



in Vancouver

and its Impacts on

Affordable Housing

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Airbnb in Vancouver: An Overview

Airbnb is an online marketplace that promotes and facilitates residents and businesses to lease residential units as tourist accommodations. While home sharing and subletting are practices as old as housing itself, Airbnb is different from traditional house sharing and online bulletin boards. Airbnb offers a variety of financial services and insurance-like products to hosts and guests, maintains centralized control of all listings, and charges a 9-15% service fee on all bookings.^{1,2} The success of this business model has led to its valuation at \$25.5 billion USD, soundly beating valuations for Hilton, Marriott, and Hyatt, while operating with little to no regulation or oversight.³

Airbnb makes a number of claims regarding the positive impacts of increased short-term rental utilization by casual hosts. In their Airbnb Community Compact, they claim:

Airbnb is a people-to-people platform—of the people, by the people and for the people—that was created during the Great Recession to help people around the world use what is typically their greatest expense, their home, to generate supplemental income.

Airbnb has repeatedly cited statistics emphasizing that the majority of listings are “casual” hosts, who rent out the house in which they live for supplemental income.⁴ In an April 2016 interview with the CBC, the head of Airbnb Canada, Aaron Zifkin, stated that “all of our hosts are occasional homesharers.”⁵

While there are undoubtedly many hosts who benefit from Airbnb, cities around the world have heard reports of long-term tenants being displaced as property owners convert affordable housing to unlicensed online hotels. Hosts who convert long-term rentals to short-term rentals (hereafter LTR and STR) reduce the availability of affordable rental housing; in Vancouver these hosts also violate municipal bylaws (see next section). Because Airbnb conceals the location and identity of commercial hosts, it has proved difficult to impossible for municipalities to track violations or enforce restrictions on STRs. Unlike other businesses operating in Vancouver, there is no public record of where Airbnb’s operations are taking place, and no effective means to enforce Vancouver bylaw.

City Partnerships with Airbnb

On 6 April 2016, Vancouver City Councillor Geoff Meggs introduced a motion to study the impact of Airbnb and similar platforms on the availability of quality affordable rental housing, and options to mitigate negative impacts. The motion also directed staff to “seek co-operation from Airbnb and other listing services, including detailed data on listings, to ensure an accurate assessment of the issue.” While Airbnb has made several statements indicating a willingness to partner with cities, the company’s idea of partnership does not include sharing data or making any effort to aid bylaw enforcement. The only city Airbnb has shared data with is New York. The first instance was under a subpoena sought by the New York Attorney General’s Office;⁶ the second release was a reassuring report describing the New York STR market as a benign enterprise composed primarily of casual hosts:⁷

- “95% of our entire home hosts share only one listing.
- 99% of all entire home properties listed on the platform are shared by hosts with one or two listings (95% share one listing, 4% share two listings).
- 90% of our hosts have indicated in a survey that the property they list is their permanent home.
- The median supplemental homesharing income for an Airbnb host in New York City is \$5,110.”

1 Airbnb - What are host service fees? <https://www.airbnb.ca/help/article/63/what-are-host-service-fees>

2 Airbnb - What are guest service fees? <https://www.airbnb.ca/help/article/104/what-are-guest-service-fees>

3 CNN - Hilton: We’re not scared of Airbnb <http://money.cnn.com/2015/10/28/investing/airbnb-hilton-hotels/>

4 Airbnb - Economic Impact Reports <https://www.airbnbaction.com/category/economic-impact/>

5 On The Coast, Airbnb Canada agrees on need for new regulations and sharing data with Vancouver, 1 April 2016 - <http://www.cbc.ca/news/canada/british-columbia/programs/theearlyedition/airbnb-canada-agrees-on-need-for-new-regulations-and-sharing-data-with-vancouver-1.3516508>

6 New York Attorney General’s Office - Airbnb in the city <http://www.ag.ny.gov/pdfs/Airbnb%20report.pdf>

7 Airbnb - Data on the Airbnb Community in NYC <https://www.airbnbaction.com/data-on-the-airbnb-community-in-nyc/?af=1977852>

It was later reported by Murray Cox and Tom Slee that Airbnb had purged thousands of commercial hosts' listings immediately prior to their report, casting serious doubts on the accuracy of Airbnb's report.⁸

Airbnb has also fallen short in their partnership to help their "community" comply with local registration bylaws. In 2015, San Francisco, California, and Portland, Oregon, created a permit process for residents to legally operate STRs, with restrictions to discourage conversion of LTRs. Currently only 9.5% and 11% of hosts in each city advertised on Airbnb list a permit number in accordance with Vancouver bylaw. Airbnb continues to list STRs in violation of municipal bylaw.

While Airbnb speaks of partnership and cooperation, the company has lobbied vigorously against regulation. In 2015, San Francisco introduced a referendum introducing several new restrictions, including a 75-day limit on properties being rented as STR, and the ability to fine platforms advertising non-compliant units.⁹ In response, Airbnb launched an \$8 million outdoor advertising campaign across San Francisco to oppose the new regulations. Much of their argument against regulation focused on the fact that they remitted hotel taxes, but ignored the fact that the overwhelming majority of hosts were in violation of registration requirements.¹⁰

Furthermore, San Francisco's hotel tax provides general revenue to the City of San Francisco, whereas British Columbia's hotel taxes are collected by the Province. Applying the hotel tax to Airbnb units presents a clear opportunity for increasing Provincial revenue, but a prudent tax policy should mitigate Airbnb's negative impacts on affordable housing by embedding the cost of producing rental housing that is currently borne by the City of Vancouver and its taxpayers.

This report is intended to contribute reliable data to the debate about Airbnb's Vancouver operations. An analysis of listing data suggests that while a slim majority of hosts are casual operators, the majority of Airbnb's listings, bookings and revenue appears to come from a minority of "commercial" hosts: property managers who list one or several full houses, apartments, and rooms on a long-term commercial basis. Some hosts even convert multiple houses for use as illegal hotels, generating hundreds of thousands of dollars in revenue. In spite of the rapid growth of the STR industry, there is little

New York City Entire Home Listings

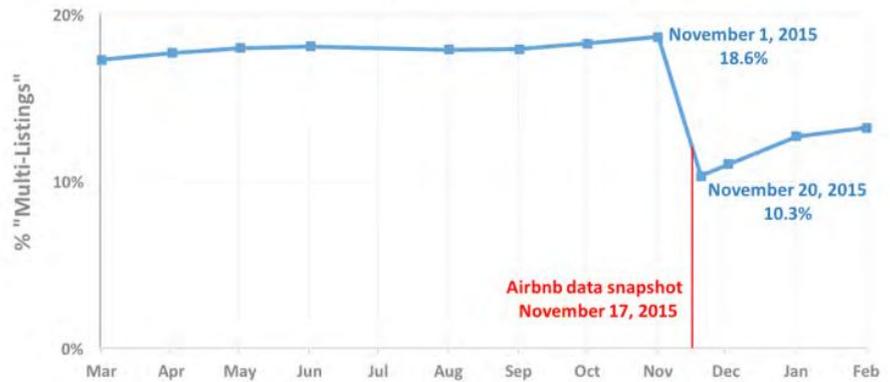


Figure 1: Airbnb purged nearly half of their multiple-unit listings prior to a public release of New York data.

Source: Cox, Slee - How Airbnb's Data Hid the Facts in New York City



Figure 2: Airbnb has campaigned vigorously against taxation and regulation in San Francisco. Photo courtesy of @khuey_

⁸ Murray Cox, Tom Slee - How Airbnb's Data hid the Facts in New York City <http://insideairbnb.com/how-airbnb-hid-the-facts-in-nyc/>

⁹ Airbnb's \$8M campaign against Prop. F in San Francisco appears to be working <http://venturebeat.com/2015/11/01/airbnbs-8m-campaign-against-prop-f-in-san-francisco-appears-to-be-working/>

¹⁰ Roy Samaan, LAANE - Airbnb, Rising Rent, and the Housing Crisis in Los Angeles <http://www.laane.org/wp-content/uploads/2015/03/Airbnb-Final.pdf>



Figure 3: Airbnb hosts use online forums such as Facebook to share advice on dealing with City inspections.
Source: Facebook Airbnb Vancouver Hosts Forum

reliable data on when, where, and how often units are being rented, and how many suites are being removed from the LTR market. This report will attempt to model host activity on Airbnb and estimate the availability and utilization of STR units in Vancouver.

Municipal Bylaws and Airbnb

STRs are prohibited under Vancouver's Zoning and Development Bylaw 10.21.6, which states: "No person shall use or permit to be used any dwelling unit for a period of less than one month unless such unit forms part of a hotel or is used for bed and breakfast accommodation."¹¹ Bed and breakfast accommodations are governed by a few simple regulations aimed at reducing the potential nuisances of operating a business in a residential neighbourhood. As of April 2016, there were 52 registered Bed and Breakfasts in Vancouver.¹² In order to legally operate in the City of Vancouver, bed and breakfasts must:

- Be the primary residence of the operator;
- Host no more than four guests in two bedrooms;
- Provide an additional parking space;
- Pay a one-time Development and Building permit fee;
- Receive a safety inspection; and
- Obtain and maintain a Vancouver business licence.¹³

In spite of the fact that 99.3% of listings advertised on Airbnb are for less than 30 days (and, assuming that none include the 52 licenced bed and breakfasts, are in violation of municipal bylaw), violations are difficult to prove and enforce because Airbnb conceals the identity of illegally operating businesses. In lieu of a confession or street-facing advertisement, it is nearly impossible for City inspectors to prove that a unit is being used as a STR. Additionally, hosts use a variety of online forums, including a Facebook group¹⁴ and dedicated online forum,¹⁵ to share advice and information on evading detection. Enforcement of existing bylaws may be desirable, but is not currently feasible.

Airbnb's STRs may be at odds with several City policies, including the Vancouver Housing and Homeless Strategy 2012-21, Greenest City 2020 Action Plan, Healthy City Strategy, and not least, the Affordable Housing Strategy. A 2012 report on the City's efforts to incentivize affordable housing development estimates that the City of Vancouver spent between \$4,900 and \$75,000 per unit to subsidize market rental housing.^{16,17} Every STR that would otherwise be used as LTR housing undermines the City's efforts to increase the supply of affordable market rental housing in Vancouver.

Interviews: A Spectrum of Host Types

Airbnb hosts employ a variety of business models. As part of this study, interviews were conducted with two commercial hosts and three casual hosts. All informants are active members of online STR host communities and attend in-person networking events in Vancouver. Many of the observations are based on firsthand experiences of informants, while others are based on secondhand observations of other host business models. For the purposes of this report, casual hosts are defined as persons who occasionally make their

11 City of Vancouver Section 10 General Regulations - <http://former.vancouver.ca/commsvcs/BYLAWS/zoning/sec10.pdf>

12 City of Vancouver - Open Data Catalogue Business licence <http://data.vancouver.ca/datacatalogue/businessLicence.htm>

13 City of Vancouver - Bed and Breakfast Business <http://vancouver.ca/doing-business/bed-and-breakfast-business.aspx>

14 Airbnb Vancouver Hosts Forum <https://www.facebook.com/groups/vancouverhosts/>

15 AirhostsForum <http://airhostsforum.com/>

16 City of Vancouver 2012 STIR Program Presentation to City Council - <http://vancouver.ca/files/cov/stir-presentation.pdf>

17 City of Vancouver 2012 Secured Market Rental Housing Policy - http://vancouver.ca/files/cov/secured_market_rental_housing_council_report.pdf

residence available for STR as a source of supplemental income. Commercial hosts are persons who do not live in their STR unit, and therefore use it primarily for income.

Casual hosts

Casual hosts are relatively limited in their business models. Generally speaking, a casual host may rent a full apartment during vacation, or may occasionally host a traveler in a spare room to generate more income. Hosts interviewed report that some commercial hosts begin as casual hosts. Casual hosts state that they are motivated by financial incentives, but also see hosting as a way to meet interesting people, and make time to get involved in cultural events in Vancouver, such as local music and art. For the purposes of this study, we will assume that casual hosts list rooms and full homes that would not otherwise be rented to long-term tenants. Due to issues of data quality and methodological limitations (described later) this report may misidentify commercial hosts as casual. This report is therefore primarily concerned with affirmatively identifying the extent and intensity of commercial host activity in Vancouver and its impacts on removing available rental housing from the LTR market.

Commercial hosts

Some commercial hosts run significant enterprises employing full-time support staff, while others simply prefer being able to occupy an otherwise unoccupied spare room or investment condominium at will. Commercial hosts are far more diverse. Some are “true believers” in the Airbnb community, while others are pragmatic and profit-driven. Small-scale commercial operators may include homeowners renting a laneway or basement suite as a STR, or condominium investors seeking to maximize revenue. Commercial hosts may also include renters who prefer hosting regular short-term tenants over seeking a long-term roommate. Most commercial hosts are owners, while a minority rent the properties they list. Some hosts run their businesses like traditional bed and breakfasts, letting multiple rooms in a single house. The most successful commercial hosts advertise multiple condominiums and houses across town, and prefer to let full houses. Many top-earning hosts have backgrounds in real estate and hospitality.

One of the commercial hosts interviewed has partnered with a property developer to fill properties awaiting development permits. Preferred building types include downtown luxury condominiums and large character homes in residential neighbourhoods. Hosts report that property managers find it difficult to lease larger houses with 5 or more bedrooms with short leases, which makes them attractive candidates for STR conversion.

One of the property managers interviewed as a commercial host offers STR during the summer “tourist season,” and seek students to fill 8-month leases which conveniently correspond with the university semester. This host rents properties from developers awaiting permits, making it difficult to find long-term tenants. The host claims that developers find these properties difficult to let. Renting a 4 or 6-bedroom house to individual students requires a significant effort, and high student turnover makes it difficult and expensive to find tenants during the development process. This host lets properties to students slightly below the average monthly rent for the properties they manage. From May to August, the student housing is converted to STR, allowing the host to recover the costs of showing and managing properties, purchasing and repairing furniture, and marketing the properties to tourists. While other analysis of Airbnb has assumed that commercial hosts have a negative impact on rental housing affordability, it is possible that a hybrid LTR/STR business model can make quality housing more affordable for students.

Methodology: The “San Francisco Model” of Webscrape Analysis

Much of what we know about Airbnb comes from data obtained through a subpoena by the New York State Attorney General. A thorough analysis of this data can be found in their report.¹⁸ The New York data revealed a great deal about the relationships between unknown factors, such as booking rates, and known factors such as the frequency of reviews. The data available for cities other than New York have been provided by

Karen Sawatzky,¹⁹ Murray Cox,²⁰ and Tom Slee²¹ through a process known as webscraping. Webscraping software scans Airbnb's public-facing website, reformatting browser data into a spreadsheet that can be used for statistical analyses.

Data and Limitations

This report relies on webscrape data obtained on 3 December 2015, and published on InsideAirbnb.com. The data compiles public information from the Airbnb website including the availability calendar for 365 days in the future, reviews, location, and nightly rate for each listing. Data is verified, cleaned, analyzed, and aggregated. The methodology used in this report is based on a utilization model developed by Alex Marqusee, the San Francisco Budget and Legislative Analyst's Office,²² and the San Francisco Planning Department.²³

This report adapts the San Francisco utilization model based on interviews with Vancouver hosts and trends identified in previous studies. While many STR hosts use Airbnb exclusively, many commercial hosts aggressively market on a variety of sites. Because this model underestimates utilization of any bookings obtained from platforms other than Airbnb, we assume that the total STR market is significantly larger than this model predicts. A recent study found that Airbnb comprised 64.6% of Los Angeles's STR market by listings.²⁴ Commercial hosts are more likely to invest greater time researching and managing online bookings on multiple sites. Even if the majority of listings on sites other than Airbnb are also listed on Airbnb, our model is likely to underestimate the utilization of commercial hosts. Additional data quality issues are described below. Wherever possible, this model uses a conservative bias, which we assume will lead to an underestimate of both utilization and revenue, which will be more significant for commercial hosts.

The data used to build the utilization model includes the following:

- Host name/unique ID: As of 3 December 2015, Airbnb requires all commercial hosts and property managers to list all properties under management under a single account. As of 29 March 2016, Airbnb has added the option of allowing hosts to appoint a third party to manage additional units. This new option could make it much easier for commercial hosts to manage multiple properties without being publicly associated with the listing.²⁵
- Approximate location: Airbnb's map interface randomly displaces listing locations. Murray Cox suggests that displacement should not exceed 150 metres, but it appears that Vancouver listings have been displaced by up to 500 metres.
- The three room types used in Airbnb listings are "Full House/Apt," "Private Room," and "Shared Room." Some hosts may list a private room in their house on a long-term basis, and also list their whole apartment while travelling.
- The listing price listed on Airbnb's website was recorded during Vancouver's December, which is reported by host interviews to be a slow season. This suggests that the rates advertised could be relatively lower than they would be during summer months.
- Airbnb allows hosts to set a minimum number of days for future listings; 89% of listings advertised a minimum rental of four days or less.
- The number of reviews per month is an average of the total reviews divided by the number of months that the listing has been under review. Because it is a running average, the number of reviews may be underestimated for listings that have been dormant, or if they have been booked for longer rentals.
- Inactive listings which are excluded from the analysis include those with a non-recent date of last review.
- Host profiles also list the number of units per host under management. In December 2015, the maximum number of listings under one host was 22 units.
- Availability: because the Airbnb calendar does not distinguish whether a unit is booked or made un-

19 Karen Sawatzky - Short Term Consequences <https://shorttermconsequences.wordpress.com/>

20 Murray Cox - Inside Airbnb <http://insideairbnb.com/>

21 Tom Slee - <http://tomslee.net/>

22 San Francisco Budget and Legislative Analyst's Office - Analysis of the impact of short-term rentals on housing <http://www.sfbos.org/Modules/ShowDocument.aspx?documentid=52601>

23 San Francisco Planning Department - Amendments Relating to Short-Term Rentals <http://commissions.sfplanning.org/cpcpackets/2014-001033PCA.pdf>

24 Roy Samaan, LAANE - Airbnb, Rising Rent, and the Housing Crisis in Los Angeles <http://www.laane.org/wp-content/uploads/2015/03/Airbnb-Final.pdf>

25 Airbnb - New Developments 26 March 2016 <http://blog.airbnb.com/newdevelopments/>

available by the host, availability will significantly underestimate popular rentals. However, because many commercial hosts list properties on multiple sites, some commercial rentals may show a high level of availability, but a casual rate of utilization. It is possible that a number of these properties obtain a majority of their bookings through other platforms, and are therefore not captured by this analysis.

Utilization Model

This study adapts the San Francisco methodologies by making the following assumptions:

- The booking rate was obtained by dividing the number of listing reviews per month by the review rate of 72%. This estimate is based on a statement made by Airbnb CEO Brian Chesky.²⁶ In their analysis of booking data, the New York Attorney General found that the average listing received 30.5% reviews per visitor, which would produce a much higher estimate of utilization. In the interest of keeping the model conservative, this report uses the higher review rate.
- An average length of stay of 3.6 nights per booking was assumed, based on reported average stays for Seattle, Washington. This number was consistent with mean guest stays reported by hosts interviewed.
- The booking rate multiplied by the estimated bookings for each listing over a period gives the occupancy rate. If a listing has a higher minimum night value than the average length of stay, the minimum night value was used instead. Estimated utilization was consistent with the number of nights booked reported by our two commercial hosts interviewed. The occupancy rate may be underestimated for listings by hosts using multiple platforms.
- Because some hosts have a review rate higher than 72%, the top 1.8% of listings are estimated to be occupied more than 365 days per year, and the top 6.5% over 270 days. In order to obtain a conservative estimate of occupancy and annual income, the number of occupied days were restricted to a maximum of 270 days per year.
- Monthly revenue was calculated by multiplying the nightly price by the 30-day occupancy rate. Commercial hosts are more likely to use multiple platforms to list units, and therefore may be underrepresented in the utilization model.
- In order to estimate median neighborhood long-term rental shelter costs, other studies have relied on online data providers such as Craigslist and Zillow, which have a number of biases and inconsistencies. A more reliable estimate was generated by combining the average city-wide rental shelter costs from the 2015 CMHC report²⁷ with rental shelter cost variability between neighbourhoods contained in the 2011 National Household Survey.²⁸ Assuming that Vancouver rents have risen at a consistent rate across the city, I expect that this model provides a more accurate picture of what LTR units actually cost.
- A break-even occupancy rate is calculated by comparing monthly revenue to median neighborhood LTR prices. After accounting for sub-neighborhood rent variation, hosts who book on multiple sites, and diversity of host motivation, it is assumed that if a property makes 75% of neighborhood LTR shelter costs, it is “breaking even.” Host interviews indicated that hosts charge lower rates in winter, suggesting this may provide a conservative estimate.
- In order to assess the impact of STR, it is necessary to estimate the number of unique housing units in the City of Vancouver. While reliable census data for rental households are available, the total number of long-term rental housing units in the City of Vancouver is less clear. Based on estimates provided by the City,²⁹ the utilization model assumes a total of 113,998 rental housing units, with 19.4% of households sharing a unit.

26 Brian Chesky - What percent of Airbnb hosts leave reviews for their guests? <https://www.quora.com/What-percent-of-Airbnb-hosts-leave-reviews-for-their-guests>

27 CMHC – 2015 Rental Market Report: Vancouver and Abbotsford-Mission CMAs http://www.cmhc-schl.gc.ca/odpub/esub/64467/64467_2015_A01.pdf

28 Statistics Canada - 2013, “2011 NHS Semi-custom Profile for the Census Metropolitan Area (CMA) of Vancouver, the City of Vancouver and its Local Areas, 2011 National Household Survey” V2 [Version] - <http://hdl.handle.net/11272/10013>

29 City of Vancouver Housing Characteristics Fact Sheet <http://vancouver.ca/files/cov/housing-characteristics-fact-sheet.pdf>

Impacts on rental stock and preliminary data analysis

How many Airbnb listings are there in Vancouver?

There were a total of 4,728 listings in Vancouver on 3 December 2015. Of these, 3,529 had at least one review, suggesting that they have been rented, and 3,425 had been reviewed in 2015. For the purposes of this report, it is assumed that 3,425 are being actively rented as of December 2015.

How many Airbnb hosts live in their units?

Casual and commercial hosts are distinguished by their rate of utilization. Commercial hosts are defined as hosts who either do not or could not live in the unit they list on Airbnb. For the purposes of the utilization model, commercial listings are utilized over 58 nights for full homes and apartments, and 88 nights for shared and private rooms. These figures were originally used by the San Francisco Budget and Legislative Analyst based on an internal report for Airbnb that stated these represented the average length of stay for each rental type in San Francisco.³⁰ The utilization model predicted that 53% of Vancouver hosts were commercial.

More importantly, the model assumes that a typical host advertising a full house on Airbnb for 58 nights or more (or a private room for 88 nights) is unlikely to live in that property. Some hosts may lease a full house for more than 58 days, but it is assumed an equivalent or greater number of hosts are likely underrepresented because they do not derive all of their STR bookings through Airbnb. Commercial hosting is therefore assumed to convert LTR units to STR, reducing the availability of affordable LTR rental housing stock.

Table 1 (below) summarizes the classification of STR based on the utilization model. As shown, the total number of housing units dedicated to full time STR is predicted to be 1,811, compared with 1,614 casual units. Based on an estimate of median neighborhood LTR prices, it is assumed that the total number of commercial housing units that have converted long-term rental housing to short-term rentals is equal to 1.6% of the total rental stock, and is equivalent to 1 in 14 secondary suites.

Table 1: Estimated Number of Short-term Rental Housing Units in Vancouver by Host Type

Type of Listing		Threshold Days Rented as STR	Estimated Unit Count	Percentage of Total STR	Percentage of Total LTR	
Casual Units	{	Entire Home/Apt	58 days or less	1005	29%	0.9%
		Private Room	88 days or less	564	16%	0.5%
		Shared Room	88 days or less	45	1%	0.0%
	Total Casual			1614	47%	1.4%
Commercial Units	{	Entire Home/Apt	over 58 days	1361	40%	1.2%
		Private Room	over 88 days	413	12%	0.4%
		Shared Room	over 88 days	37	1%	0.0%
	Total Commercial			1811	53%	1.6%
TOTAL UNITS				3425	100%	3.0%

Source: InsideAirbnb.com, December 2015

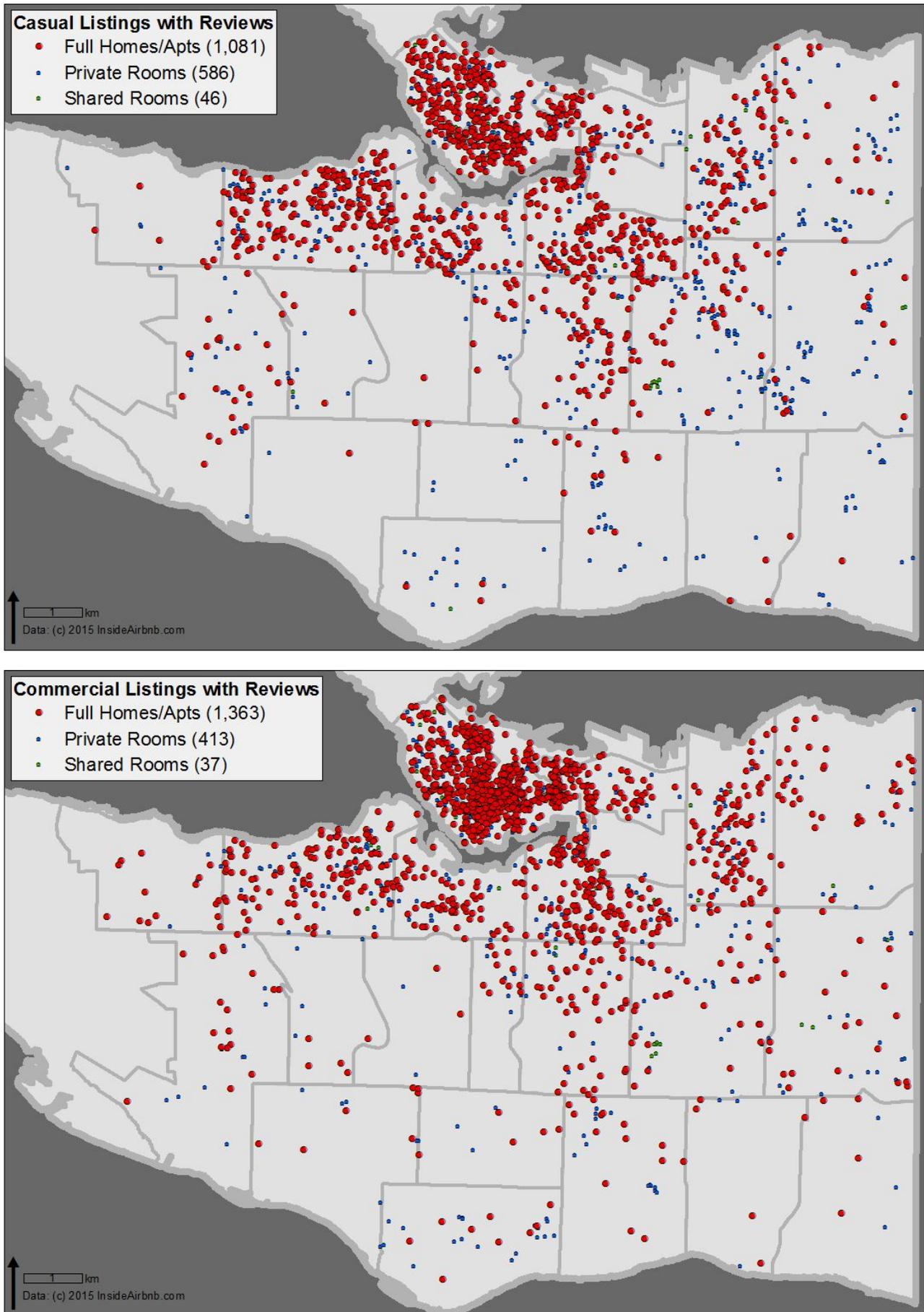


Figure 4: Airbnb Commercial and Casual listings are distributed across the city, but concentrated in Downtown and the West End. Commercial listings also represent a greater share of full homes and apartments.

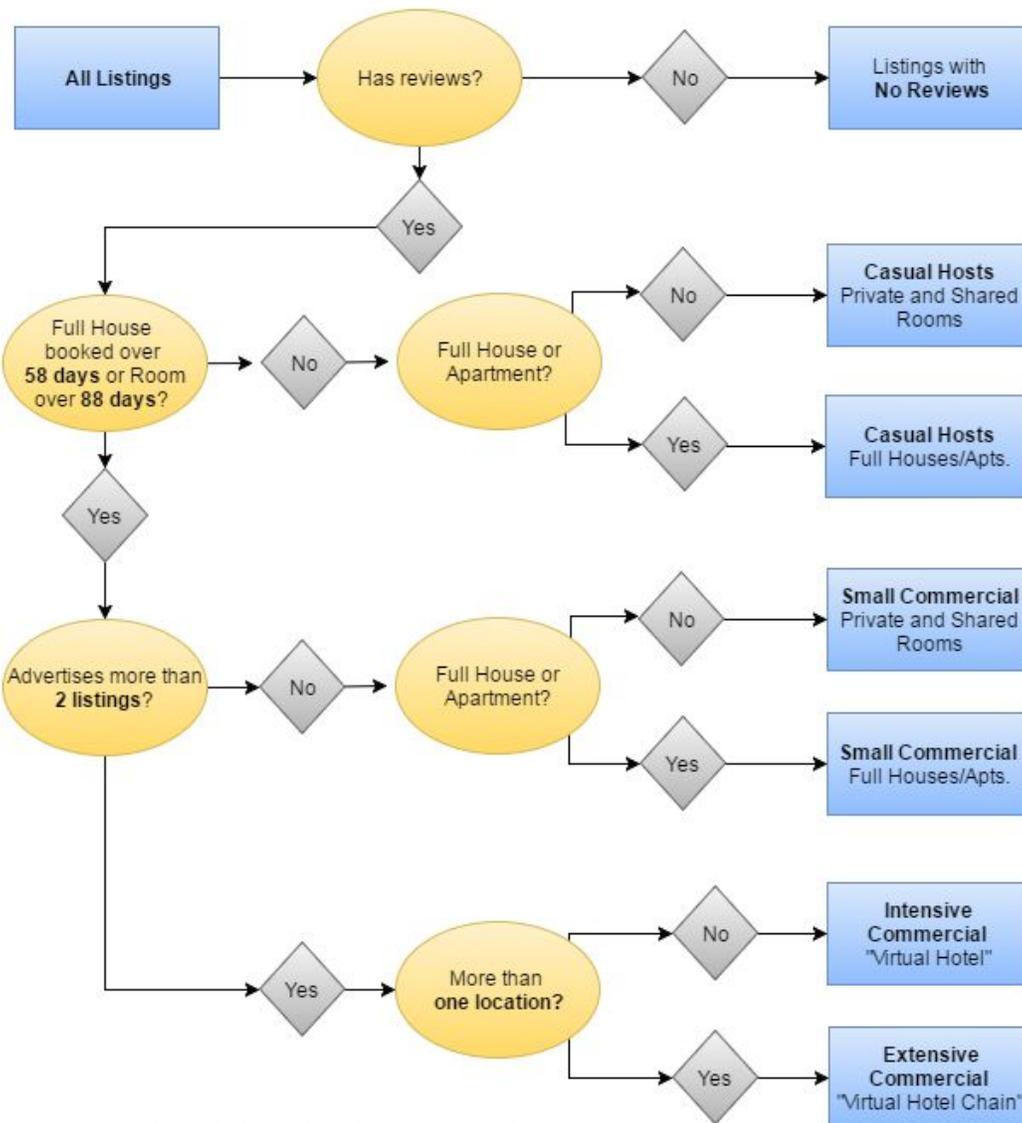


Figure 5: Distinguishing different host business models provides a nuanced understanding of the STR market in Vancouver

How many hosts list multiple units?

Of a total of 3,425 active rentals, 1,247 are listed by hosts managing multiple units. Because many casual hosts will list a full apartment and a private room as separate units, an analysis of hosts advertising 3 or more units offers a study size of 740 units. 704 were listed by a host that managed at least one commercial listing; however, commercially utilized listings totaled just 394. This may reflect property managers assigned to multiple properties on behalf of casual hosts, or it could reflect that some suites are more frequently booked on sites other than Airbnb.

In order to better understand the differences in business models, utilization and profit margins of various host types, I will attempt to further distinguish several subcategories of commercial hosts (see Table 2, below). While all commercial hosts are assumed to have a negative impact on affordable housing availability, commercial hosts with more than 2 units (hereafter referred to as Large Commercial Hosts) have a disproportionate impact on affordable housing stock.

Large Commercial Hosts are further grouped into two categories:

- Intensive Commercial Hosts are assumed to operate multiple listings in a single unit or structure. This may include a single host in their own residence listing multiple couches in a shared room, a large house that has been subdivided into a virtual hotel or nonconforming traditional bed and breakfast, or could also describe a single host who manages multiple properties in a single condominium.
- Extensive Commercial Hosts are hosts who manage more than two properties in more than one location. Extensive Commercial Hosts may include property managers who manage the residences of casual hosts or commercial developers awaiting permits. They may also be investors who own multiple condominiums and houses across town and use Airbnb to maximize profits

How much do STRs earn compared to LTRs?

Hosts utilize a variety of models to maximize profit on rental units. Full homes are a preferred option among hosts. Hosts reported in interviews that large groups booking full homes are less labour-intensive, and guest reviews reveal greater satisfaction than houses divided into private rooms. Private rooms can be more lucrative, particularly with larger houses with five or more bedrooms. As discussed previously, CMHC provides neighborhood long-term rental prices for bachelors, 1, 2, and 3-bedroom rental units. The utilization model assumes that commercial hosts can “break even” over renting long-term in the following ways:

- Bachelors and 1-bedroom units can be rented as a full home or one single room;
- Two-bedrooms can be rented as a full home or two single rooms; and
- Three-bedrooms can be rented as a full home or three single rooms.
- Shared rooms are omitted due to low sample size.

The rate at which a unit will “break even” with a long-term rental in the same neighborhood is calculated by multiplying the nightly rate by the monthly utilization rate, which provides a rough estimate of how much revenue a unit generates. The break-even point assumes that STR revenue is at least 75% of the median neighborhood LTR shelter cost, accounting for neighborhood variations in rent, and revenue from sources other than Airbnb. Table 2 illustrates the break-even rate among host types, which shows a higher break-even rate with more sophisticated enterprises.

Commercial Hosts are not only a significant source of revenue for Airbnb, they are the dominant source of revenue. Contrary to Airbnb’s public statements, the company is heavily reliant on professional full-time hosts. Casual part-time hosts who live in the units they rent may form a majority of hosts, but revenue from casual hosts is dwarfed by all other categories. It would appear that Airbnb’s core business is not casual hosts, but commercial operators using an anonymous online marketplace to circumvent local laws and regulations, as illustrated in Figures 5 and 6.

Table 2: Estimated Monthly Income of Short-term Rental Housing Units in Vancouver by Host Type

Type of Listing		Threshold Days Rented as STR	Average Monthly STR Revenue	Percentage of Units Breaking Even
Casual Units	Entire Home/Apt	58 days or less	\$396	10%
	Private Room	88 days or less	\$238	13%
	Shared Room	88 days or less	\$204	-
Small Commercial Units	Entire Home/Apt	over 58 days	\$1,557	81%
	Private Room	over 88 days	\$998	92%
	Shared Room	over 88 days	\$737	-
Intensive Commercial Units	Entire Home/Apt	over 58 days	\$2,043	84%
	Private Room	over 88 days	\$707	87%
	Shared Room	over 88 days	\$352	-
Extensive Commercial Units	Entire home/apt	over 58 days	\$2,203	89%
	Private Room	over 88 days	\$967	100%
	Shared Room	over 88 days	\$765	-

Source: Webscrape prepared by Murray Cox, December 2015

Table 3: Estimated Monthly Income of Commercially Utilized STR in Vancouver by Neighborhood

Location and Type of Commercial Listings		Number of Commercial Units	Average Monthly Commercial STR Revenue	Percentage of Commercial Units Breaking Even
Downtown	Entire Home/Apt	440	\$2,162	82%
	Private Room	74	\$1,320	96%
	Shared Room	4	\$419	-
West End	Entire Home/Apt	181	\$1,507	81%
	Private Room	57	\$1,147	98%
	Shared Room	7	\$460	-
Kitsilano	Entire Home/Apt	122	\$1,626	81%
	Private Room	42	\$884	93%
	Shared Room	4	\$493	-
Mount Pleasant	Entire Home/Apt	139	\$1,240	76%
	Private Room	35	\$944	97%
	Shared Room	3	\$371	-
Grandview-Woodland	Entire Home/Apt	82	\$1,325	80%
	Private Room	24	\$791	96%
	Shared Room	3	\$240	-
Fairview	Entire Home/Apt	68	\$1,330	72%
	Private Room	15	\$781	100%
	Shared Room	2	\$576	-
Kensington-Cedar Cottage	Entire Home/Apt	35	\$1,003	77%
	Private Room	24	\$802	75%
	Shared Room	6	\$267	-
Downtown Eastside	Entire Home/Apt	90	\$1,801	100%
	Private Room	14	\$1,002	100%
	Shared Room	0	-	-
Riley Park	Entire Home/Apt	45	\$1,208	78%
	Private Room	15	\$896	93%
	Shared Room	2	\$263	-
Hastings-Sunrise	Entire Home/Apt	34	\$1,386	85%
	Private Room	14	\$625	100%
	Shared Room	1	\$254	-
Renfrew-Collingwood	Entire Home/Apt	22	\$1,274	73%
	Private Room	18	\$608	72%
	Shared Room	3	\$277	-
Dunbar Southlands	Entire Home/Apt	18	\$1,288	67%
	Private Room	10	\$1,366	100%
	Shared Room	0	-	-

Sunset	{	Entire Home/Apt	14	\$1,093	71%
		Private Room	14	\$515	57%
		Shared Room	0	-	-
Marpole	{	Entire Home/Apt	9	\$948	78%
		Private Room	21	\$667	95%
		Shared Room	0	\$147	-
West Point Grey	{	Entire Home/Apt	15	\$2,054	87%
		Private Room	5	\$747	100%
		Shared Room	0	-	-
South Cambie	{	Entire Home/Apt	11	\$1,763	45%
		Private Room	8	\$843	75%
		Shared Room	0	-	-
Victoria-Fraserview	{	Entire Home/Apt	5	\$978	80%
		Private Room	3	\$474	67%
		Shared Room	0	-	-
Oakridge	{	Entire Home/Apt	5	\$1,358	80%
		Private Room	4	\$1,183	100%
		Shared Room	0	-	-
Arbutus Ridge	{	Entire Home/Apt	5	\$1,219	40%
		Private Room	4	\$925	50%
		Shared Room	0	\$57	-
Killarney	{	Entire Home/Apt	4	\$1,238	100%
		Private Room	3	\$797	100%
		Shared Room	0	-	-
Strathcona	{	Entire Home/Apt	8	\$1,395	100%
		Private Room	2	\$692	100%
		Shared Room	2	\$1,233	-
Kerrisdale	{	Entire Home/Apt	7	\$1,978	100%
		Private Room	5	\$1,136	100%
		Shared Room	0	-	-
Shaughnessy	{	Entire Home/Apt	2	\$4,046	50%
		Private Room	2	\$829	100%
		Shared Room	0	-	-

Source: InsideAirbnb.com, December 2015

Tools for regulation

Large Commercial Hosts are heavily invested in Vancouver's STR market. Table 3, left, shows that the top 10 hosts in 2015 generated significant revenue through illegal STRs. In cities where STR has been legalized, commercial hosts have been largely non-compliant with registration requirements and maximum night bookings.³¹

Airbnb has continued to facilitate Large Commercial Hosts who violate bylaws put in place to regulate the STR industry while benefiting from the existence of a regulatory framework which legitimizes prohibited types of STR. LAANE's report provides an extensive analysis of Airbnb's activities in North America. Based on his case studies of cities where regulation has been introduced, three themes have emerged:

Airbnb will agree to submit fees equivalent to local tax rates as part of a private contract with cities, with no public oversight, no monitoring, and without ongoing data sharing on the number or legal status of STR.

- Airbnb does not participate in enforcement or monitoring of its listings despite having the technical ability to do so.
- The vast majority of hosts will not comply with licensing or permitting. Airbnb refuses to require hosts to comply with permit requirements, or to turn over addresses of STR listings they list.

Existing Tools Available Without New Legislation

The City of Vancouver has a limited number of tools available to regulate Airbnb and other websites advertising illegal STRs. While more innovative regulations would require enabling legislation from the Province, the City has tools allowing it to take action against the worst offenders:

- The principal tool which has historically regulated STR accommodation is Vancouver's Bed and Breakfast licence. While some hosts may qualify for licensing, the majority of commercial hosts, including Extensive Commercial Hosts would not.
- Vancouver could enforce the Zoning and Development bylaw restricting unlicensed STR. Because hosts rely on using photographs of suites to advertise rentals, it may be sufficient to prove that interior and/or exterior photographs of a suite were advertised on Airbnb to prosecute some violators.
- An analysis of webscrape data is a useful but insufficient substitute for official booking data. In the past, Airbnb has been reluctant to share its data with municipalities, and in New York has willfully misled the public. An accurate understanding of STR bookings in Vancouver can only be determined through a review of past booking data from major sites advertising illegal STR in Vancouver.

Potential Tools Requiring Municipal Legislation

The City of Vancouver has a number of extraordinary powers enumerated in the Vancouver Charter. It does not, however, have all the tools available to other BC municipalities, such as resort communities, which have additional tools to generate affordable housing. As the STR industry evolves, it will be necessary to develop new tools to regulate it; nonetheless, it is critical to establish basic regulations and restrictions to control public nuisances and social harms created by certain types of STR.

- Hosts interviewed for this study favoured a hotel tax for STR similar to San Francisco's regulations. A hotel tax would contribute 8% of revenues to the Province, and 3% to Tourism Vancouver. A hotel tax would not offset the loss of rental housing, and if Airbnb is given the legitimacy of paying taxes, it would likely encourage more commercial hosts to enter the market. This is not recommended as an effective option for reducing impacts on the availability of affordable housing.
- Relaxations on STR could include setting a maximum number of days at 90 or 120 days. This may prove difficult to enforce on a per-unit basis as hosts may try to register a single property across multiple platforms or use multiple registered agents. This option is recommended provided that a mechanism is developed to track STR units across platforms.
- Multi-year prohibitions on units that have applied for a "no-fault eviction" resulting from renovation or redevelopment. Amending Vancouver's existing Tenant Relocation and Protection Policy to prohibit STR conversion for a period of several years following a redevelopment could discourage land-

31 Roy Samaan, LAANE - Airbnb, Rising Rent, and the Housing Crisis in Los Angeles <http://www.laane.org/wp-content/uploads/2015/03/Airbnb-Final.pdf>

lords from applying a no-fault eviction that may not have otherwise been deemed necessary.³² This option is recommended if the City intends to reduce redevelopment of existing rental stock for the purpose of STR conversion.

- Any attempt to limit STR utilization of a particular unit requires registration and licensing of units to be rented, which has proven unsuccessful in other cities. Developing a successful registration system is essential for any regulatory mechanism to be successful. This option is strongly recommended.
- Ultimately, Airbnb and similar sites are principally responsible for facilitating the violation of municipal bylaws. Airbnb has the tools to remove or prohibit illegal posts, but chooses not to do so. In order for Vancouver to successfully enforce existing or future zoning bylaws, the City needs the authority to fine platforms like Airbnb that knowingly advertise illegal STRs. This tool is recommended and necessary for any registration and licensing mechanism to be effective.
- A new licensing program for non-traditional Bed and Breakfasts could introduce new annual fees to offset the costs of enforcement and fund the replacement of LTR units lost by conversion. The feasibility of an affordable housing fee scheme would have to be subjected to a thorough economic and legal analysis that is beyond the scope of this report. This option is recommended as the least restrictive means to reduce impacts on the availability of affordable housing.

Table 4: Estimated Annual Revenue of Top Hosts

Rank	Host	Units	Estimated Number of Visitors	Estimated Annual Revenue
1	Drew	22	60	\$500,450
2	Soul	16	109	\$416,506
3	Kevin	5	118	\$386,170
4	Matin	8	51	\$332,592
5	Sarah	15	94	\$328,127
6	Katie & Adam	9	99	\$274,392
7	Edgar	11	36	\$259,130
8	Lease It Furnished	7	73	\$242,464
9	Lili	7	50	\$220,718
10	Jay	5	89	\$190,620

Source: InsideAirbnb.com, December 2015

Potential Tools Requiring Provincial Legislation

While many tools already exist to control and regulate STR in Vancouver, provincial cooperation would be a great asset. Essential to regulation would be a clear authority to fine platforms facilitating violations of municipal bylaws. Another tool would be a clear municipal authority to tax STRs, allowing Vancouver to develop innovative tools to allow Airbnb and similar services while mitigating their negative impacts on housing affordability. Such regulation might be similar to inclusionary zoning tools available to resort municipalities allowing local businesses to provide housing for workers or pay into an affordable housing fund in lieu of directly offsetting their impact to the community.

Conclusions

This study represents an important first step in identifying the nature and impact of Airbnb on the availability of rental housing units. Karen Sawatzky's forthcoming research will investigate the growth of STR in Vancouver over time. Future research could include quantifying the statistical significance of various business models, and associations with negative trends such as no-fault evictions. Further studies of host business models could include an analysis of building types and proximity to community amenities associated with STR conversion.

Effective regulation of STR in Vancouver requires the ability to track hosts across platforms and across units. Both hosts and platforms must be held accountable for encouraging and facilitating illegal STR, and individual rental units must be registered and tracked. Until sites like Airbnb can be affirmatively held accountable to the communities and municipal governments in which they operate, any attempt to regulate STR in Vancouver will only legitimize Airbnb's operations and undermine municipalities' authority to regulate zoning and business within their borders.

32 City of Vancouver - Tenant Relocation and Protection Policy <http://former.vancouver.ca/ctyclerk/cclerk/20151210/documents/ptec4.pdf>