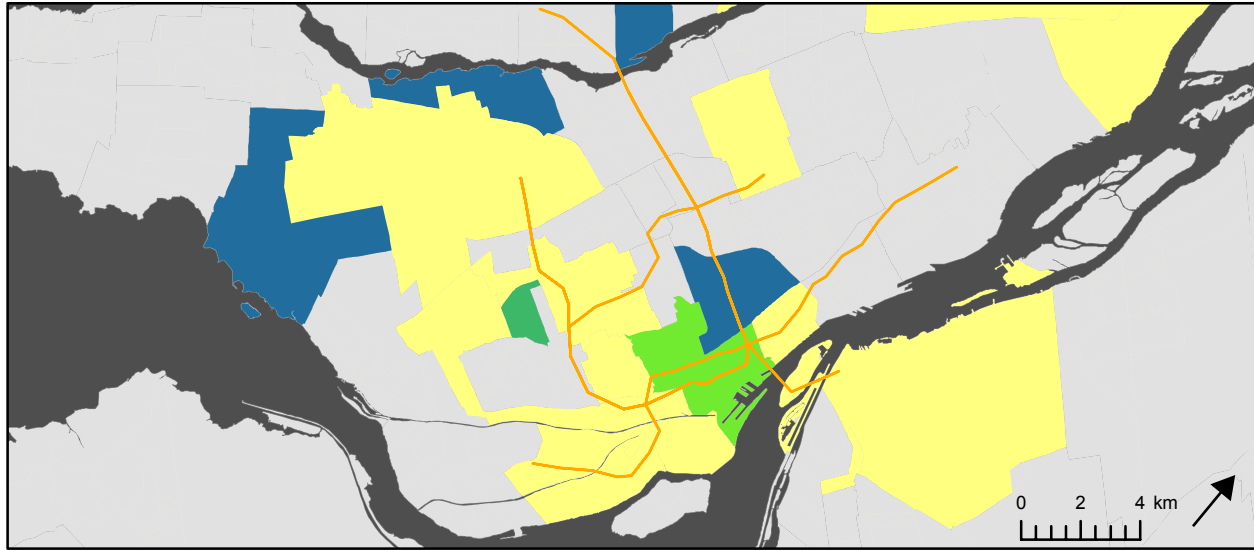
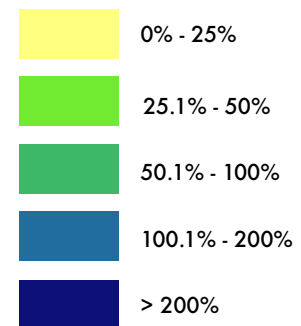


Figure 7d. 2016 growth in full-time, entire-home listings as a percentage of 2016 housing completions



8. The state of short-term rental regulation in Canada

Short-term rentals often operate in legal grey zones, able to avoid existing accommodation regulations and taxes, and are now increasingly being targeted with specific regulations. The Province of Quebec was the first major Canadian jurisdiction to legalize short-term rentals, implementing a regime focused on recovering tax revenues. Toronto and Vancouver, acknowledging the wide range of impacts from short-term rentals, have both proposed more stringent regulations, including limiting short-term rentals to principal residences.

While forms of short-term rentals have existed for many years, the rapid rise and large scale of Airbnb and other home-sharing platforms has caught regulators off guard. In many jurisdictions Airbnb operates within a legal ‘grey-area’, circumventing traditional regulations, enforcement mechanisms, and tax regimes. In response, many jurisdictions have moved to introduce new short-term rental regulations. The regulations range in strictness from Berlin’s ban on most entire-home listings to the Province of Quebec only requiring ‘regular

users' to pay accommodation taxes. In the summer of 2017 both Toronto and Vancouver released reports on their proposed short-term rental regulations. These new regimes will not outright ban entire-home rentals but instead attempt to preserve long-term rental housing stock by limiting short-term rentals to primary residences and requiring them to be licensed.

Montreal

In December 2015 the Province of Quebec amended the existing tourist accommodation law to regulate short-term rentals. The debate on how to properly regulate short-term rentals had begun in 2013. The inadequacy of the previous regulatory regime's ability to capture tax revenue had become apparent and hotel and other accommodation providers clamoured for equal treatment. The aim of this law, Bill 67 was to capture tax revenue without impacting the growth of short-term rentals. To this end the law required 'regular users'—a category not otherwise defined—to get a certificate from Quebec's Ministry of Tourism and to pay an accommodation tax of 3.5%. A lack of compliance was to result in significant fines. 'Occasional users', defined in the law as those renting out their home for less than 31 consecutive days, were not required to take these steps. This law came into force on April 15, 2016.

Even before its introduction there were concerns by tenant rights organizations and other groups that the law was inadequate in scope and execution. Stories about rising rental costs and neighbourhood disturbances caused by Airbnb guests started to appear more frequently within the local media. By 2017 the Mayor of Montreal's Plateau-Mont-Royal borough stated that complaints about Airbnb were the most frequent type he receives (CTV Montreal 2017). The law also appears ineffective from the perspective of recovering tax revenue. As of March 2017 in Montreal there were 42 certified listings, with 26 applications in progress. This is in comparison to the 6356 full time listings [as of March 2017] in Montreal. This means that fewer than 1% of Montreal's full time listings are certified and paying the accommodation tax. Additionally, there is a low conviction rate for violators of this law. Across all of Quebec the Province issued 700 warning notices, conducted 233 inspections and found 18 violations. None of these violations were in the City of Montreal (Marandola, 2017).

Criticism of this law has been widespread in the media. Proposals have emerged for alternative regulations at both the provincial and municipal levels. In 2017 the Government of Quebec announced its decision to move enforcement from its Ministry of Tourism to Revenue Quebec, the tax collecting agency. This suggests a tacit acknowledgement that the current regime is not working.

Toronto

The City of Toronto is still in the process of developing regulations for short-term rentals. Beginning in early 2016, the departments of Municipal Licensing and Standards and City Planning, under the direction of City Council, began conducting research on short-term rentals in the city. The City began a consultation process later that year, which have included two public meetings, an Ipsos research survey, online surveys, and stakeholder meetings and workshops.

In June 2017, a report on potential regulations was presented to Executive Committee. The regulations in the report are organized into three categories: zoning, licensing, and taxation. Zoning regulations include amending the Zoning Bylaw to accommodate for a “short-term rental” land use, permitting short-term rentals only in principle residences and limiting the number of rooms rented on a short-term basis to three per household. In terms of licensing, proposed regulations include: licensing short-term rental companies such as Airbnb with fees ranging between \$5,000 - \$20,000, as well as an additional fee per booking; creating a registry of people who rent their homes on a short-term basis and introducing an associated fee of \$40 - \$150 per household; requiring that users publish their registration number in all advertising; and requiring that companies allow only registered hosts to advertise with them. Alongside the proposed licensing, the report proposes implementing new taxes for hotels and short-term rentals at rates of four percent and up to ten percent, respectively. Earlier in 2017, Toronto City Council requested that the Province of Ontario grant the City authority to collect this proposed hotel and short-term rental tax.

Vancouver

On April 6th, 2016 Vancouver City Council passed a motion to study options for regulating the short-term rental market. The impetus has been council’s acknowledgement that Airbnb and other short-term rental providers are exacerbating Vancouver’s tight rental housing market. Rental vacancies are less than 1%, and the City’s is having ongoing issues with housing affordability (City of Vancouver, 2017a). Currently, the vast majority of Airbnb units are offered in contravention to zoning regulations which outside of licensed hotels and Bed and Breakfast forbids short-term rentals (currently defined as stays under 30 days).

A staff report released on July 5th, 2017 outlines Vancouver’s proposed short-term rental regulations. The overarching goal of the regulations is protecting the affordability of Vancouver’s long-term rental market (City of Vancouver, 2017b). To accomplish this, the focus of the proposed regulations is limiting short-term rentals to primary residences. If not a residence is not owner-occupied, permission would need to be obtained from the unit’s landlord or

condo board. The new regulations would target commercial operators (those operating multiple listings) to prevent illegal hotels and ban short-term rentals in secondary suites. Once a licence is granted, hosts will have to display it in their advertisements making it an easier process for the City to determine who is licensed and who is not. The city will charge a small yearly licensing fee, and recommend that the Province apply the provincial hotel tax of 3%. Despite the threat of fines and requirements to display licences online, the city estimates future compliance to be only 25%. These proposed regulations are expected to be enacted in April 2018. Figure 8a summarizes the status of existing and proposed STR regulations in the three cities.

| City | Reg. status | Target | Criteria | Enforcement |
|------------------|---------------------------------------|--|---|--|
| <i>Montreal</i> | Active (April 2016) | Differentiates between "regular" and "occasional" users | \$250 licensing fee, operating certificate, lodging tax of 3.5% for regular users, requirement to advise landlord | Increase in inspectors and fines for offenders |
| <i>Toronto</i> | Proposed (final report due Fall 2017) | Differentiates between STR Hosts and STR Commercial operators | Limit of STR hosts to principle residence, with registry and fees of \$40-50 per home, licensing fees of \$5,000-20,000 per night for commercial operators, hotel tax of 4%, STR tax of 10% | Have to post licence in ad |
| <i>Vancouver</i> | Proposed (expected April 2018) | Multiple categories, including re: principal residence and commercial operations | Registration fee of \$54, yearly business licence of \$49, only in principle residence, must obtain permission of condo board, provincial hotel tax of 3% | Have to post licence in ad, limited increase in inspectors |

Figure 8a. Short-term rental regulations in Montreal, Toronto and Vancouver

9. Conclusion: What regulations are appropriate?

Cities should regulate short-term rentals according to three simple principles: 1) one host, one rental; 2) no full-time, entire-home rentals; 3) platforms responsible for enforcement. The City of Amsterdam provides an encouraging example of these principles in practice, while Fairbnb.ca's recent regulatory proposals for Toronto offers a closer-to-home example.

This report has presented the first comparative analysis of short-term rentals in major Canadian cities. Airbnb activity in Montreal, Toronto and Vancouver has increased by 50% in the last year, and this growth has been disproportionately concentrated among full-time, entire-home listings whose hosts control multiple such properties. There are now nearly 13,700 entire homes rented 60 days or more per year on Airbnb in Montreal, Toronto and Vancouver, each of which is unlikely to be rented to long-term tenants. They account for one sixth of all Airbnb listings, and a majority of nights booked on the service. Many neighbourhoods have seen two percent or more of their entire housing stock converted to de facto hotels.

A third of all active Airbnb properties are “multi-listings”, whose hosts administer two or more entire homes or three or more private rooms. The most successful of these hosts earn millions of dollars per year running commercial short-term rental services across dozens or even hundreds of homes, most of which are no longer able to support a long-term resident. The “triple threat” is short-term rental listings which are full-time, entire homes, and multi-listings. Even though there are only 6,500 of these listings in Montreal, Toronto and Vancouver—8% of the total active listings—they account for 34% of total revenue. These listings are growing more rapidly than any other category of listing, and in Toronto their share of total revenue increased by 125% in a single year.

How should Canadian cities respond to the regulatory challenge of the growing short-term rental market, with an eye to protecting the availability of affordable housing for city residents? Our view is that cities should regulate short-term rentals according to three simple principles, which together imply reorienting short-term rental markets to the original notion of “home sharing”:

1) One host, one rental: Cities should require home sharing hosts to actually be sharing their homes—allowing residents to rent out their own homes while they are out of town, or to rent out a spare bedroom—while refusing to allow large-scale commercial operators to convert multiple homes into de facto hotels. If each host is only permitted to list a single unit—their own home—then short-term rentals will cease to come at the expense of residents’ long-term housing needs.

2) No full-time, entire-home rentals: Hosts should not be permitted to rent their homes for a large amount of the year, regardless of if that home is a primary residence or not. Different cities have set different thresholds for full-time cut-offs, usually between 60 and 90 days per year, but some threshold is necessary for limiting short-term rentals to actual home sharing.

3) Platforms responsible for enforcement: Even the best-conceived regulatory principles will flounder if they cannot be properly enforced. And international evidence demonstrates that short-term-regulations will fail to achieve their intended effect unless Airbnb and the other platforms are required to proactively enforce them. For example, in the absence of cooperation from the platforms, a city seeking to enforce an annual limit on 60 days of rentals would need to conduct 61 separate inspections to identify a violator. Airbnb, on the other hand, can modify the online platform to disallow further rentals from a listing that has reached its 60-day limit.

A wide variety of specific regulatory approaches are compatible with these principles; here we highlight an existing regulatory framework in Amsterdam, and a proposed framework in Toronto, as two plausible examples. In Amsterdam in January of 2017 Airbnb began to automatically block the

booking of entire-home listings once 60 days of bookings had been reached. This was the result of an agreement between Airbnb and the City to enforce a new regulatory regime. This limit, in concert with only permitting the short-term rental of one's primary home significantly reduces the potential for commercialization, bans multi-host listings, and returns housing to the long-term rental market. Knight (2017) found that the regulations might already be having a positive impact (albeit not total compliance). In May 2016, 13% of hosts had exceeded the 60-day limit, while a year later that number was down to 5%.

The Toronto civil society organization Fairbnb.ca, a coalition of community groups, labour unions, and accommodation providers, has proposed a similar set of regulations as a model of best practice. Like Amsterdam, they emphasize working with short-term rental platforms to ensure regulatory compliance. Without working with these platforms, cities face high costs and difficulties in regulating thousands of hosts. In their 2017 report Fairbnb.ca suggests a permit system, with platforms requiring a valid number to display the host's listing; banning more than one listing for one host; placing a 30-day limit on entire-home rentals; and data sharing with the relevant jurisdiction (Wieditz 2017).

If cities, communities, and short-term rental platforms work together, they can create positive-sum, sustainable regulatory regimes, prevent the increasing commercialization of housing, and protect the supply of long-term rental housing.

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List of changes

Version 1.0 (August 7, 2017)

Version 1.1 (August 10, 2017): Figures 3a, 3d and 3e added; other figures tweaked for readability and accuracy; number of significant digits changed to clarify precision of estimates; time-frame of available data for Vancouver suburbs clarified; “transaction” information on p. 9 replaced with more straightforward information about “data points”; revenue data in chapter 4 clarified as either revenue per host or per listing; textual clarifications throughout

About UPGo

UPGo, the Urban Politics and Governance research group at McGill, addresses pressing urban governance problems—particularly those that exceed or challenge city boundaries—with rigorous and publicly-oriented research. Our three research themes are 1) local and regional economic development; 2) urban sustainability; 3) housing policy. UPGo is led by Prof. David Wachsmuth of McGill’s School of Urban Planning.



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