

Promoting Innovation In Vancouver's Sharing Economy

A REPORT FOR
THE CITY OF VANCOUVER

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A Sharing Economy Story (that could not have happened 10 years ago)

Vancouver resident Joe ShareItAll is having breakfast, enjoying fresh, locally grown strawberries from his garden with his cereal. But he didn't grow them. A neighbouring family did, because Joe is one of many people offer the use of their land to avid gardeners; the gardeners repay the favour by sharing produce with the landowners.

Over breakfast, he goes online to plan his vacation in Portland, Oregon. This will include staying at an Airbnb and hiring the services of a local citizen-guide to show him around. A third of the cost of his vacation will be paid by the fees he collects from a couple from Toronto, who'll be renting his place through Airbnb while he's gone. Joe then checks into a peer-to-peer lending site, and loans some money to a promising women-owned cooperative in India.

He waves at the guy pulling into his parking spot: Joe no longer needs it, because he auctioned off his own car years ago on Ebay. The extra money he makes renting his parking space allows him to cut back his work hours and spend more quality time with his kids.

After breakfast, Joe catches a carpool to his co-work space, where he goes a couple of days a week when he actually needs to meet with clients in person. His business--offering workshops on how to get cohousing projects off the ground--got its start thanks to crowdfunding.

After work, he picks up a bike share to stop in to visit the grandmother he's been looking out for. Because he's part of a timebank, he's traded his own time doing this with someone else who is doing the same for his mom in Montreal. But it's not all business by any means. He and the old lady have developed a warm friendship.

After enjoying a cup of tea with her, Joe gets onto today's project: fixing her radio, which seems to have stopped working. Good thing he learned a thing or two about soldering and electronics during his visits to the Vancouver Hackspace. He was able to find the tools he needed for the job at the local tool library. She can't resist sending Joe home with some fresh kale that she got from a local produce-sharing network.

When Joe gets home, he gets ready for the really big event of the day: a date with the coordinator of Vancouver's new alternative currency system. When Joe arrives at her place at 6 p.m. in a spiffy-looking Daimler Car2Go, she's impressed – that the car isn't his. He, meanwhile, is star-struck because she looks sensational in a gorgeous grey silk dress. How does she manage to look so deluxe on her non-profit salary, he wonders? She smiles, but doesn't tell him: For the same prices she used to spend on outfits she'd wear only a few times, she's effectively tripled her wardrobe by renting fashions for special occasions like this.

INTRODUCTION

This story illustrated many examples of what is increasingly called the sharing economy, and what others are calling collaborative consumption. So what do these terms mean, why should the City of Vancouver pay attention, and what should it do about it?

This report will address this topic by exploring the meaning of these terms, the development of these phenomena in Vancouver and other cities, and some implications for planning and sustainability. It will conclude with our recommendations for actions that the City could take to encourage the development of its sharing economy and foster innovation within it.

DIFFERENT UNDERSTANDINGS OF THE SHARING ECONOMY

The origins of the term *sharing economy* are not entirely clear, and its meaning appears to be evolving as we speak. In what may be the first widespread use of the term *sharing economy*, Gold (2004) saw it as the outgrowth of The Economy of Communion, which started within the Focolare Movement in Brazil in 1991 and a global network of some 800 businesses and civil society organisations promoting the values of sharing, caring and justice.

Wikipedia equates it with the term *gift economy*, which refers to ancient traditions of mediating exchange through gifts; for Eisenstein (2011), the sharing or gift economy is enjoying a resurgence and is the direction we must return to.

Lessig (2008) makes a clear distinction between the commercial economy, where products and services have a tangible economic value; the sharing economy, which functions outside of monetary exchange and which is mediated not by a metric of price but by a set of relationships; and hybrids of both, where revenues are made but where users self-regulate and freely contribute without hope of monetary gain. Some critics (e.g. Randall-Whited, 2012) have argued that the term *sharing economy* is a misnomer to the extent that it is thought to encompass activities that are more about making profit than about sharing in any commonly understood sense of the word.

Gansky (2010) sees the sharing economy as a new wave of information-enabled commerce that's also improving our communities and our planet, and a massive business opportunity that every CEO needs to know about.

Botsman and Rogers (2010) coined (and seem to prefer) the term *collaborative consumption* to describe what others might view as a subset of the sharing economy – the rapid explosion in traditional sharing, bartering, lending, trading, renting, gifting and swapping reinvented through network technologies on a scale and in ways never possible before. For Botsman and Rogers, the rise of collaborative consumption signals a “macro power shift” that is turning conventional models of ownership and accumulation on its head and redefining how we relate not only to consumption but to each other – and in the process, fomenting a new “We” generation.

WHY THE SHARING ECONOMY SHOULD BE ON THE CITY'S RADAR

Even with their different understandings of the sharing economy, all commentators would likely agree on a couple of things: It is growing, it offers a tremendous opportunity to reduce our collective impact on the environment, and it can have profound effects on the way we consume and do business (Latitude Research, 2010). These factors alone demand the City's attention.

But the City has other reasons to take a strategic interest in the health of the Sharing Economy. Two of the City's Greenest City Goals (City of Vancouver 2012) relate directly to sharing economy activities in general and collaborative consumption in particular:

Goal 5: Zero Waste

Target: Reduce solid waste going to the landfill/incinerator by 50% from 2008 levels

Goal 7: Lighter Footprint

Target: Reduce Vancouver's ecological footprint by 33% over 2008 levels.

As we shall see in this report, growth of the sharing economy also has a bearing on several other Greenest City goals, including:

- Goal 1:** Green Economy
- Goal 2:** Climate Leadership
- Goal 4:** Green Transportation
- Goal 10:** Local Food

This report will also show how the development of the sharing economy should be of interest to planners in any community, for reasons related to regulations, zoning, and the development of social capital.

OUR FOCUS

We have designed this report to contribute to or complement work by the Collective Research Group (2012), which has already begun a much larger research project for the City of Vancouver. The CRG uses a much more expansive definition of the sharing economy than the commentators above: the sharing economy equals the sum total of all activities related to sharing, bartering, swapping, renting, repurposing or re-using. It includes non-profit organizations, for-profit businesses, and social enterprises; monetary and non-monetary exchange; and transactions that can be considered formal and organized (as in barter networks) as well as those which are informal and spontaneous (such as borrowing a lawnmower). Transactions may be mediated by technology or the result of face-to-face interactions; they may be neighbour-to-neighbour or global in scope; they may be new and innovative or as old as car rental companies, libraries and scrap yards.

The CRG research project will essentially map, quantify and describe the dynamics of Vancouver's sharing economy and identify opportunities to increase sharing activities in Vancouver. As graduates students working on a planning class project, we agreed with CRG to adopt their expansive definition of the sharing economy but, in light of our limited time frame and resources, narrow our team's research focus to the subset of that larger definition of the sharing economy aligns most closely with Botsman's conceptualization of collaborative consumption¹: sharing-economy activities that are formally organized, new and innovative, usually mediated by network technologies, and occurring at scales unimaginable only a decade ago.

RESEARCH QUESTION

Working with the City of Vancouver (Amy Fournier) and the Collective Research Group (Chris Diplock), we agreed to explore the following question:

What can the City of Vancouver do to promote the expansion of the sharing economy in Vancouver in the service of its Greenest City goals?

We also agreed on the following subset of research questions that will inform the two major sections of this report:

I: Sharing Economy Development in Other Cities

In which other cities has the sharing economy has taken root in a larger way? Where is it growing? What evidence is there that this is so? What explains the growth of the sharing economy? What role, if any, is there for local governments to promote this?

¹ Our team is not wholly comfortable with the term *Collaborative Consumption* to describe the kinds of activities described by Botsman in her book, not only because not all of the activities are any more collaborative than traditional market behaviours but also because the term suggests a focus on consumption rather than on the environmental imperative of scaling back consumption through sharing-economy activities.

II: Sharing Economy Innovation in Vancouver

What is the state of innovation in the sharing economy at in Vancouver? Who / what sectors are leading the way and why? What do Vancouver sharing economy trailblazers identify as opportunities and hindrances to growth of the sharing economy?

METHODOLOGY OVERVIEW

We first conducted a literature search to explore the sharing economy landscape, define the key terms *sharing economy* and *collaborative consumption* (highlights of which are described above) and become familiar with the many dimensions of innovative sharing economy activities. We then assigned team members to examine sharing economy development in other cities (Part I of this report) and to explore innovation in the Vancouver sharing economy (Part II). Methodology and analysis for each of these endeavours will be described in more detail in each of these respective sections of this report.

We then reconvened to share our learnings with each other, derive recommendations for the City of Vancouver and test-run a presentation with our class. Our recommendations will be presented at the end of this report and followed by some final thoughts on the generalizability of this research and future research directions.

PART I: SHARING ECONOMY DEVELOPMENT IN OTHER CITIES

RESEARCH AIMS & METHODOLOGY

The aim of this part of the research was to extract lessons for Vancouver from case studies of innovative sharing-economy initiatives in four North American cities. We sought to identify pressing issues and problems as well as factors explaining the success of sharing initiatives, and to explore how municipal governments are approaching the sharing economy.

Our literature review combined with our initial informal scan of the online sharing economy landscape quickly pinpointed San Francisco, New York, and Portland as leaders. In collaboration with CRG, we also elected to include Montreal for some Canadian perspective and because it boasts a very interesting transportation initiative.

We then reviewed popular and academic online media to identify current problems or topics and provide direction for our inquiry into the sharing economy in these regions. From there, we sought to identify innovative sharing-economy initiatives, being particularly alert for those that had not yet made an appearance in Vancouver. Once we had identified several candidate initiatives, we located relevant contact persons and initiated semi-structured phone and email interviews. Interviews took up to 20 minutes and probed participants' thoughts regarding the state and development of their cities' sharing economies, the factors that drive their success, and any perceived barriers to their development. We also invited participants to share how, if at all, their initiatives had received help from their municipalities and other levels of government as well as what actions by their municipalities could be helpful. In cases where participants identified helpful actions by municipalities, we also probed for contacts within municipal governments to interview about their involvement and future plans for their engagement with the sharing economy.

It should be noted here that we encountered one difficulty from the outset: We had hoped to identify one unique initiative in each city which had not yet been implemented in Vancouver and which would have a strong connection to Vancouver's Greenest City Action Plan goals, especially Goals 5 and 7. We researched thoroughly but were unable to do this – because the initiatives we found which spoke to these goals were only marginally different than initiatives already established in Vancouver. We consider this a positive outcome, in that it suggests how comparatively advanced and diverse Vancouver's sharing economy has already become.

For this reason we changed our focus from highlighting specific initiatives to aspects of these cities' sharing economies that are unique and potentially hold valuable lessons for the City of Vancouver. As we shall see below, this broadening of scope produced some useful insights.

RESULTS

SAN FRANCISCO

San Francisco was found to be an important center for sharing economy initiatives (see Table 1, below), based on the number and scope of initiatives and the high level of municipal involvement in their regulation. Indeed, many companies' headquarters in the redistribution and collaborative lifestyle sectors are located in San Francisco; this feeds a continuous dialogue between municipality offices, representatives of those ventures, and resident organizations.

Table 1. Initiatives identified in San Francisco

SAN FRANCISCO	
Froomz	Space, salon, and office sharing
CarShare	Ride-sharing
ZipCar	Ride-sharing
RelayRides	Peer-to-peer car-sharing
Getaround	Peer-to-peer car-sharing
Park Circa	Parking space-sharing
Loosecubes	Share office space
Hub Bay Area	Share office space
SideCar	Ride-sharing
Zimride	Ride-sharing
Ven	Digital currency
Kickstarter	Funding for initiatives
VRBO	Rent out their apartments, homes or extra rooms
Airbnb	Rent out their apartments, homes or extra rooms
CouchSurfing	Rent out their apartments, homes or extra rooms
Ebay	Big marketplaces
Skillshare	Knowledge sharing and training
Taskrabbit	Time-sharing
Backcountryride	Trip car-sharing
Techshop	Tool and Machine sharing
Zilok	Rental website for items, spaces and accommodation
Indiegogo	Alternative money markets
Park at my House	Shared parking space
Vayable	Peer-to-peer travel
Craigslist	Big marketplaces

San Francisco's sharing economy has undoubtedly benefitted from state laws that promote its growth. For example, AB 1866, a law passed by California in 2003, allows the addition of new independent apartments to existing homes. It allows second housing units on single-family lots to help increase density and create affordable housing, but also helps to further cohousing and peer-to-peer travel services like Airbnb. AB 1871, passed in 2011, helps peer-to-peer car-sharing by allowing one person to rent a car from another person and still be covered by the state's insurance policy.

As well, San Francisco's sharing economy benefits from high-level involvement from the City. In April 2012, the mayor created a Sharing Economy Working Group which brings together sharing economy organizations; community stakeholders; the Mayor's Office and Board of Supervisors; the city's departments of planning,

building inspection, fire services, police, environment and public health as well as the municipal transportation agency; the City Controller and the treasurer/tax collection office. The Group looks at how the city's land-use, planning, tax and other laws impact or are impacted by collaborative consumption. It also explores policy alternatives and legislation to modernize those laws and/or address emerging problems.

Initially, the Group was designed to focus on five policy areas:

1. Car sharing, parking-sharing and ride-sharing
2. Bike and scooter-sharing
3. Housing, commercial spaces and workspaces
4. Recreation and green spaces, roof gardens, urban agriculture and food
5. Shareable tools, skills and other commercial enterprises.

Currently, the Group's discussions focus on the economic and social implications of Airbnb. Hoteliers argue that the growth of short-term housing rental initiatives through Airbnb unfairly compete with the hotel industry. They're calling for comparable taxation schemes (15%) and standards for fire and emergency be applied to Airbnb hosts. Concerns have also arisen that affordable housing for residents may be used primarily for cheap visitor accommodation, thereby displacing the primary use of these properties as homes. For its part, Airbnb argues that income generated from short-term rentals help mitigate residents' high rental and ownership costs in the city, and that the social networking promoted by Airbnb makes this a service that is fundamentally different from the hotel industry and one which should not be viewed as competition for the same market.

The growth of sharing economy initiatives in San Francisco, particularly the ride-sharing companies like Uber, Lyft and SideCar, have highlighted another challenge: liability and insurance. The California Public Utilities Commission (CPUC) asked these startups to cease and desist because they were operating as passenger carriers without evidence of public liability and property damage insurance required by taxi companies. According to CPUC definitions, offering rides to passengers for money turns the service into a transportation carrier as cab service.

San Francisco shows that new sharing economy initiatives based on communication and collaboration can create conflicts with existing industries and that policy frameworks need to consider how they can coexist.

PORTLAND, OREGON

Portland's sharing economy (see Table 2) is well-established and has experienced a very rapid growth over the past 3 years (Lynott 2012). Many of the initiatives we identified were created after the global financial crisis that began in 2008.

Table 2. Initiatives identified in Portland

PORTLAND	
Bright Neighbor	Share items, space, skills
NedSpace	Office sharing
Jelly	Office sharing
Farm my yard	Space sharing
Yardsharing	Space sharing
North, Northeast, and Southeast Tool Library	Share tools
Swap Positive	Clothes swap
Abby's Closet	Share clothes
Sunnyside Swap Shop, St Johns Swap'n'Play, Eastside Swap'n'Play, Woodlawn Swap'n'Play	Sharing care and children's toys

Portland Food Exchange	Swapping food
Portland Fruit Tree Project	Share and swap food
Something Borrowed	Wedding rental
Kitchen Share	Share kitchen tools
Free Geek Portland	Redistribute electronics
North Portland Preserve and Serve	Share canning equipment
Portland Seed Library	Share seeds
SewPo	Share sewing facilities

One remarkable feature of Portland’s sharing economy is that sharing initiatives seem to focus more on serving residents within the range of neighborhoods than is the case with initiatives in other cities. One reflection of this is that tool libraries and children’s clothing and toy swap initiatives can be found in almost every city district.

This appears to be supported by a very unique characteristic of Portland: the city has more than 95 volunteer-driven neighborhood associations (NAs). Some came into being through grassroots initiative; others were helped into being thanks to a municipal effort in the mid-1970s to “broaden channels of communication between the people of Portland and City officials on matters affecting neighborhood livability” (Portland City Council 1974, De Morris and Leistner 2009). All NAs enjoy modest annual funding support from the City of Portland and must meet minimum standards in terms of governance; however, there is considerable diversity in terms of *how* these standards get met. Each one covers a geographical area of one to three square kilometers and serves to connect local residents to the municipal government. Although a healthy debate continues about the effectiveness, representativeness, role and viability of Portland NAs, our interviewees made clear that they provide critical support for the sharing economy: Residents whose sharing initiatives are successful and growing rapidly, and even residents who just want to start with a new idea, can get help becoming a legal, registered non-profit organization under the neighborhood association’s umbrella.

Another notable feature of Portland’s sharing economy is that its municipality has recently begun to proactively engage with and support its sharing economy. Three examples support this point.

Firstly, the municipality’s transportation department is seizing sharing-economy opportunities to grow its transportation sector and reinforce mode choice. It actively sought out car-sharing companies, set up contracts to simplify parking, and helped them get grants and funding. Portland also plans to implement a bike-share program (S. Hoyt, personal communication, Nov. 2012).

Secondly, the municipality has recently updated Portland’s Urban Food Zoning Code (Bureau of Planning and Sustainability Portland 2012). This Code is designed to create a level playing field and legal security for Portland’s community gardens, community-supported agriculture and farmers’ markets. It deals with concerns such as hygiene standards applicable to sales of home-produced food and conditions for retailing food from properties zoned for residential use. The Code distinguishes between market gardens, community gardens, food membership distribution sites and farmers markets, and essentially allows all of them in all community zones—although farmers’ markets are also governed by temporary-use regulations (Bureau of Planning and Sustainability, Portland 2012). The Outreach Manager of Portland’s Bureau of Planning and Sustainability, indicated that the new Food Code’s stable and clear rules—for example, those related to size limitations of gatherings and food production spaces—make it easier for small-scale projects to get started and remain viable (L. Norris, personal communication, Nov. 2012).

Thirdly, the Bureau of Planning and Sustainability has been refining a messaging framework and outreach strategies regarding alternative forms of consumption for more than two years. It found that Portlanders are already very open to alternative consumption patterns and well connected with each other, but that residents sometimes lack information about concrete sharing possibilities—for example, about where initiatives exist and what participants are expected to do. Hence the municipality seeks to build better “bridges” between residents and existing initiatives. Strategies considered include collecting data about existing initiatives such as swap sites and tool libraries and how they work, and distributing flyers with this information to residents

within these initiatives' reach. Others are about proactively developing and strengthening relationships between the municipality and founders of sharing-economy initiatives. For example, the Bureau of Planning and Sustainability has working relationships with the different tool library founders. Implementing its messaging strategy and considering future possibilities for laws, regulations, and additional programs (such as financing support) are also on the Bureau's work plan.

NEW YORK CITY, NEW YORK

High density plus a high degree among residents of adaptation to modern communications have made New York City a fertile place for a sharing economy to take root (see Table 3). The city boasts a comprehensive set of existing organizations, with virtually every sector offering sharing initiatives.

Table 3. Initiatives identified in New York

NEW YORK	
Shared Squared NY	Facilitating network
Ioby	Facilitating and crowdfunding network
SnapGoods	Redistribute and share unused items
Neighborrow	Redistribute and share unused items
Thingl	Redistribute and share unused items
Swap-o-Matic	Redistribute and share unused items
Jointli	Share expensive goods
Zimride	Transportation
NYC: Citibike	Transportation
SocialBicycles	Transportation
Airbnb	Housing
SkillShare	Skills/Education
TaskRabbit	Skills/Labor
Ourgoods	Skills/Education
Tradeschool	Ideas/Skills
Loosecubes	Share office space
Paragraph	Share office space
WeWork	Share office space
Zokos	Social/Food
ClosetDashShop	Share and swap clothes

A notable feature of New York's sharing economy is the prominent presence of general networks that moderate and promote not just individual initiatives but awareness and discussion of the sharing economy as a whole — assuming, in a sense, at least part of the role of industry associations or community economic development organizations. For example, Shared Squared NY network has convened many initiative founders and activated a lively discussion about existing barriers and future ideas.

Another interesting feature is that it is space-sharing initiatives, like Airbnb and Loosecubes, that have experienced the fastest growth in recent years. Our interviewees suggested that this is driven by the high price of renting space in New York. In this sector, as well as in the sharing of clothes and fashions, New York stands out as a leader.

These successes aside, New York appears to be working out its relationship with the sharing economy. Our interviewees suggested that neighborhood-level initiatives face an uphill battle due to a lack of trust. As well,

growth of car- and bike-sharing initiatives has been slow. Perhaps not surprisingly, New York's highly effective public transit system was cited as a reason for this.

As in San Francisco, New York's local government has grappled with problems related to the short-term apartment rentals facilitated by Airbnb, passing bylaw S6873 to prohibit the rental of apartments for less than 30 days unless the permanent occupant is still living in the apartment (New York State Senate 2010). Media reports (e.g. Jaffe 2010) raised questions about the City's ability to enforce the law, as well as about the law's unintended effects on the traditional B&B industry (Harris 2012). A modified version of the law (New York State Senate 2011), which would distinguish the "legitimate business model" of micro-subletting from illegal hoteliers and associated maintenance, safety, and health-code problems was finalized and passed in mid-2012. Will this uneasy relationship between the City and Airbnb improve in the wake of Superstorm Sandy, in which NY Mayor Bloomberg found cooperation from Airbnb members in accommodating residents in need of temporary housing (Office of the Mayor, New York 2012)? This remains to be seen.

Apart from its Airbnb dilemmas, the municipality has been relatively uninvolved in the sharing economy. Even New York's sustainability plan mentions the sharing economy only in terms of car-sharing and alternative transportation methods (City of New York 2011). On the bright side for the sharing economy, however, the municipality plans to implement a bike-share program called Citi Bike early next year.

MONTREAL, QUEBEC

Like other cities in Canada, Montreal has experienced the growth of many new sharing initiatives (see Table 4). Most of the initiatives we found were similar initiatives already existing in Vancouver. However, two elements of Montreal's sharing economy may offer lessons for Vancouver: its transportation system and communal agriculture.

Table 4. Initiatives identified in Montreal

MONTREAL	
Theswampteam	Clothes redistribution
Renaissance	Clothes redistribution
Uniiverse	Redistribution communication
Airbnb	Unit rental
Communauto	Car sharing
Meals-on-Wheels	Food services
GoBac	Bin renting
Tous les Jours	Taxi sharing
Vélo Québec	Bike sharing
Bixis	Bike sharing
Edible Campus Garden	Community gardening
Alternatives	Community gardening
Santropol Roulant	Community gardening
Chez Soi	Community gardening
Sell your Electronics	Re-use electronics
Amigoexpress	Ride sharing
Kijiji	Redistribution, communication

In terms of transportation, Montreal boasts flourishing bike- and car-sharing programs which continue to grow. The bike-sharing system (Bixi) involves over 5,000 bikes and 411 stations around the city. In addition, the car-sharing initiative (Communauto) has developed partnerships with the public transportation companies which are owned by municipalities, allowing yearly users of public transportation to receive discounts on monthly passes as well as Communauto memberships at preferential rates. Recently they have also developed an agreement with the Société de Transport de Montréal and the Réseau de Transport de la Capitale allowing

some users of public transportation cards (“OPUS” cards) to access Communauto vehicles. Communauto also works closely with taxis, allowing members discounts on pre-paid taxi rides. These Montreal programs show how well the bike- and car-sharing systems can be integrated with public transit and taxi companies.

Sharing initiatives in urban agriculture are particularly notable in Montreal. Currently, 98 community gardens are shared by about 17,000 gardeners; over 100 rooftop gardens are engaged in hydroponic cultivation, organic agriculture and collective gardening. These are not only sources of food, but also foster social networks and provide the setting for initiatives that bring people of all ages, languages and cultural backgrounds together through urban food systems.

DISCUSSION

Several insights emerged from our studies of these four cities’ sharing economies.

The sharing economy includes a huge variety of actors and activities, and this should be reflected in a municipality’s approach to possible problems. Big players like Airbnb and Zipcar are few in number but represent a large proportion of sharing-economy transactions and a significant influence on the economy as a whole. As they grow, problems related to taxes, liability and insurance become more important. Thus careful regulation may be required to ensure benefits to all citizens. For example, cities may need to clarify permissions and prohibitions on short-term apartment rentals.

Small, neighbourhood-scale players in the sharing economy face completely different challenges, such as lack of publicity and volunteer time. Municipalities may want to look for appropriate ways to help them meet these challenges.

The obviously important role of cities’ unique local cultures in how local sharing economies develop also emerged as a theme. This was highlighted by our interviewees in New York: the founder of a neighborhood-level sharing network described sharing in that city as “tough”, while the founder of a city-wide board for dialogue about collaborative consumption referred to a “culture of distrust”. Both contrasted New York with their perception of San Francisco as a place where the residents’ openness for sharing would be deeply interwoven with the city’s history. Similarly, an interviewee in Portland felt that locals there had a higher-than-average propensity to try new sharing activities.

Others observed that sharing economy development is a predictable response to adversity. A Portland contact identified the financial crisis 2008 as a background and catalyst for the sharing economy movement. She explained that many people had lost their jobs, and then—through participation in sharing economy activities—helped reorient themselves by discovering that they were in fact in nice, likeable neighborhoods. Shared predicaments and the will to start something together led to a stronger sense of community.

Other “soft” characteristics and success factors were identified by our interviewees. For example, one interviewee felt that women played and still play critical roles as initiative owners and founders in Portland’s sharing economy. She was convinced that women are less inclined to wait for great financial support to begin and that their tendency to just keep the rules simple, combine sharing activities with having fun, and start moving has been an important success factor. An interviewee also suggested that to be successful, sharing-economy activities should consider equity implications and avoid separations between “haves” and “have-nots”. She felt that in well-structured sharing or swapping events, every participant should feel like a benefactor.

Finally, it appears that in some cities’ sharing economies at least, small is beautiful. While many sharing initiatives in other cities struggle to gather a critical mass of participants, Portland’s many neighbourhood-level initiatives have been so successful that they have had to implement rules that participants must live in the initiatives’ own neighbourhoods or district. This highlights the characteristically neighbourhood-based approach of Portland’s sharing economy and the considerable potential of a variety of small-scale initiatives as opposed to a high concentration of bigger initiatives.

PART II: SHARING ECONOMY INNOVATION IN VANCOUVER

METHODOLOGY

To complete our look at Vancouver's Sharing Economy, we started with the comprehensive list of sharing-economy innovators in Rachel Botsman's snapshot of collaborative consumption organizations at CollaborativeConsumption.com (The movement, n.d.), and used Google to search for any Vancouver-based equivalents. This frequently led not only to the equivalents, but to sharing-economy organizations and sectors we weren't previously aware of.

We then reviewed the resulting list (by no means exhaustive) of more 80 organizations with the CRG and the City of Vancouver and made adjustments: we added a few organizations that CRG and the City felt should be included simply because they could reasonably be expected to have some good insights about the sharing economy (e.g. the Vancouver Public Library); we added some organizations that could not really be considered new anymore but which were trailblazers (e.g. Jack Bell Rideshare) and/or that have a major role in Vancouver's sharing economy even if they aren't located here, such as Ebay, Craigslist and Netflix. We added Alta Bicycle Share, which isn't here yet but promises to be soon, because we felt they may have good insights to offer. We also removed some organizations from the list at the request of CRG because they didn't fit CRG's preferred definition of the sharing economy, such as community-supported agriculture and fisheries, community kitchens concerned primarily with teaching, a renewable energy cooperative, and some groups concerned primarily with activism and social networking. This left us with 72 organizations.

Considering the time available to this project, it was clear that we wouldn't be able to interview all of them. With CRG, we developed a system to select a broadly representative sample of these organizations. We started by grouping them into the three overarching categories of organizations used by Botsman and Rogers (2010):

- **Collaborative Lifestyles (CL):** These organizations promote transactions involving intangibles, such as time, space, skills and money. Examples include shared workspaces, time banks, parking spaces, and peer-to-peer travel.
- **Product-Service Systems (PSS):** These organizations facilitate access to products without needing to own or maintain them and help extend product lives. Examples include car-sharing rental businesses.
- **Redistributive Markets (RM):** These organizations enable used or pre-owned goods to be redistributed from where they are not needed to somewhere or someone where they are. Money may or may not be a part of this. Examples include Freecycle, swap and bartering networks, and neighborhood-based loan networks.

From there, we grouped organizations in each of these three categories into subcategories of like purposes. These subcategories were:

- Alternative money markets (i.e. organizations that offered an alternative to traditional monetary exchange and banking services)
- Shared space
- Children's goods
- Clothing
- Digital media
- Physical media
- Repair & maintenance tools
- Transportation
- Food-related
- All (i.e. big marketplaces that offer all of the above, such as Freecycle, Craigslist and Kijiji)

Table 5 shows our final list of organizations, placed in the Botsman and Rogers (2010) categories and subcategories of like purpose, alongside (under **Purpose**) a brief description of what they do.

Table 5. Inventory of sharing economy innovators in Vancouver. CL = Collaborative lifestyles; PSS = Product-service Systems; RM = Redistribution markets.

# of Organizations	Purpose	Name	Botsman & Rogers Category	Like purpose subcategory
5	Bartering	Barter First, Swapsity, Troc exchange, U-Exchange, Trade School Vancouver	CL	Alternative Money Markets
5+	Crowdfunding	Fund Weaver, Indiegogo, Kickstarter, Pozible, Start some good	CL	Alternative Money Markets
1	Errand & Task Networks	Ayoudo	CL	Alternative Money Markets
1	LETS / Complementary currency	Seedstock	CL	Alternative Money Markets
1	Social currencies	Timebank	CL	Alternative Money Markets
2	Social Lending	CommunityLend, VanCity Credit Union	CL	Alternative Money Markets
1	Coworking Space Finder	DeskWanted	CL	Shared Space
5+	Coworking Spaces	Startups XL, The Hive Vancouver, The Network Hub, The Office Vancouver, The Water Street Profile	CL	Shared Space
2	Garden-sharing	City Farmer, The Edible Garden Project	CL	Shared Space
2	Parking Spots	Park at my House, Parking Spots.com	CL	Shared Space
2	Peer-peer travel	Airbnb, Couch Surfing	CL	Shared Space
4+	Shared housing	Cohousing on Victoria Drive, Quayside Village Cohousing, North Vancouver, Vancouver Cohousing	CL	Shared Space
8+	Shared Studios/Workshops	The Purple Thistle, Glass Blowing Coop, The Toast Collective, Vancouver Community Laboratory, Vancouver Hack Space, W2 Community Media Arts Centre, Community Kitchen Program, Pedal + Our Community Bikes	CL	Shared Space
2	Toy/Baby Rental	Aboo Toy Rentals, Baby's on the Go	PSS	Children's Goods
1	Fashion Rental	Du Jour Boutique	PSS	Clothing/Apparel
2+	Movies	Netflix, itunes	PSS	Digital Media
2	Art Rental	Art Rental & Sales, North Van Arts Council	PSS	Physical Media
3	Text Book Rental	Amazon, Big Mama's, UBC Bookstore	PSS	Physical Media
10+	Book Sharing	All Public Libraries, University Libraries, Blue and yellow box, etc.	PSS	Physical Media

# of Organizations	Purpose	Name	Botsman & Rogers Category	Like purpose subcategory
1	Neighbourhood rental	Vancouver Tool Library	PSS	Repair and Maintenance Tools
1	Peer-peer rental	Rentthings.ca (Inaccessible)	PSS	All
1	Bike Sharing	Alta Bicycle Share (Not here yet)	PSS	Transportation
3	Car Sharing	Daimler Car2Go, Modo, Zip Car	PSS	Transportation
2+	Ride Sharing	Jack Bell Ride Share, Backcountryride.com	PSS	Transportation
5	Big Marketplaces	Craigslist, ebay, Kijiji, Used Vancouver, Amazon	RM	All
3	Free/Gift Exchanges	Freecycle, Vancouver Reuses, Craigslist	RM	All
1	Swap Sites for kids	Kids Vancouver	RM	Children's Goods
1	Food sharing	Farm Folk City Folk Shared Harvest	RM	Food
1	Used Electronics	FreeGeek, Sell Your Electronics	RM	Physical Media

To construct our sample, we chose organizations that reflected all possible combinations of the Botsman and Rogers categories and our list of subcategories of like purpose. This produced a sample of 22 organizations. When we were unable to reach a given organization after multiple attempts (more on this below), we selected an alternate organization that could be categorized the same way: for example, if we could not find one PSS organization that related to transportation, we selected another PSS organization related to transportation.

SURVEY

Working closely with CRG, we developed a questionnaire (see **Appendix A**) that could be administered by our team members to knowledgeable contacts from each organization. The questions were designed to be completed in about 20 minutes and were tested before we ran them. They were meant to get these innovators to describe:

- the scope of their operations,
- their past and future growth trajectory,
- expectations about how the sharing economy will develop,
- their sense of unrealized opportunities in Vancouver's sharing economy,
- their impressions of how the City of Vancouver's actions *presently* hinder or help sharing economy development, and
- their thoughts on how the City of Vancouver's actions *could* support sharing economy development.

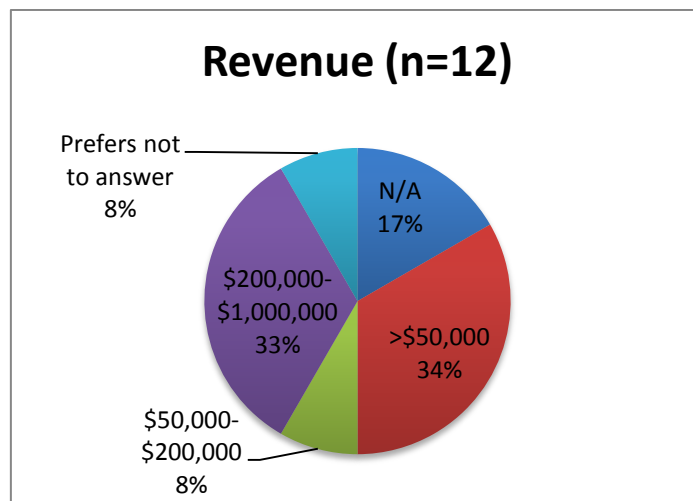
SAMPLE CHARACTERISTICS

Despite considerable detective work and multiple attempts to contact all of our sampled organizations plus suitable alternates when we couldn't reach our first selections (for a total of 29), we were only able to secure interviews with representatives of 12 organizations.

Most of them were small organizations that had launched within the past 5 years, with a median of 2 years in operation. Private businesses accounted for 42% of our respondents, 33% were registered non-profits, 17% were non-profit cooperatives and 8% (i.e., 1) was an informal non-profit. Seventy-five percent of respondents said they operate (or operated) from the neighbourhood to regional (i.e. more than one contiguous community) level. Fully 75% of the organizations had employees; of those, 3.3 was the average number of FTE employees.

According to our respondents' answers, almost 40,000 people have used these organizations' services since they began operating, and more than 6,800 users have used their (collective) services in the last 12 months at a rate of about 3,400 (total of all of the groups) transactions per month. More than 2,500 volunteers contributed to the six organizations who indicated that volunteer help was important to what they do. This level of participation is impressive considering the relatively small size and newness of these organizations as a whole, and the fact that half of our interviewees (50%) were generating \$50,000 or less in revenues annually. Chart 1 shows the distribution of respondents by revenue category.

Chart 1. Distribution of respondents by revenue category



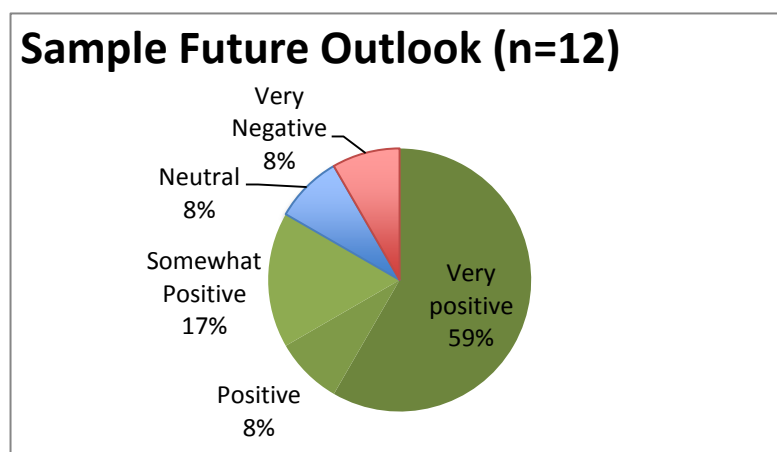
KEY FINDINGS

Because organizations varied so widely in purpose, we offered respondents the opportunity to choose for themselves the three definitive measures of success of their organizations from a list of five metrics. In order of frequency cited, the most important metrics of success were the average number of transactions per month (chosen by 83% of organizations), followed by these equally cited factors: annual revenue and total number of users/members served in the past year (each cited by 50% of organizations); total number of volunteers per month (33%); and total number of people served since the organization began operations (8%). Interestingly, no one selected the number of jobs provided as a measure of success.

Also interesting characteristic of our sample was that 60% of our respondents who selected average number of transactions per month as a definitive measure of success (including one that had closed) said they had experienced medium growth in that regard since the end of their first year in operation, while 40% reported strong growth. Of the 50% of respondents who chose active users as one of their top three indicators, 50% reported medium growth in this indicator and 30% reported strong growth.

This may be related to our respondents' overarching sense of optimism about their futures. Seventy-five percent of our respondents felt positive or very positive about their organizations' chances for success in the next two to three years (Chart 2 shows the distribution of responses to this question). One organization (i.e. 8% of our sample) had recently closed after a costly business failure, which explained the "very negative" response.

Chart 2. Respondents' outlook on the future of their organizations in the next 2 to 3 years



What is driving this overwhelmingly positive outlook for our interviewees? Our interviews cited the following reasons:

- Increased awareness among markets or target audience about what they do, thanks to good use of social media, word of mouth, new relationships
- Good financial returns over the past year, allowing hiring of more staff
- Successful marketing; a sense that they have a marketing niche / advantage
- Successful collaborations with other groups for fundraising purposes
- Successful public events that raised their profile and increased connections with other sharing-economy innovators
- Highly motivated founders
- Low expectations for revenue (not a priority or definitive indicator)
- Enhanced organizational capacity, i.e. a great new board of directors
- Ideas for expansion of what they do (i.e. new services, products)
- Growth of related industries, such as tourism
- A cultural shift that equals greater awareness of sustainability
- Tough economic times and rising real estate costs makes people more willing to try sharing-related activities -- people are actually seeking them out
- A sense that the City of Vancouver is listening and trying to help
- A sense that they are on the cusp of something new in terms of consumption patterns – from one of owning to one of access

The two respondents (16% of our interviewees) who felt negative or neutral about their prospects identified the following reasons:

- A combination of bad timing and bad luck: seasonal delays in getting necessary permits, untoward weather, a major investment negatively affected by the devaluation of the Canadian dollar, extended street closures related to major Vancouver events
- Lack of access to credit
- Hard to find investors in Vancouver... "crowdfunding fatigue"?
- The challenge of keeping up with quickly changing technology

Half of our organizations (i.e., two businesses and four non-profits) indicated that they had benefitted from, and were very appreciative of, some forms of help from a local, provincial or government agency. Four non-profits received local forms of assistance, including (in one case) full funding from the municipality and very modest grants from the City and VanCity Credit Union (three organizations). Deeply appreciated was the City's

Greenest City Open House event, its contributions to the Vancouver Maker Faire and the City's Made in Vancouver list to publicize local tech innovators.

Two businesses made good use of provincial and federal forms of assistance included tax credits for scientific research and experimental development and job creation / wage subsidy programs.

When probed about whether and how City of Vancouver actions had hindered their organizations' success, almost 60% identified no problems. The rest identified issues such as:

- Bureaucracy, slow approval of permits
- Asking local businesses to shoulder the burden of extended street closures to accommodate high-profile events
- The absence of any policy that they are aware of to help organizations like theirs access affordable spaces where people can gather for sharing-economy related activities.
- Lack of any identifiable contact person at the City who is tasked with sharing-economy issues

Respondents were asked to suggest what the City could or should do to assist sharing economy development in Vancouver. Their suggestions included:

- Lower taxes, reduced bureaucracy and increased support for new business startups
- Promote sharing by sharing, re-using, bartering with other municipalities
- Create a sharing economy website/hub and promote it; use other communications channels and through local facilities, such as advertising on buses
- Update, amend/toughen and enforce re-using and recycling policies/bylaws, especially as regards electronics waste / re-use and institutions such as schools
- Organize or create spaces where swap events can happen
- Offer advice, if possible, on how to get affordable liability insurance
- Offer organizational capacity-building workshops
- Continue to support events where sharing economy innovators can meet and network
- Develop policies and developer incentives to make affordable spaces available (not just for professional artists but for informal collaboration/peer-education/sharing activities); help sharing-economy organizations locate these spaces. Tax breaks or subsidies for non-profits to ease burden of high Vancouver rents?
- Approve an application (re: 281 Industrial Ave) by several organizations for an affordable 20,000 square feet of space
- Increase investment in Translink to reduce car trips and carbon emissions
- Create a help/referral network to connect local businesses

We asked respondents to predict which type of sharing they expected to grow the fastest:

- A) Organization-assisted sharing-economy activities, e.g. car sharing, tool libraries, the Hive.
- B) Online peer-to-peer sharing-economy activities, e.g. Airbnb
- C) Traditional peer-to-peer sharing-economy activities, e.g. lending your lawnmower to your neighbour.

It was clear from the answers we received that most people overwhelmingly felt these activities would increase in the order presented above: A would grow fastest, followed by B, and finally C.

Finally, we probed our interviewees about what sharing-economy activities they felt were well established and working well in Vancouver. Car-sharing, free stuff / gift exchanges, peer-to-peer travel, co-work spaces, and crowd-funding, as well as big market places like Craigslist, were all highlighted as examples. When asked to suggest sharing-economy opportunities that were as yet unrealized in the City of Vancouver, respondents identified:

- Bike sharing
- Taxi sharing
- Peer-to-peer car-sharing (as opposed to cooperatives)

- Peer-to-peer item rental
- Rental of high-end, low-use fashions (e.g. wedding dresses)
- Formal swap events open to the public
- Neighbourhood sharing networks
- Baby equipment re-use / redistribution networks
- Tool libraries
- Shared workshop spaces that cater to wider variety of people and interests (not just professional artists and musicians), for example, sewing, photography... “brain gyms” where people can be creative together and teach each other stuff in an informal, non-class setting. Not-for-profit / social enterprise tech workshops like ADX in Portland, Gang Plank in Arizona, Third Ward in New York.
- Neighbourhood centres where people can drop off / donate used electronics.

RECOMMENDATIONS

The following recommendations are based on the insights gained from Parts I and II of this report. Together, they represent actions to strengthen existing sharing-economy initiatives, support the creation of new ones that capitalize on unrealized sharing-economy opportunities, and prevent or manage complications and conflicts that can arise from developments that relate to the growth of the sharing economy. Each set of related recommendations will also identify which goals of the Greenest City 2020 Action Plan they most support. To review, these goals are:

- | | |
|------------------------|---------------------|
| ① Green Economy | ⑥ Access to Nature |
| ② Climate Leadership | ⑦ Lighter Footprint |
| ③ Green Buildings | ⑧ Clean Water |
| ④ Green Transportation | ⑨ Clean Air |
| ⑤ Zero Waste | ⑩ Local Food |

RECOGNIZE & REWARD SHARING ECONOMY INNOVATION ①

Spend some money to help grow your sharing economy! Cultivate awareness and recognition of sharing economy innovation; reward innovators with access to resources or breaks on their most significant expenses.

- Develop criteria for a sharing-economy innovator performance award. These criteria could include aspects of Botsman’s 2010 definition of collaborative consumption and/or the thrust of Gansky’s (2010) definition of sharing economy businesses, reflect Vancouver’s Greenest City Goals, and contribution to growth of social capital. Undertake a campaign to invite and publicize applications and nominations for the top five (or three, or ... ?) sharing-economy organizations in Vancouver. Rewards could be proportionate to the scale of the organization’s impact and include choices like cash, rent top-ups, access to City-supplied capacity-building training or expertise for organizational development, etc.

DEDICATE HUMAN RESOURCES ① ⑤ ⑦

Another potential for assistance is to provide human resources to aid and monitor the development of the sharing economy.

- Create a Sharing Economy Working Group modelled after that of San Francisco, with representation from several City planning functions, to identify local issues and opportunities, monitor sharing-economy developments in other cities, and devise solutions to problems as they arise.

- Conduct a randomized, automated phone survey or web-based poll that verifies names and addresses to determine the level of unmet local demand for organized, place-based swap events and the optimum frequency that such events should occur. Assuming the research confirms that demand is sufficiently robust, hire a part-time coordinator (or allocate some social planning staff time) to organize these events and develop a business model that would transition swap-meet management from the City to a private or non-profit organization after a reasonable amount of time (e.g. one year).

SPARK NEW CONNECTIONS ①

Much like it does with support for conventional economic development, the City could take a cue from places like Portland and San Francisco and proactively promote new partnerships and connections in the sharing economy.

- Help fund events like trade shows that help innovative collaborative-consumption groups meet each other and the public. Our interviewees told us that the City has done this previously by hosting the Greenest City Open House 2012 and offering small grants and logistical support to the Vancouver Maker Faire. We heard that this Faire, which hosted 3,000 visitors in 2009, was enormously successful at helping sharing oriented groups connect, share intelligence and build capacity. This could help diffuse sharing-economy behaviour and spark new applications of sharing. Also mentioned was the Greenest City Open House 2012, which was seen as a great networking event.
- Help people find out about staples and innovators of the Vancouver sharing-economy. Provide a publicly accessible web directory of Vancouver-based sharing organizations, analogous to the City's Made in Vancouver list of tech innovators.

POWER UP CITIZEN ENGAGEMENT WITH NAs ①⑤⑦

Taking a cue from the City of Portland and its Office of Neighborhood Involvement, the City of Vancouver should more fully investigate how not only the sharing economy but also the broader goal of citizen engagement in planning could be served by the creation of a comprehensive network of effective, representative neighborhood associations. Prescriptions for how to do this are beyond the scope of this report, but useful first steps would be:

- Review the history, reflections and best practices on Portland's (and possibly other communities') experiences with NAs, including and especially issues of governance, scope, activities, representativeness, focus, powers and funding, and conduct an assessment of existing residents' associations in Vancouver. Materials produced by the League of Women Voters of Portland (2005, 2006) offer an excellent starting point. An active network of NAs could help incubate sharing economy initiatives at the neighbourhood level. A guiding example could be Portland's "trash to treasure" event which redistributes unused items in the households of one neighborhood association (Trash to Treasure, 2012). Perhaps a Vancouver-based Office of Neighborhood Involvement could spur some friendly competition and help disseminate sharing-economy innovation among neighbourhoods to design the most creative and successful sharing-economy initiatives by offering prizes and public recognition for the most innovative and efficient initiatives, as well as those which most effectively build trust and other forms of sharing economy-supportive social capital within neighbourhoods.

TUNE DEVELOPMENT BYLAWS TO SUPPORT SHARING ACTIVITIES ②③④⑤⑥⑦⑧⑨

City of Vancouver development bylaws may offer unrealized opportunities to create incentives for car- or bike-sharing programs, or programs that integrate one or both of these with public transit (as in Montreal).

- Allow developers to construct more space-efficient, cohousing-friendly units in return for creating larger and more appealing shared facilities, such as guest rooms, shared kitchens and accessible rooftop gardens with safe play areas.
- Amend Vancouver's Parking Bylaw 6059 to allow developers of requirements to provide less traditional parking spaces in return for providing more designated parking spots for car- or bike-sharing and/or more secure bike parking.

ADDRESS AFFORDABILITY OF SUPPORTIVE SPACES ①⑤

The primary need identified by our interviews with Vancouver-based sharing-economy innovators was for affordable space to operate and grow. Strategies to address this could include:

- Review stock of existing, under-used municipal facilities for opportunities to provide free or discounted rental spaces to innovative sharing-economy organizations, for example, City-owned community centres that could periodically host neighborhood swap meets or other sharing events.
- Offer density bonuses or other incentives to developers that incorporate gathering spaces for community groups who are clearly advancing sharing-economy innovation and expansion, for example by running shared workshops.
- Review the Vancouver Public Library's mandate as well as business models of traditional libraries in other cities that have incorporated tool libraries, with a view to identifying opportunities for Vancouver to incorporate tool rental facilities into public libraries. Include (and preferably, partner with) any existing private- or non-profit tool-borrowing in planning for this from an early stage.
- Facilitate dialogue among, and encourage partnering of, sharing-economy innovators to create neighborhood based sharing-economy centers.

REGULATE SHORT-TERM ACCOMMODATION RENTALS ①③⑤⑦

Airbnb and services like it offers a markedly different product than hotels, one that is more akin to a traditional bed & breakfast with social aspects. Anticipate that while Airbnb-like services like it can be a boon to the city's short-term accommodation options with associated environmental and tourism benefits as well as financial support to residents coping with high housing costs, it could also have short- and long-term impacts on the city's stock of affordable housing. In the short term, it could spur the conversion of many otherwise affordable units into unofficial hotels that no longer serve as homes. In the long term, it could exert macroeconomic effects on housing prices as the actual or perceived profit-making potential of some units or regions raises their market value.

- Collect data and monitor the situation as it develops by requiring residents who use their properties for sublets of less than 30-day periods more than once a year have to register their unit with the city in order to obtain an annually renewable permit. Revisit and re-evaluate policy on at least an annual basis.
- Permits might be offered at a nominal fee to short-term accommodation hosts. The permit cost could be proportionate to assessed property values, or related to the cost of an inspection to ensure that the residence offers fire safety and prevention features comparable to traditional B&Bs. Permits would contain a number that would identify the permit holder in the City's registry (not the personal information of the permit holder), and feature a complaints number with the city, to which neighbours could complain if short-term tenants are causing security, noise, parking or other anticipated problems. Permit holders would be required to post these permits in locations visible to neighbours (e.g. a front door). Complainants could be offered the option of filing anonymous complaints. Permit holders whose activities invoke more than a given number of complaints would have their permits rescinded (temporarily or permanently) and their physical addresses published. This will place a strong onus on permit holders to reconcile their rental activities with the rights of their neighbours to safe, reasonably quiet communities.
- To ensure that homes are not converted *de facto* into untaxed, substandard hotels, require that permit holders be limited to offering their spaces for sublets to no more than a certain number of days (for example, 20%) of the year and to no more than a certain number of paying guests (a formula for which could be developed from the square footage of the house). Fines could be established for violating the terms of the permit or for housing people without a permit. Fines collected from violators could be directed to an affordable housing fund for the city.
- Considering the existence of a room tax, as well as HST, for existing accommodation businesses in Vancouver, solutions may have to be found to level the playing field. Whether Airbnb collects taxes on behalf of the accommodation and submits them, or whether those need to be remitted by the owners, other municipalities are starting to grapple with these issues, including New York (Jaffe, 2012; Harris, 2012).

PROMOTE SAFER, SMARTER CYCLING... AND BIKE-SHARING ②④⑦⑨

Vancouver has a glaring gap in its sharing economy: a bike-sharing program. We understand the City of Vancouver is in discussion with Alta Bicycle Share to implement a bike-sharing program in Vancouver (Griffin, 2012), and we applaud the ambitious targets of its Greenest City Goals and its sustainable transportation plan (City of Vancouver 2012a and 2012b) to have 50% of trips made by bicycle, walking or transit by 2020. We understand that the success of the proposed bike share program could be jeopardized by BC's cycle helmet laws and complications associated with dispensing sanitized, adjustable helmets for cyclists who don't bring their own helmet to a bike share (Sinoski, K.) Research (e.g. de Jong 2012, Bicycle Helmet Research Foundation, n.d.; see also D'Aliesio 2012) suggests that the most effective way to increase cycling and reap net health benefits of getting people out of their cars is not to randomly fine cyclists for not armouring up for a daily war on auto-centric streets—but to provide better cycling infrastructure and encourage riders to make smart choices about helmet use. This more supportive approach has been effective in cities with thriving bike share programs and is more consistent with government approaches to other personal health choices like food, exercise, alcohol, smoking and sexually transmitted diseases.

- Explore all possible legal means to exempt the City of Vancouver from BC's cycle helmet laws for persons 16 or older, either permanently or on the basis of a five-year pilot project that could study the net public health benefits of relaxed helmet laws coupled with greater availability of bikes and more supportive infrastructure. Perhaps this could be realized through a pilot project accompanied by an education program on the benefits of helmet use. Section 184 (6)(b) of B.C.'s *Motor Vehicle Act* allows the Lieutenant Governor to exempt "any person or class of persons from the bicycle helmet requirements and prescribe conditions for those exemptions."

MAXIMIZE EXISTING PARKING SPACES ①④⑤⑦

More efficient use of existing parking spaces could reduce the costs of providing parking and perhaps even reclaim some public parking spaces for other purposes.

- Allow residents to rent out existing parking spaces that come with their property or rental agreement. Require that renters of parking spaces register this activity with the City for a small fee; provide a means by which neighbours can complain if parking spot rentals violate existing parking laws. Establish fines for violations; direct the proceeds of these and fees towards administering the system and/or toward public transit or bikesharing programs.
- Allow multi-unit residential buildings to maintain or place restrictions on these types of rentals if residents identify security concerns, particularly in underground or gated parking lots.
- Extend existing regulations (e.g. regarding use for commercial purposes, informal camping, types of vehicles) about the use of parking space to subletted parking spaces and clarify that existing regulations continue to prohibit creation of new parking spaces to discourage people from converting existing green or residential spaces to private parking lots.

GROW URBAN GARDEN-SHARING ①⑦⑩

Make it easier for people to grow, sell and trade food from their own urban gardens in view of the fact that small-scale agricultural activities for private consumption or commercial purposes in private and shared gardens is an efficient use of green spaces, a potent way to reduce our greenhouse gas emissions, an effective stimulant to social capital and a valuable contribution to Vancouver's food security (Barr, 2002).

- Offer publicity support to local seed-, produce- and garden space-sharing networks.
- Continue to promote organic gardening as the best practice in food production.

- Change any zoning laws that inhibit gardening for trade or sale, and/or offer easy-to-access permits for gardeners interested in selling their produce locally and to collect valuable information about Vancouver's food security status.
- Promote the use of capture and waste heat (for example, from clothes dryers in cool seasons) in greenhouses.
- In the case of inflexible zoning that unnecessarily restricts gardening activity, and/or to collect valuable data about the state of Vancouver's food security, offer easy-to-access, annually renewable permits to residents who grow food for sale or trade. Permits could require compliance with specific conditions. Bags of free, City-produced compost could be offered as an incentive to acquire a permit.
- Review Portland's new Urban Food Zoning code for additional ideas that could be applied in the City of Vancouver.

CONCLUSIONS

In closing, we would like to emphasize that the evolution of the sharing economy should be of continuing interest and involvement of the City of Vancouver—not only because it already has significant environmental, social and economic impacts, but because it represents a huge opportunity to realize its Greenest City Goals.

We would also like to share here a few thoughts about the limitations of our report and our thoughts about future research directions.

The tight time frame and limited resources available for this research served to limit the amount of information we were able to gather. Although we strove for an even representation of all of the categories and subcategories we identified with CRG, multiple attempts to connect with 29 of the organizations in our sample yielded only 12 interviews with Vancouver-area organizations. Although this is still a respectable response rate (41% of organizations contacted), we recognize that it would be a stretch to call this a representative sample of sharing economy innovators in Vancouver. We therefore offer it as a useful snapshot of selected sharing economy innovators that could generate ideas for the CRG's more comprehensive project. Also, all 12 organizations in our sample are headquartered in the Lower Mainland. This was valuable for getting perspective from economic actors in the City, but it also means that our results are in no way representative of the sharing economy as a whole. The most influential and successful sharing economy organizations on our list chose not to participate, offering no response at all or citing concerns about parting with proprietary information. Many of these organizations are huge players in the sharing economy and probably divert substantial amounts of waste from landfills. It would be unwise to draw firm conclusions about what this refusal meant, but we can surmise that not every sharing-economy organization wants to share its perspectives or perhaps even be identified with the sharing economy and all that might imply. However, we feel that the explosive growth and pervasive influence of organizations like Craigslist, Kijiji, Netflix and Ebay requires the City to keep its door open for dialogue with them. Future research in this area should seek more meaningful ways to measure their impact.

To complete this project, we focused on a subset of the fairly expansive definition of sharing economy preferred by the Collective Research Group. People we talked to seemed to readily grasp what that subset ("collaborative consumption") was about. As stated at the outset of this document, this study is meant to contribute to or complement the larger CRG project of quantifying Vancouver's entire sharing economy. During the course of this research, we found ourselves wrestling with how to devise comparable metrics for widely divergent organizations (for example: How should "transactions" be conceptualized in a way that can be compared across organizations? How to count users, donors, beneficiaries, volunteers when these players sometimes share roles and sometimes do not? We also struggled with the question of where you draw the line around what is and is not a sharing-economy activity: for example, would proofreading your colleague's paper or looking after your sister's kids constitute sharing economy activity? Does an expansive definition of the sharing economy risk losing its meaning as it tries to encompass every act of commerce and to consider every act of sharing a "transaction"? We found ourselves wondering (and from our look at the literature, felt we were not alone in this) whether sharing-economy activities by definition have community-building or environmentally beneficial (or at least benign) impacts. For example, renting a seat on a 747 (sharing access to an asset) in some ways is comparable to ridesharing (also sharing access to an asset), but the latter is much easier on the environment. We questioned whether traditional "sharing" activities – e.g. car rental – should usefully be included in the sharing economy, and whether some activities ought to be—such as participating in

a community-supported agriculture program or using an alternative currency (where collaborative consumption helps make communities more resilient to volatile global economic forces). To meaningfully quantify the sharing economy's scope and impact, future research would need to grapple with such questions in more depth than our time frame made possible.

Finally, it may well be that the City of Vancouver is primarily motivated to explore its sharing economy because of its environmental and economic implications for sustainability. However, our conversations with innovators here and abroad suggested that the sharing economy has a crucial role in building *social* capital. Although this is arguably the challenging impact to quantify, it is likely worth the effort. Future research that documents those impacts would be helpful in shoring up political support for a more pro-active approach to the sharing economy.

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APPENDIX A

These questions formed a survey stored on SFU's Web Survey apparatus. Interviewers from our group used the web survey to ask questions of interviewees by phone. In one case, the interview was conducted during an on-site visit.

QUESTIONNAIRE USED TO GUIDE INTERVIEWS FOR VANCOUVER SHARING ECONOMY INNOVATORS

Q1 . Interviewer name

Q2 . For interviewer: Enter/confirm name of this organization

Q3 . For interviewer: Choose Botsman & Rogers category

Q4 . For interviewer: Choose 'like purpose' sub

Q5. For interviewer: If you ticked 'other' because organization activities don't appear to fit any of the subcategories above, please summarize it briefly here.

PREAMBLE

Hello, my name is XXXX and I'm a graduate student in Simon Fraser University's Resource & Environmental Management program. I'm contacting you because I think insights from XXXXXOrganization would be really valuable to a research project that is being supported by the City of Vancouver. Can I tell you more about this?

.....

The research is about the sharing economy in Vancouver (that's sharing, bartering, re-use, trading and renting in the Vancouver area). Part of that involves looking at innovators in Vancouver's sharing economy, and a team of graduate students and I have identified XXXXorganization as one of about 60 innovators.

I'm looking to speak with someone with some great all-round knowledge about XXXXXX (Like its structure, key indicators, history, and future outlook). Are you the appropriate person to speak to?

...

[if not, could you suggest who would be]?

Great. Could you participate in a short survey about this? It would take about 20 minutes, collect non-identifying information about XXorganizationXX and its future prospects, and ultimately be used to inform a report to the City of Vancouver on its potential role in the sharing economy.

[reschedule for another time if necessary, or if they agree to start now]

OK, before we start, I need to run through a couple of things on our interview consent form. I can email you this right now and let's quickly go over this:

[send it by email, go over interview consent form on the spot]

Content of Consent form:

INTERVIEW CONSENT FORM

Purpose & Project Description

The purpose of this research is to deepen our understanding of the current status and future outlook of Vancouver's sharing economy. This survey is focused on organizations that are finding innovative ways to share, rent, barter and trade, and to scale up to levels we haven't seen before. Our aim is to make recommendations to the City of Vancouver on how it can promote the growth of this kind of activity.

Anonymity and Confidentiality

All information shared in this interview will be held within strict confidence by the researchers and our collaborative groups. No names will be used or attributed to specific points or quotes. If we do wish to attribute information to a specific organization, we will request permission ahead of time and provide the exact reference prior to publication and distribution.

Voluntary Participation

Your participation in the research project is entirely voluntary and, as such, you may choose not to participate. If you participate, you may choose not to answer questions with which you are uncomfortable, and you have the right to terminate the interview at any time and have the information provided deleted from the project.

Research Results/Complaints

In case of any questions or complaints that may arise from this research, please feel free to contact Dr. Sean Markey, Resource and Environmental Management (REM), Simon Fraser University [xxxxphonexXXX or xxxemailxxxxxX]. The final project report will be distributed to all interviewees. We will also be posting research reports on the REM webpage. Could I get your email address so I can email you this information?

Thank you for your participation.

Q6. For interviewer: Enter name of person interviewed.

Q7. What is the interviewee's position in the organization?

Q8. For interviewer: Enter phone number of interviewee

Q9. For interviewer: Enter email address of interviewee

Q10. Briefly, what is the purpose of your organization? [Summarize in one sentence.]

Q11. How many years has your organization been operating? [Enter a whole number.]

Q12. How many years operating in the Vancouver area?

Q13. Which of the following best describes the structure of your organization? [respondents offered a selection of corporate / non-profit / hybrid structures]

Q14. If you chose 'other' in the above question, please elaborate.

Q15. If you identified your organization as 'not-for-profit': does your organization operate any entities or programs on a for-profit basis?

Q16. In terms of geographic scope, would you say your organization operates primarily: [respondents offered choices ranging from neighbourhood to global level]

Q17. If you answered 'other' in the last question, please clarify:

Q18. What annual revenue category does your organization fall under? [respondents offered N/A, up to \$49,999, \$50,000-\$199,999, \$200,000 and over

Q19. Does your organization employ anyone (i.e. pay wages/salary)?

- Q20. If you answered yes to the question above, how many current full-time equivalent employees?
- Q21. For interviewer to classify: Which category does # of employees fit under?
- Q22. Does your organization depend on regular contributions of volunteer time?
- Q23. If yes, about how many volunteers contributed time to your organization over the past 12 months?
- Q24. About how many users/members have been active in your organization over the past 12 months?
- Q25. About how many users/members has your organization served since it began operating?
- Q26. Can your organization be described as facilitating transactions of any kind?
- Q27. If you answered yes, what is the primary type of transaction in your organization? (e.g. rent cars, share tools / vegetables / space, trade time, barter goods and services, etc.)
- Q28. Referring to your answer above, about how many transactions does your organization facilitate per month?
- Q29. Choose up to three measures which most usefully describe the volume of activity of your organization. [Interviewer: please keep track of which items were chosen (A, B, etc.) for use in the next question.]
- Annual revenue
 - Total of full-time equivalent employees
 - Total # of volunteers contributing time over the past 12 months
 - Total # of active users/members over the past 12 months
 - Total # of users/members served since your organization began operations
 - Average # of transactions per month
- Q30. If you chose A. Annual Revenue, how has it changed (if at all) since the end of your first year of operations?
- Q31. If you chose A. Annual Revenue, about what percent of that is generated in the Vancouver area?
- Q32. If you chose B. Full-time employees, how has this number changed (if at all) since the end of your first year of operations?
- Q33. If you chose B. Full-time employees, about what percentage of your organization's employees are in the Vancouver area?
- Q34. If you chose C. Volunteers, how has this changed (if at all) since the end of your first year of operations?
- Q35. If you chose C. Volunteers, about what percent of your volunteers are in the Vancouver area?
- Q36. If you chose D. Active users, how has this changed (if at all) since the end of your first year of operations?
- Q37. If you chose D. Active users, about what percent of these are in the Vancouver area?
- Q38. If you chose E. Total Users served, how has this changed (if at all) since the end of your first year of operations?
- Q39. If you chose E. Total Users served, about what percent of these are in the Vancouver area?
- Q40. If you chose F. Average # of transactions per month, how has this changed since the end of your first year in operation?
- Q41. If you chose F. Average # of transactions per month, about what percent of these involve people in the Vancouver area?

Q42. How do you feel about your organization's prospects for success in the Vancouver area over the next two to three years? [respondents offered selection of answers ranging from very negative to very positive]

Q43. What factors *within* the control of your organization affect that assessment? [Prompt if necessary: operating capital, debt, personnel, professional development, access to credit, etc.]

Q44. What factors *outside* the control of your organization affect that assessment? [Prompt if necessary: macro-economic conditions, government policy or law , changing patterns of consumption (please specify), existing regulations, changing technologies (please elaborate), changing labour market, changing access to supply.]

Q45. Do you anticipate offering a new product or service in Vancouver's sharing economy in the next 2-3 years? [Prompt if needed: "Sharing economy" includes anything related to sharing, bartering, re-using, trading and renting.]

Q46. Where (i.e. what sectors, activities) do you see unrealized opportunities in Vancouver for innovation or growth in sharing-economy activities? [Prompt if needed: "Sharing economy" includes anything related to sharing, bartering, re-using, trading and renting.]

Q47. Rank these activities according to which you think will increase fastest (1= fastest growth, 3=slowest growth). [Activities included Organization-assisted sharing-economy activities, e.g. car sharing, tool libraries, the Hive.; Online peer-to-peer sharing-economy activities, e.g. Airbnb.; Traditional peer-to-peer sharing-economy activities, e.g. lending your lawnmower to your neighbour.

Q48. What direct assistance, if any, does your organization get from government? [Prompt: direct assistance includes things like contracts, grants, etc... sources of money unique to this organization.]

Q49. What indirect assistance, if any, does your organization receive from government? [Prompt: Indirect assistance includes things like favorable tax policy, industry subsidies.]

Q50. What actions, policies, regulations or programs, if any, of the City of Vancouver hinder your organization's ability to engage in sharing-economy activities?

Q51. What actions, policies, regulations or programs, if any, of the City of Vancouver help your organization's ability to engage in sharing-economy activities?

Q52. What actions, policies, regulations or programs should the City of Vancouver undertake to help the sharing economy flourish?

Q53. That's it! Anything you'd like to add?

Q54. Can we pass your information along to the Collective Research Group, who will be doing further research in this area?

...

Thank you so much. We really appreciate you taking the time to answer this survey. Good bye!

...

Q55. For interviewer: Add here any NOTES, comments you feel are critical to understanding content of this survey.