

**Hidden Homes:
Building an Accessible and Adaptable Housing
Registry in Metro Vancouver**

by

Heather Stack

B.A., University of British Columbia, 2012

Capstone Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Public Policy

in the

School of Public Policy

Faculty of Arts and Social Sciences

© **Heather Anne Stack 2014**

SIMON FRASER UNIVERSITY

Summer 2014

All rights reserved.

However, in accordance with the *Copyright Act of Canada*, this work may be reproduced, without authorization, under the conditions for "Fair Dealing." Therefore, limited reproduction of this work for the purposes of private study, research, criticism, review and news reporting is likely to be in accordance with the law, particularly if cited appropriately.

Approval

Name: Heather Stack
Degree: Master of Public Policy
Title of Thesis: *Hidden Homes: Building an Accessible and Adaptable Housing Registry in Metro Vancouver*
Examining Committee: Chair: Dominique M. Gross
Professor

Judith Sixsmith
Senior Supervisor
Professor

Nancy Olewiler
Supervisor
Director

J. Rhys Kesselman
Professor
Internal Examiner

Date Defended: June 27, 2014

Partial Copyright Licence



The author, whose copyright is declared on the title page of this work, has granted to Simon Fraser University the non-exclusive, royalty-free right to include a digital copy of this thesis, project or extended essay[s] and associated supplemental files (“Work”) (title[s] below) in Summit, the Institutional Research Repository at SFU. SFU may also make copies of the Work for purposes of a scholarly or research nature; for users of the SFU Library; or in response to a request from another library, or educational institution, on SFU’s own behalf or for one of its users. Distribution may be in any form.

The author has further agreed that SFU may keep more than one copy of the Work for purposes of back-up and security; and that SFU may, without changing the content, translate, if technically possible, the Work to any medium or format for the purpose of preserving the Work and facilitating the exercise of SFU’s rights under this licence.

It is understood that copying, publication, or public performance of the Work for commercial purposes shall not be allowed without the author’s written permission.

While granting the above uses to SFU, the author retains copyright ownership and moral rights in the Work, and may deal with the copyright in the Work in any way consistent with the terms of this licence, including the right to change the Work for subsequent purposes, including editing and publishing the Work in whole or in part, and licensing the content to other parties as the author may desire.

The author represents and warrants that he/she has the right to grant the rights contained in this licence and that the Work does not, to the best of the author’s knowledge, infringe upon anyone’s copyright. The author has obtained written copyright permission, where required, for the use of any third-party copyrighted material contained in the Work. The author represents and warrants that the Work is his/her own original work and that he/she has not previously assigned or relinquished the rights conferred in this licence.

Simon Fraser University Library
Burnaby, British Columbia, Canada

revised Fall 2013

Ethics Statement



The author, whose name appears on the title page of this work, has obtained, for the research described in this work, either:

- a. human research ethics approval from the Simon Fraser University Office of Research Ethics,

or

- b. advance approval of the animal care protocol from the University Animal Care Committee of Simon Fraser University;

or has conducted the research

- c. as a co-investigator, collaborator or research assistant in a research project approved in advance,

or

- d. as a member of a course approved in advance for minimal risk human research, by the Office of Research Ethics.

A copy of the approval letter has been filed at the Theses Office of the University Library at the time of submission of this thesis or project.

The original application for approval and letter of approval are filed with the relevant offices. Inquiries may be directed to those authorities.

Simon Fraser University Library
Burnaby, British Columbia, Canada

update Spring 2010

Abstract

Adequate housing for Persons with (Dis)abilities (PWD) is a current issue in Metro Vancouver, and as the rate of PWD grows, concerns will intensify. There is no tracking system to catalogue newly built or renovated accessible, or adaptable homes in Metro Vancouver as a region. This study proposes a policy portfolio for how best to proceed in tracking and listing accessible and adaptable housing in Metro Vancouver. The methodology consists of a secondary data analysis of the interviews conducted by Evans (2013) and a thematic analysis of the primary data collected in the internet surveys issued for this study. Surveys provide insight into establishing a housing registry for accessible and adaptable housing at a municipal and regional level. Surveys also identify challenges currently facing municipalities and organizations in tracking housing data, and suggestions for how to overcome challenges.

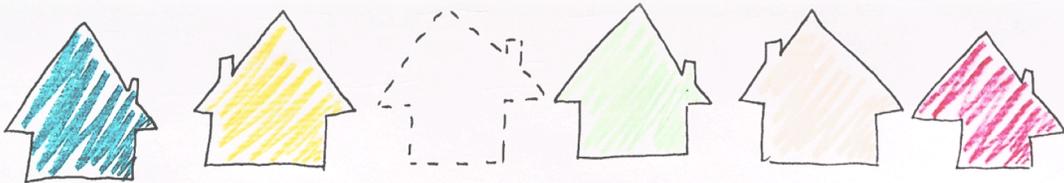
Keywords: Disability; Housing; Registry; Accessible; Adaptable; Metro Vancouver

Dedication

I would like to dedicate this capstone to my mother and father who have always loved and supported me, for which I am forever grateful.

I'll like you forever.
I'll love you for always.
As long as I'm living, your baby I'll be.

--Robert Munsch



Acknowledgements

I offer my warmest thanks to Nancy Olewiler for always going above and beyond, for her warm and welcoming nature, and her extreme dedication to the Master of Public Policy Program and all its students. Many thanks to Dawn Geil for her tireless efforts in helping me navigate academia, and to Eva Lewis for always being ready to help.

A warm note of thanks to Debbie Kraus, Margaret Eberle, Heather Evans and Brenda Southam for helping me to clarify and focus this research topic and for supporting me in my research.

I would also like to thank my friends and colleagues, Sterling Nelson and Felipe Rodriguez-Flores for their endless hours of study-buddy-ship, for challenging me, supporting me, and helping me laugh (and dance) along the way. I could not have done it without you!

A thank you to all my classmates. You are such a talented group of people, I cannot wait to see what your futures will entail!

A deep note of thanks for my loving and supportive family: Mom (Anne), Dad (Luke), Laura, Joel, Falina, Steven, Noah and Emma (and Morgan and Fergus!). You are all so unique, amazing, hilarious, and supportive - I simply could not ask for more. I am humbled by your love.

Table of Contents

Approval.....	ii
Partial Copyright Licence.....	iii
Ethics Statement.....	iv
Abstract.....	v
Dedication.....	vi
Acknowledgements.....	vii
Table of Contents.....	viii
List of Tables.....	xii
List of Acronyms.....	xiii
Glossary.....	xiv
Executive Summary.....	xvi
Chapter 1. Introduction.....	1
1.1. Research Problem.....	5
1.2. Purpose and Objectives.....	7
1.3. Capstone Overview.....	8
Chapter 2. An Overview of Accessible and Adaptable Housing in Metro Vancouver.....	9
2.1. Seniors and PWD.....	9
2.2. Availability: Vacancy Rates and Cost of Housing.....	14
2.3. Accessibility: The Dangers of Inappropriate Housing.....	17
2.4. Homelessness.....	18
2.4.1. Cost of Homelessness.....	20
2.5. Accessible and Adaptable Housing Policy in BC.....	20
2.6. Dependency and Lower Quality of Life.....	23
2.7. Aging in Place.....	24
2.8. Up-to-Date Information.....	27
Chapter 3. Registries.....	28
3.1. Evans' 2013 Study.....	28
3.1.1. Resources, Registry Management, Partners.....	29
3.1.2. Timeline and Funding.....	30
3.1.3. Accessible and Adaptable Housing Features.....	30
3.1.4. Accessible and Adaptable Housing Information Sources.....	32
3.1.5. Data Provision.....	32
3.1.6. Challenges to Tracking Accessible and Adaptable Housing.....	33
3.2. Existing Registries.....	33
3.3. Inadequacies of Existing Registries.....	35
3.4. Summary.....	36

Chapter 4. Methodology	38
4.1. Methodological Framework	38
4.2. Selection of Study Area	40
4.3. Research Tools	40
4.4. Research Instruments	41
4.4.1. Internet Surveys	41
4.4.1.1. Probability and Non-Probability Sampling	44
4.4.1.2. Mixed Methods Sampling	45
4.4.1.3. Survey Design	46
4.4.2. Secondary Data Analysis: In-Person Interviews	48
4.5. Thematic Data Analysis	49
4.5.1. Surveys	50
4.5.2. Secondary Analysis	51
Chapter 5. Findings	52
5.1. Themes	53
5.1.1. Housing Features	54
5.1.1.1. Features Currently Recorded	54
5.1.1.2. Recommendations for Housing Features to Record	55
5.1.2. Challenges and Concerns	56
5.1.2.1. Burden and Data Fatigue	56
5.1.2.2. Buy-In	60
5.1.3. Listing vs. Tracking Data	62
5.1.3.1. Consistency and Standardization	63
5.1.3.2. Education and Awareness	64
5.1.3.3. Incentives, By-laws and Regulations	65
5.1.3.4. Start Simple	66
5.1.3.5. Find a Champion	67
5.1.4. Benefits of Recording Accessible and Adaptable Housing	68
5.1.4.1. Groups That Benefit	68
5.1.4.2. Recording and Sharing Data is Good for Everyone	70
5.1.5. Feasibility and Clear Objectives	70
5.1.6. Involvement and Responsibility	71
5.1.6.1. Groups to Involve	71
5.1.6.2. Groups to Track Data	72
5.1.6.3. Consistency with Goals	77
5.1.6.4. Groups Interested in Tracking Accessible and Adaptable Housing Data	78
5.1.7. Other Themes	81
5.2. Analysis and Synthesis	81
Chapter 6. Analysis of the Policy Portfolio Framework	84
6.1. Find a Champion or Task Force of Champions	84
6.2. Listing vs. Tracking	87

6.3.	Education and Awareness Campaigns	87
6.3.1.	Focus of Education and Awareness Campaigns	88
6.4.	First and Second Stage Features to be Recorded.....	92
6.5.	Addressing Top Challenges and Concerns	96
Chapter 7. Limitations, Next Steps and Conclusions.....		99
7.1.	Limitations of Study.....	99
7.1.1.	Survey Participation	99
7.1.2.	Using Internet Surveys	99
7.1.3.	Secondary Data Analysis	100
7.1.4.	Lack of Involvement of PWD	100
7.2.	Next Steps	101
7.2.1.	Get Started.....	102
7.2.2.	Standardize Terms	102
7.2.3.	Contact Groups Interested in Creating Registries.....	102
7.2.4.	Steps to Establish Listing Registries	102
7.2.5.	Steps to Establishing Tracking Registries	103
7.2.6.	Other Avenues of Research	103
7.3.	Conclusion	104
References		105
Appendix A.	Existing Registries	114
	Spinal Cord Injury BC (SCI BC)'s Accessible Housing BC	114
	Target Audiences	114
	Size	114
	Operations.....	115
	Challenges for PWD.....	115
	Real Estate Board of Greater Vancouver's Multiple Listing Service	115
	Target Audiences	115
	Size	116
	Operations.....	116
	Challenges for PWD.....	116
	BC Housing's Housing Registry	117
	Size	117
	Operations.....	118
	Challenges for PWD.....	118
Appendix B.	Full Survey.....	119
Appendix C.	Technical Survey.....	125
Appendix D.	Consent Form.....	130
Appendix E.	Internet Survey Invitation Script.....	133
Appendix F.	Participant List	134
Appendix G.	Housing Features Currently and Recommended to Record	135
Appendix H.	Evans' (2013) Full List of Stakeholders.....	138

Appendix I. Participant Breakdown of Suggested Groups to Track Housing	
Features	139
Appendix J. Additional Themes	141
Access to Data	141
Affordability of Available Accessible Units	143
Complexity of PWD	143
Inconsistent By-laws and Regulations	144
Filling Units	144
Unrealistic Expectations.....	145
Interactive Features	145
Reviewing the Registry	146
Retrofitting Old Accessible Units – Keeping Up-to-Date	146
Current Policies on Accessible and Adaptable Housing	146
Registry Software.....	147
Ways to Track Accessible and Adaptable Housing as Identified in Data Set	148
Permits	148
Graphic Information Systems	148
Registering Land Titles	151
Appendix K. Potential Criteria and Measures to Access Tracking Systems	152
Effectiveness.....	156
Stakeholder Acceptability.....	157
Cost and Administrative Feasibility	157
Political Feasibility.....	158
Equity	159

List of Tables

Table 2.1	Home Modification Services Breakdown in Pynoos, Perelman and Nishita 2001	12
Table 2.2	Breakdown of (Dis)ability Type in BC for Ages 15-64	13
Table 2.3	Determinants of Quality of Life	23
Table 3.1	Accessible Housing BC's Accessibility and Adaptability Features List.....	31
Table 3.2	Existing Registries.....	34
Table 5.1	Groups That Benefit	69
Table 5.2	Groups to Involve	72
Table 5.3	Groups to Track Data	73
Table 5.4	Breakdown of Participant Recommendations for Recording Data	76
Table 5.5	Groups Interested in Recording Data.....	78
Table 5.6	Analysis and Synthesis of Themes	82
Table 6.1	Suggestions for Designing Awareness Campaigns	88

List of Acronyms

BCBC	British Columbia Building Code
CMHC	Canadian Mortgage and Housing Corporation
GIS	Graphing Information Systems
HRSDC	Human Resources and Skills Development Canada
MLS	The Multiple Listing Service
PWD	People With (Dis)abilities
QoL	Quality of Life
REBGV	The Real Estate Board of Greater Vancouver
SCI BC	Spinal Cord Injury BC
SFU	Simon Fraser University

Glossary

“Behind the walls”	Adaptability features that are “behind the walls” are structural designs to a unit that exist behind the finished walls, making them difficult to detect visually
(Dis)abilities	(Dis)abilities for this project refers to disadvantages experienced by an individual resulting from barriers (attitudinal, physical, etc.) that impact people with impairments and/or ill health (Prime Minister’s Strategy Unit 19). For this study “(dis)abilities” includes people with physical or mental impairments, ill-health, and health challenges faced by seniors.
Access or Accessibility	Means that a person with (dis)abilities is, without assistance, able to approach, enter, pass to and from, and make use of an area and/or its facilities (BCBC 2007).
Adaptable housing	A housing unit that is built to facilitate inclusive adaptations at a later date. Features may include removable cupboards to accommodate the height needs of a person in a wheelchair, and knock out floor panels in a closet to accommodate the installation of an elevator, ability to raise or lower counters, structure to provide weight bearing grab bars in bathrooms and other design features. See also Universal Design and Flex Housing
Episodic (dis)abilities	Episodic (dis)abilities come and go over time and get better or worse often with little or no warning, and for unknown periods of time (EDN 2012)
Flex Housing	Canadian Mortgage and Housing Corporation’s branding of universal design and adaptable housing.
Impairment	Activity limitations or participation restrictions due to a problem with body function or structure (HRSDC, 2013, n.p.)
Impairment	Impairment is activity limitations or participation restrictions due to a problem with body function or structure (HRSDC, 2013, n.p.)
Inclusive	Referred to as accessible, handicap accessible, wheelchair accessible. Inclusive housing offers seamless integration into the overall design of the housing unit and surrounding area, and addresses quality of life as well as access to make the space usable for people with diverse-abilities. The space often must be designed, or redesigned to meet the needs of the current occupant. Elements of an inclusive home are neighborhood, street, property, building and interior design.

Market Rental Housing	Housing units that are rented at the competitive rate in a housing market.
Non-Market Housing	Also known as “social housing.” This type of housing rental housing for low and moderate income singles and families, and is usually subsidized through a variety of mechanisms, including senior government support.
Purpose Built Housing	Purpose-built housing is “residential construction developed for the rental housing market, including, but not limited to, multi-unit rental apartment buildings” (Federation of Canadian Municipalities, 2012, 5).
Registry	An inventory of accessible and adaptable housing making it possible to identify the total number of units that exist in a certain area. This information can be used for trend studies and to track supply and demand, all of which has future policy implications
Rent-geared-to-income	A form of subsidized housing for low-to-moderate income earners. Rent is calculated as 30% of the gross income of the household (BC Housing, 2010 ¹ , n.p.).
Universal design	Housing that is designed to be accessible for all people regardless of age, mobility, and ability and is often incorporated in adaptable housing and flex housing (Scotts, Saville-Smith and James, 2007, 3; Universal Design 2014). See Adaptable Housing and Flex Housing
Young PWD	While age categories vary, for this paper “young PWD” refers to PWD between the ages of 18 and 64, as 65 is the age when people are considered senior and can qualify for long-term care facilities.
Listing Housing	In this paper listing refers to identifying available accessible and adaptable housing. This can include recording the accessible and adaptable features of these units.
Tracking Housing	In this paper “Tracking” housing refers to recording the total number of units in an area. This can include recording the accessible and adaptable features in these units.
Recording Housing	A general term used in this paper that can apply to either tracking housing or listing housing, or both together.

Executive Summary

Housing is a basic human need. The Federation of Canadian Municipalities identifies that “A healthy housing sector that is able to meet a broad range of needs is a vital part of the economic and social wellbeing of a community” (Federation of Canadian Municipalities, 2012, 4). Throughout the course of our lives we all exist on a spectrum of able-bodiedness that shifts as we experience accidents, illness, or (dis)abilities. Thus, no one is exempt from the inevitability of encountering some form of mobility or access issues at some point in their life (McWhorter, 2010, xv). Using universal, accessible, or adaptable designs is one way to reduce barriers to movement, and to help people with (dis)abilities (PWD) and seniors to age in place.

Currently there is no combined recording system to catalogue newly built or renovated accessible or adaptable homes in Metro Vancouver as a region. While accessibility features may be obvious, adaptable features exist “behind the walls”.¹ Thus, it may not be readily apparent that a unit is designed to be adaptable. As home owners buy and sell units, adaptable units are “lost,” as information about the housing structure may not be passed on to new owners (Stack, 2013, 13). Adequate housing for PWD is already a problematic issue in Metro Vancouver, and as the rate of PWD grows, this will continue to be an issue of importance (Evans 2012¹).

Housing registries can have multiple functions: most relevant to this study are those that track current numbers of housing stock in an area, and those what connect people looking for housing to available units. Registries can be designed to show currently available housing units, or to catalogue and track the total number of certain types of units such as affordable housing or subsidized units available in a region, or through an organization. This study proposes a policy portfolio to start the process of

¹ Adaptability features that are “behind the walls” are structural designs to a unit that exist behind the finished walls, making them difficult to detect visually.

establishing accessible and adaptable housing registries to list available units and track total numbers of accessible and adaptable housing units.

Chapter 1.

Introduction

Housing is a basic human need. The Federation of Canadian Municipalities identifies that “A healthy housing sector that is able to meet a broad range of needs is a vital part of the economic and social wellbeing of a community” (Federation of Canadian Municipalities, 2012, 4). International and national research on housing and health identifies that housing is both a pre-requisite and co-requisite for individual health and population health (Mahamoud et al., 2012, 4). Yet many people have difficulty accessing housing, especially those with chronic mental and/or physical health concerns, addictions or concurrent disorders¹, those who have been displaced, or have had long-term unemployment (Mahmoud et al., 2012, 4).

Throughout the course of our lives we all exist on a spectrum of able-bodiedness that shifts as we experience accidents, illness, or (dis)abilities. Thus, no one is exempt from the inevitability of encountering some form of mobility or access issues at some point in their life (McWhorter, 2010, xv). For example, pushing a baby-carriage, having a broken leg, or having an elderly friend over to visit may all be examples in which a person experiences accessibility barriers that under ‘normal’ or different circumstances they do not experience. Using universal, accessible, or adaptable designs is one way to reduce barriers to movement.

¹ Concurrent disorders, or Dual Diagnosis is when a person has both mental health issues and addictions (Our Health Minds n.p.).

Accessible Housing

Accessible housing is housing that has been designed or retrofitted to suit the particular needs of a homeowner or tenant, or to address common features needed by a specific group of People With Disabilities (PWD). There are many definitions of accessible housing, and features that make a home accessible vary. For example, an accessible home could have visual fire alarms for the hearing impaired, or lowered counters in a kitchen for a person in a wheelchair. Housing can be made accessible during the construction phase, or can be later implemented, generally at a greater cost. If the unit is not designed to be adaptable the cost for retrofitting a unit to be accessible is generally higher, depending on which accessibility features are needed by the resident.

Adaptable Housing

Adaptable housing, or Flex Housing as coined by Canadian Mortgage and Housing Corporation (CMHC 2000), is housing that has been originally designed or retrofitted to accommodate accessibility features and upgrades. Adaptable housing can be a standard looking unit, however it has the ability to be tailored to meet the evolving needs of a resident. Adaptable features often exist “behind the walls” and can facilitate the implementation of accessibility features at a later date, often reducing the cost of implementation (Evans, 2013, 4; Scotts, Saville-Smith, 2007, 3). For example, “behind the wall” features can include: inner wall reinforcement to allow cupboards to be raised, lowered, or grab bars or rails to be installed; “roughing-in plumbing” to allow for future bathroom layout changes, such as the ability to convert a closet on the main floor to a bathroom; or, closets designed and placed one above the other on two floors to allow easy installation of a lift (CMHC 2014, n.p.). Adaptable homes are often built without any accessibility features other than those designated by building codes, such as wider doors and corridors, entrances without steps and lever doors (CMHC 2014, n.p.). Adaptable homes generally look like any other unit, which is one of the challenges of tracking these units.

Adaptable housing allows the housing features to change along with the needs of the resident. Having a unit originally constructed to be adaptable reduces the need to

relocate to a suitable unit and the cost of implementing required features. CMHC goes beyond simply recommending adaptable housing design for individual units to recommending that whole neighbourhoods be designed containing adaptable units (CMHC 2014). Adaptability implemented at the construction phase allows people to remain in their homes throughout multiple stages of their life creating secure, “and can help make these units more affordable for owners and renters” (CMHC 2014, n.p.). CMHC has identified that Adaptable Housing and Universal Design is going to be increasingly important in addressing the housing needs of Canadians (CMHC 2014, n.p.).

Universal Design

Universal design evolved from accessible and adaptable design, and is gaining traction in building codes across Canada. Universal design seeks to accommodate a wide spectrum of people with varying needs and abilities taking into account the broad range of human diversity including physical, perceptual and cognitive abilities (Universal Design 2014). Whereas universal design can be applied to anything, accessible and adaptable designs pertain to built environments. Although universal design attempts to make everything more accessible for everyone, there may still be cases in which there needs to be extra adaptations. Accessible design for houses means that the home has been modified to accommodate a specific person’s needs (Evans, 2013, 3). Adaptable, accessible and universal design can all be co-implemented in the initial construction, or can be retrofitted, although retrofitting built environments is generally more expensive than initially incorporating these designs.

Registries

In 2007 Scotts, Saville-Smith and James researched accessible housing for seniors and PWD in Europe, North America, United Kingdom, Japan and Australia to review best practices for policy and programmes. This research reviewed changing trends in accessible housing standards and design, adaptation of existing housing, and ways to integrate assistive technologies into homes (Scotts, Saville-Smith and James, 2007, 2). Their research identified a growing international need to use accessible housing stock more efficiently. According to Scotts, Saville-Smith and James, modified

units are being “lost” in two ways: through the lack of knowledge and information available to buyers and renters sales, and sale of adaptable units to consumers who do not have (dis)abilities (Scotts, Saville-Smith and James, 2007, 12). Through their research, registries were shown to be a useful tool for tracking accessible and adaptable units, and providing information for PWD who are seeking these units (Scotts, Saville-Smith and James, 2007, 12). Unfortunately, there are relatively few comprehensive rental or sale registries internationally, and they vary on the type and extent of information provided.

Housing registries can have multiple functions: most relevant to this study are those that track current numbers of housing stock in an area, and those what connect people looking for housing to available units. Registries can be designed to show currently available housing units, or to catalogue and track the total number of certain types of units such as affordable housing or subsidized units available in a region, or through an organization.

Listing

Listing registries connect those looking for housing units to housing providers and available units. Listing registries do not keep track of units, but rather offer a snapshot of current available units. Units in listing registries tend to turn over relatively fast, especially in the rental market. Listing registries are a useful tool for those looking to make a housing transactions, such as renting or buying/selling a housing unit.

Tracking

Tracking registries record total numbers of units in a designated area and may also record specific housing features. Whereas listing registries are a snapshot of current available units, tracking registries are long-term databases that track the number of units, but not if the units are available. Tracking registries can be used in conjunction with listing registries, recording the units that go through listing registries. The information held in tracking registries can be a valuable resource for policy makers and planners, as they provide area specific information that may be more current than census data, or may include information that is not counted in census data (Jacobucci, 2005, 38).

Making homes accessible and adaptable means that throughout our lives we all will be able to visit, interact, and move through our own and each others homes without experiencing barriers. Hence, accessible and adaptable housing has positive implications for us all (McBride, 2013, n.p.). This paper focuses on the housing for People With (Dis)abilities (PWD), who often require accessible or adaptable housing features, but who also disproportionately experience lower rates of employment, income and education, and challenges with accessing transportation and housing (Prime Minister’s Strategy Unit, 2005, 25). These multiple barriers have a cyclical relationship with (dis)abilities. PWD are more likely to have “low incomes, low or no employment, and low education” and each of these factors increases the probability of a person developing (dis)abilities or having existing (dis)abilities worsen (Prime Minister’s Unit, 2005, 25). This research focuses on the challenges of people with physical (dis)abilities in regards to finding accessible and adaptable housing and explores strategies to establish accessible and adaptable housing registries for Metro Vancouver.

1.1. Research Problem

Currently there is no combined recording system to catalogue newly built or renovated accessible or adaptable homes in Metro Vancouver as a region. While accessibility features may be obvious, adaptable features exist “behind the walls.”² Thus, it may not be readily apparent that a unit is designed to be adaptable. As home owners buy and sell units, adaptable units are “lost,” as information about the housing structure may not be passed on to new owners (Stack, 2013, 13). Adequate housing for PWD is already a problematic issue in Metro Vancouver, and as the rate of PWD grows, this will continue to be an issue of importance (Evans 2012¹).

² Adaptability features that are “behind the walls” are structural designs to a unit that exist behind the finished walls, making them difficult to detect visually.

One of the challenges for PWD in finding accessible and adaptable housing in Metro Vancouver is the lack of data on how many accessible and adaptable units there are, what the accessibility features are, and where they are located. Currently there is no available data on the number of accessible or adaptable units in Metro Vancouver as a whole. Thus, it is unclear if there are enough units to meet the needs of PWD in the area. BC Housing has a registry that is linked with housing providers across BC. With approximately 24,000 units listed in BC Housing's Housing Registry, only 700 are listed as accessible, with another 500 listed as being adaptable (Stack, 2013, 9). The 1,200 accessible and adaptable units in the Housing Registry represent 5% of affordable housing stock. While it is important to note that the Housing Registry is not an exhaustive count of accessible and adaptable units in BC or Metro Vancouver, when compared to the rate of PWD in BC, it appears that there is likely to be a shortage of accessible and adaptable units³.

In addition to the need for more housing, there is a need to record new accessible and adaptable homes being built. While new accessible and adaptable homes may be being built, without recording them PWD searching for these units will not know of their existence. Lack of information exacerbates the difficulty of finding appropriate housing (Evans 2012¹; Jacobucci 2005). It is difficult for buyers, renters, real estate agents, and care workers to find information about available accessible and adaptable housing (Scotts, Saville-Smith and James, 2007, 12). Evans (2013), in partnership with the Real Estate Institute of BC (REI BC) and BC Housing released a study on "Scoping an Accessible and Adaptable Housing Registry". This report identifies that PWD are having difficulty finding homes that are accessible or adaptable. Tracking accessible and adaptable housing in Metro Vancouver is a public policy issue as the number of PWD are growing in the region and there are currently many barriers for PWD in locating accessible and adaptable housing.

³ The whole of BC was used in this example as The Housing Registry includes all of BC and there are no alternate counts of accessible or adaptable housing units for only Metro Vancouver.

1.2. Purpose and Objectives

This research explores ways to record⁴ accessible and adaptable housing in Metro Vancouver by exploring how municipalities and organizations⁵ are currently recording housing data, and their recommendations for how to track data at a municipal and regional level. Internet surveys were issued to municipalities⁶ and, organizations, and individuals with knowledge on how to record housing data in Metro Vancouver. Surveys were used to gather insight into the local interest in establishing a housing registry for accessible and adaptable housing at a municipal and regional level. Surveys also identified challenges currently facing municipalities and organizations in tracking accessible and adaptable housing data, and suggestions for how to overcome these challenges.

There are four objectives to this study.

1. The first objective is to add to the growing body of academic literature on registries and systems recording housing data in general.
2. Secondly, this study seeks to encourage municipalities, regional and provincial bodies and organizations in Metro Vancouver to engage in collaborative processes to record accessible and adaptable housing in Metro Vancouver.
3. Thirdly, matching PWD to accessible and adaptable housing is a vital and time sensitive need. This study aims to make recommendations for how to begin establishing and/or upgrading current rental and private market housing listing services to include accessible and adaptable housing features to facilitate the process of locating appropriate housing for PWD.
4. Finally, this research seeks to further dialogue in Canada and abroad regarding recording information on accessible and adaptable housing.

⁴ The term “recording” is used in lieu of tracking or listing in cases where registries not specific to one term or the other are being used.

⁵ Organizations includes regional bodies, non-profits, and for-profit organizations.

⁶ For brevity, throughout this paper “municipalities” is used to identify the 22 municipalities, one electoral area, and one treaty First Nation included in the Metro Vancouver region.

This research study explores the ways that accessible and adaptable housing registries could be established at a municipal and regional level and addresses the following research questions:

1. Which Municipalities, Regional/Provincial Bodies and/or Organizations in Metro Vancouver are currently recording accessible and adaptable housing?
2. Which approach to recording data on accessible and adaptable housing can be implemented efficiently by Municipalities, Regional/Provincial Bodies and/or Organizations?
3. What information would a registry need to include so that it is a useful resource for Municipalities, Regional/Provincial Bodies and/or Organizations and people seeking accessible and adaptable homes?

1.3. Capstone Overview

The following section details the chapters contained in this capstone, providing a brief overview of what each chapter contains.

CH 2: Background: The context of accessible and adaptable housing in Metro Vancouver.

CH 3: Methodology: The methodology for collecting and analyzing primary and secondary data.

CH 4: Findings: Explains the findings of the primary and secondary data analysis.

CH 5: Themes: Explores the themes that arose from the Thematic Analysis of the Full Survey, the Technical Survey and the Secondary Data Analysis of Evans' (2013) study, "Research Study on Scoping a Registry of Accessible and Adaptable Homes in British Columbia"

CH6: Analysis of the Policy Portfolio Framework: Explains the recommended policy portfolio of how to begin establishing listing and tracking registries in Metro Vancouver

CH7: Limitations, Next Steps and Conclusions: The final chapter reviews the limitations of this study, makes recommendations for the next step to be taken to further listing and tracking accessible and adaptable housing, and makes concluding remarks.

Chapter 2. An Overview of Accessible and Adaptable Housing in Metro Vancouver

While finding appropriate housing in Metro Vancouver is difficult for many, there are additional challenges facing PWD. Factors complicating the process of finding appropriate housing for PWD include the high cost of housing, lack of accessible and adaptable housing, and difficulty determining where these units are located. Lack of information complicates the (re)location process putting PWD at risk longer than necessary, at times literally trapping them in their homes. These barriers result in PWD having difficulty locating housing that is available, accessible, and adaptable leading PWD to live in homes that are inadequate or unsafe, or facing the risk of becoming homeless. Housing that is inadequate, or not designed to accommodate the needs of PWD can result in higher incidence of accidents, low Quality of Life (QoL), and dependency.

2.1. Seniors and PWD

In the past decade the rate of PWD in BC has been on the rise. In 2011, 14.8% of BC's adult population⁷ had a (dis)ability (Statistics Canada, 2013¹ 13)⁸. BC's rate is above that of Canada as a whole, which is at 13.7%. One of the challenges to identifying the trends of rate of (dis)ability is the changing definitions of (dis)ability in studies on PWD. The Participation and Limitation Survey (PALS) was conducted in 2001 and 2006.

⁷ For Statistics Canada, "adult" is defined as persons aged 15 and older (Statistics Canada 2013¹).

⁸ Statistics Canada's "Canadian Survey on Disability" (2013) is based on information collected in 2011.

However, these reports could not be directly compared as the way (dis)ability was reported changed in each survey (Statistics Canada, 2007, n.p.). In the most recent report on (dis)ability, the Canadian Survey of Disability the definition of “disability” once again changed (Statistics 2013, n.p.). In the Canadian Survey of Disability (2013) “disability” includes anyone who experiences limitation in daily activities due to long-term conditions or health problems (Statistics Canada, 2013², 4). The rate of (dis)ability in the PALS 2001 was 13.4% and in 2006 was 14.5%. In each survey for Statistics Canada on PWD the definition of (dis)ability has become broader and more encompassing. While this may explain the higher rates of (dis)ability, it may also be representative of the acknowledgement that there are many types of (dis)ability, and focusing on the needs of PWD is of growing importance. Exacerbating the growing numbers of PWD is the trend of BC’s aging population, as the likelihood of experiencing (dis)abilities or health concerns increases with age (HRSDC, 2008, 3). Working to identify the changing rate of PWD necessitates a discussion of BC’s aging population as well. By 2036 the number of residents over the age of 65 is expected to rise from 15.3% in 2011 to 23.8% in BC⁹. The growing rate of PWD and seniors in Metro Vancouver will mean that this demographic will become increasingly important in the future.

While there are differences between seniors and PWD, there are also considerable similarities regarding the types of difficulties they face regarding housing, care, transportation, and assistive technology needs (Baser, 2008, 102). Studies have shown that the likelihood of developing (dis)abilities increases with age (Statistics Canada, 2013², 4). Whereas 10.1% of the Canadian population aged 15-64 report having a (dis)ability, 33.2% of those 65 and older report having (dis)abilities.¹⁰ The high rates of both PWD and seniors has implications for the types of housing that is needed

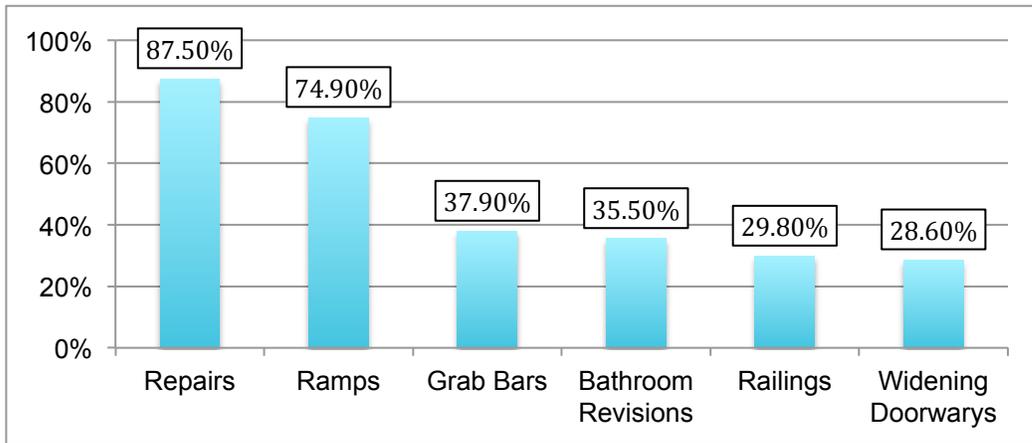
⁹ HRSDC calculations based on Statistics Canada. *Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual* (CANSIM Table 051-0001); and Statistics Canada. *Projected population, by projection scenario, sex and age group as of July 1, Canada, provinces and territories, annual* (CANSIM table 052-0005). Ottawa: Statistics Canada, 2011.

¹⁰ This information is not available at a Provincial level.

in Metro Vancouver. There are similarities between seniors and PWD in regards to accommodations and assistive technologies needed to safely navigate spaces, often involving modifications to the home (Newell 2011, n.p.; Unwin et al., 2009, 963). However, while both PWD and seniors use assistive technologies, the rate of use is different for each group. The Equipment and Assistive Technology Initiative (EATI) in BC identifies that there are 1,579 PWD in BC who qualify to receive assistive technology (Jongbloed et al. 2013, 22). Of the 548,760 PWD in BC, this computes to less than one percent. In 2009 An Ipsos Reid telephone poll commissioned by the BC Institute of Technology's Living Laboratory identified that 22% of Canadian seniors use at least one assistive technology, and of the 36% of seniors who used grab bars 78% had them installed in their homes (Ipsos Reid, 2009, n.p.). In 2013 there were 765,488 seniors in BC (Ip and Grundlingh, 2013, 2). If the percentage of seniors using assistive technology identified in 2009 (22%) remained the same in 2013 this would equate to over 34,000 seniors using assistive technology.¹¹ For the seniors in the Ipsos Reid study the main reasons for the need for assistive technology was due to mobility issues resulting from arthritis and chronic pain, both considered (dis)abilities (Ipsos, 2009, n.p.). Due to similarities between the needs of PWD and seniors, data on seniors is used in this paper to inform missing information for PWD.

¹¹ The exact number of seniors using assistive technologies in BC is unknown.

Table 2.1 Home Modification Services Breakdown in Pynoos, Perelman and Nishita 2001

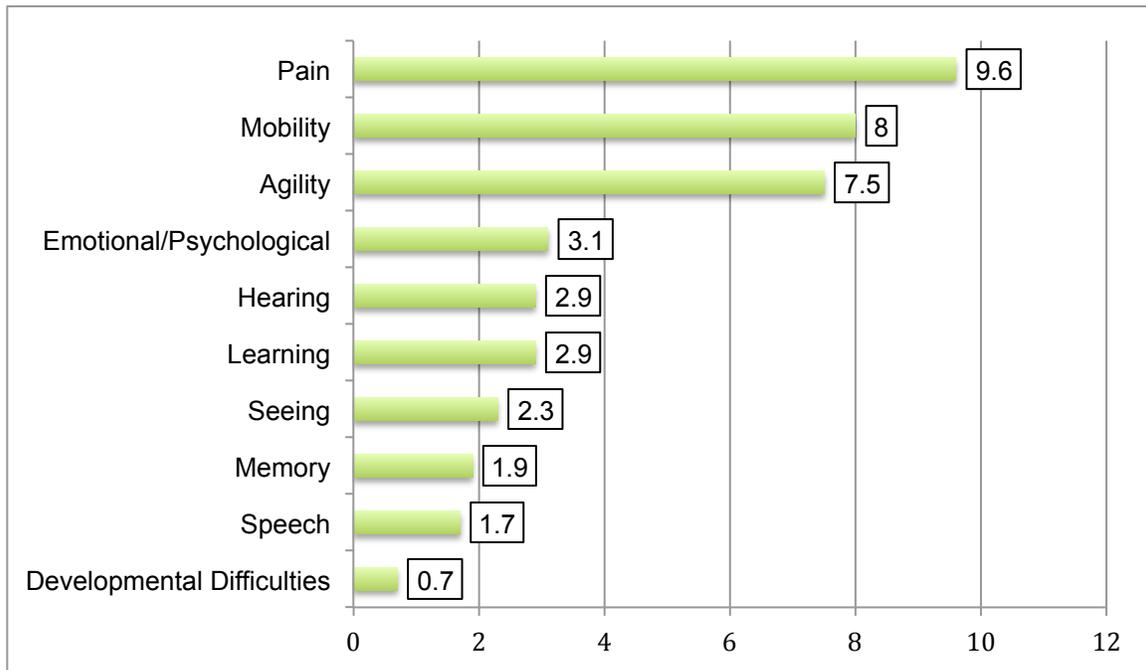


Based on a chart in Pynoos, Perelman and Nishita (2001)

The top modifications performed include: minor home repairs (87.5% identified they provide this service); ramp installation (74.9%), and grab bar installations (37.9%) (Pynoos, Perelman and Nishita, 2001, n.p.). While this report was done on PWD home adaptation services in the United States, this data can be used to get a rough idea of the types of home adaptations that are needed by PWD.¹² The range of adaptations is due in part to the wide range of types of (dis)abilities. In 2006 BC Stats released their report on Labour Market Outcomes for PWD in BC. In this report BC Stats identified the range of (dis)abilities in BC. The most prevalent (dis)abilities relate to pain, mobility and agility.

¹² There is no available data on the types and prevalence of home adaptations done in BC.

Table 2.2 Breakdown of (Dis)ability Type in BC for Ages 15-64



Based on a chart in BC Stats (2006)

Pain, mobility and agility related (dis)abilities often require adaptations in the home and/or assistive technology to make movement possible and safe. PALS identifies that in 2006, two-thirds of the adult population with (dis)abilities required assistive technology to help them perform daily activities. In BC 9.7% of PWD who required assistive technology (37,900 people) had no needs met, 28.0% had some needs met (109,700 people), and 62.3% had all their needs met (391,670) (PALS, 2006, n.p.). While the information in Table 2.2 relates only to those 15 years and older, children also have (dis)abilities and require modifications and assistive technology. In the PALS (2006) study 11,820 children aged 5-14 were identified as having a (dis)ability in BC. Often mobility and agility related (dis)abilities are related (PALS 2006, n.p.). PALS identifies that in Canada over half of children with mobility limitations experience difficulty with everyday activities on a daily basis.¹³ Of these children, one-in-5 children with mobility

¹³ Information was not provided specifically for children with (dis)abilities in BC.

limitations are completely prevented from participating in everyday activities (PALS, 2006, n.p.). What these numbers indicate is that there are a great number of British Columbians of all ages who experience mobility related (dis)abilities. Furthermore, many are still experiencing (dis)ability related difficulties everyday. While not all (dis)abilities reported are mobility-related, the highest ranking categories all pertain to accessibility. Having accessible and adaptable housing can help reduce the burden of having a (dis)ability for those of all ages by providing a safe place to live.

2.2. Availability: Vacancy Rates and Cost of Housing

A “snapshot” of vacant units determines the vacancy rate at the time of the study. Units are considered to be vacant if the unit is not occupied and is available for immediate rental (Federation of Canadian Municipalities, 2012, 4). It is difficult to identify an exact vacancy rate as different organizations calculate vacancy rates in slightly different ways and at different times. At best, a given vacancy rate is an estimate, providing a snapshot of vacancy rates at the time of the study. In their calculation of vacancy rates the Canadian Mortgage and Housing Corporation (CMHC) counts units in private rental buildings that have three or more units. According to CMHC the vacancy rate in Metro Vancouver¹⁴ increased from 1.4% in 2011 to 1.8% in 2012 (CMHC, 2012¹,1).

Another challenge to calculating vacancy rates for Metro Vancouver is that the rates vary throughout the region. In the City of Vancouver, where there are higher educational and employment facilities, the vacancy rate in 2012 was only 1% (CMHC 2012¹, 2). Alternately, in Coquitlam, Port Moody and Port Coquitlam, where housing prices are lower, the average vacancy rate was 3.2% (CMHC, 2012¹, 2). Compared to a

¹⁴ CMHC statistics are for the “Vancouver CMA” which includes the Vancouver City, Burnaby City, New Westminster City, North Vancouver City, North Vancouver DM, Richmond, Delta, Surrey, White Rock, Langley City and Langley DM, Tri-cities (Coquitlam, Port Coquitlam, and Port Moody), Pitt Meadows and Maple Ridge (CMHC, 2012¹, 11).

vacancy rate of 4.4% for Canada's 35 major centres¹⁵, Metro Vancouver's vacancy rate is low (CMHC, 2012², n.p.) resulting in high competition for rental housing. While there is a slight increase in vacancy rate in Metro Vancouver there is also a rise in the demand for rental housing (CMHC, 2012¹,1).

The private real estate market is also indicates it s challenging to purchase homes. In June 2014, the sales-to-active-listings ratio was the highest it has been since June 2011 (Wilson, 2014, n.p.). This ratio determines the rate at which units are selling. A ratio over 20 is considered to be a sellers market, in which it is profitable to sell. In June 2014 the ratio is 20.4. Another measure of the private market is the affordability index, used to determine the percent of income an average family would need to put towards monthly mortgage payments. The affordability index is expected to rise to 71.4% in 2014, up from 69.9% in 2013 (Wilson, 2014, n.p.). Conversely, Toronto, the second least affordable city in Canada, is expected to have a reduced affordability index of 42.5% in 2014, down from 42.7% in 2013 (Wilson, 2014, n.p.). These statistics indicate that it is very expensive to buy a home in Metro Vancouver.

Units are only truly available if they are affordable, a problem complicated by the high cost of housing in Metro Vancouver, low vacancy rates, and low-income status of PWD. Even if there is appropriate housing available, the problem of accessing housing is compounded for PWD. Due to lack of information on accessible and adaptable housing it is unclear if there are adequate numbers of units in Metro Vancouver for PWD. However, even if there are enough appropriate units for PWD they are having difficulty locating these units (Stack, 2014, 6; Evans, 2013, 3), and/or affording competitive rental rates once units are located (Disability Without Poverty Network, 2012, 7).

¹⁵ For CMHC "major centres are based on Statistics Canada Census Metropolitan Areas (CMAs), with the exception of the Ottawa – Gatineau CMA, which is treated as two centres for Rental Market Survey purposes and Charlottetown, which is a Census Agglomeration (CA)" (CMHA 2012², n.p.).

Over the past few decades the cost of living in Metro Vancouver has been steadily rising, resulting in increasing pressure on people who rely on income assistance, or who have low rates of employability in finding housing they can afford (Disability Without Poverty Network, 2012, 2). In 2012 the allowable rent increase in British Columbia rose from 2.3% in 2011, to 4.3% in 2012 (CMHC, 2012¹, 4). The rise in cost of rental housing has serious implication for PWD, many of whom, due to serious financial restraints, have rental housing as an only option (Saugeres, 2011, 7).

According to the “Labour Market Outcomes of Persons With Disabilities” released by BC Stats (2009), the employment rate of PWD is significantly lower than for those without (dis)abilities (BC Stats, 2009, 9) resulting in many PWD relying on Disability Benefits for some, or all of their living expenses. In 2012 Disability Benefits in BC were modified. In addition to changes to Trust and Asset allowances, the earning exemption for a single PWD increased from \$500 to \$800 per month, and for a couple both receiving (dis)ability assistance from \$750 to \$1600 (Inclusion BC, 2012). However, the base rate of monthly assistance remains the same: \$375 for housing; \$531 for basic living expenses such as food, clothing, housing, and personal care (Inclusion BC, 2012, n.p.; Disability Without Poverty Network, 2012, 5). In Metro Vancouver the average rent spent on a bachelor apartment was estimated at \$839, and a 1-bedroom apartment at \$964 (Disability Without Poverty Network, 2012, 3¹⁶). Housing is generally considered to be affordable if a household is spending less than 30% of their gross income on housing (CMHC, 2010¹, 2). Despite changes to Disability Benefits, the cost of housing in Metro Vancouver comes close to the total living allowance received by PWD on Disability Benefits. In 2009 BC Stats provided a comparison of the yearly median incomes of PWD compared to those without (dis)abilities in three age groups. This findings indicate that: ages 15-29, PWD make just over \$2,4000 less than those without (dis)abilities; ages 30 to 54, PWD make over \$14,000 less, and for ages 55 to 64, PWD make on average 12,600 less than those without (dis)abilities (BC Stats 2009). In addition to the difference

¹⁶ From BC Stats, 2009 Survey of Household Spending (SHS), Canada, British Columbia, and Vancouver published by Statistics Canada, December 2010.

between PWD and those without (dis)abilities, there is a discrepancy in income between males and females, with males with (dis)abilities earning double that of females in the same age group. The combination of difficulty finding and keeping employment, the low rate of Disability Benefits and income from employment for PWD, changing needs due to (dis)abilities, and the rising cost of housing in Metro Vancouver, results in PWD being in a very precarious housing position.

2.3. Accessibility: The Dangers of Inappropriate Housing

As people develop (dis)abilities, or as (dis)abilities change, homes that are not designed to be accessible or adaptable can become unsafe. The nature of many (dis)abilities is not static, while some improve over time; others are episodic¹⁷, or degenerative.¹⁸ While data on the prevalence of accidents in the home due to insufficient adaptations for PWD is difficult to obtain, research on the dangers of inadequate housing for seniors can inform this issue.

As people age and (dis)abilities change, daily tasks such as entering or exiting a home or using the washroom can become unsafe (City of Edmonton, 2010, 4; Sixsmith and Sixsmith, 2008, 227). Falling in the home is a major cause of accidents in Canada and can result in hospitalizations, injury, chronic pain, reduced QoL and even death (Scott, Wagar and Elliot, 2010, 3). In 2006 the leading cause of unintentional injury for those age 25 and over in BC was falls (Ministry of Health 4).¹⁹ In Canada, over half of falls resulting in hospitalization occurred in or around the home in 2008/2009 (Scott, Wagar, and Elliot, 2010, 7).

¹⁷ Episodic (dis)abilities come and go over time and get better or worsen often with little or no warning, and for unknown periods of time (EDN 2012).

¹⁸ Degenerative (dis)abilities progressively worsen over time as body parts (nerves, bones, etc.) break down.

¹⁹ This is the most recent data on falls in BC.

It has been recognized internationally that inadequate housing design features have negative impacts for seniors and PWD (Scotts, Seville-Smith and James, 2007, 10; Sixsmith and Sixsmith, 2008, 227). Similar to seniors, the ability of PWD of all ages to remain in their homes is compromised if safety issues and support needs are not addressed (Jorgenson, Thomas and Parsons, 2009, 735). Inadequate housing is associated with “rising care costs, deteriorating health and wellbeing, dislocated family relations and recourse to higher dependency housing” (Scotts, Seville-Smith and James, 2007, 10). “Quasi-widowhood,” in which one partner remains in the home, while the other partner needs to be relocated due to their (dis)abilities also may occur, which tends to have profoundly negative impacts on both partners (City of Edmonton, 2010, 6). Negative psychological impacts such as increased dependence on others for daily activities, “loss of autonomy, confusion, immobilization and depression” (Scott, Wagar, and Elliot, 2010, 3) also negatively impact PWD in inappropriate housing. For some, the fear of falling, or falling again, can cause them to restrict their own activities (Sixsmith and Sixsmith, 2008, 227).

Making houses safe places to navigate not only improves the lives of PWD through the reduction of social, psychological and physical harms resulting from inadequate housing, but also has positive possibilities for reducing health care costs. Accidental injury and falls in the home result in health care costs associated with hospitalization, treatment, rehabilitation, and ongoing support. In 2004 falls alone cost \$886 million.²⁰

2.4. Homelessness

People are considered to be “at risk of homelessness,” or in “core housing need” if current housing falls below the CMHC standards of affordability, adequacy or suitability (BC Housing 2010³). CMHC housing is not deemed to be affordable if rent is above 30%

²⁰ This is the most recent figure of the cost of falls in BC.

of income before taxes (BC Housing 2010³). Being homeless or “at risk of homelessness” has a negative impact on a person’s health, trapping them in a downward spiral of deteriorating health and prolonged homelessness. In his study on the real costs of homelessness Gaetz (2012) informs the cycle of homelessness and illness as people who:

are poorly nourished, they are unable to get proper rest, when they get sick they are unable to engage in proper health practices (such as following a drug or treatment regime), they live in congregate settings and are exposed to communicable diseases, frequent moves and instability threaten their health, they are unable to maintain a healthy social network necessary for good health, they are vulnerable to a higher level of physical and sexual violence, inadequate social programs trap people in their homelessness, and a downward cycle of despair along with sleep deprivation can lead to chronic depression and serious mental health concerns. (Gaetz, 2012, 7)

If PWD are also homeless, or “at risk of homelessness” there is likelihood of additional negative impacts from psychosocial risk factors; such as chronic stress, lack of self-esteem, depression, and feelings of isolation and self-efficacy (Ansari et al., 2003, 243). Psychosocial impacts of being homeless or “at-risk” of homelessness can negatively affect pain levels and long-term health (Ansari et al., 2003, 244). Those who are homeless have difficulty accessing with basic self-care due to lack of access to health care service, inability to store medications, lack of access to hygiene routines, exposure to weather an violence, unreliable food sources, and lack of accommodations that allow them to sufficiently rest (Zlotnick, Zerger and Wolfe, 2013, S200; Matter et al. 2013, 863). In general, poverty remains a social determinant of health, and being homeless or at risk of homelessness makes individuals additionally vulnerable (Zlotnick, Zerger and Wolfe, 2013, S200; Frankish, Hwang, and Quantz, 2009, 6). In general, homeless people experience higher levels of pain than non-homeless people (Matter et al., 2009, 863). The cycle of homelessness causes not only reduced QoL for the individual, but also raises the costs of government spending on support services.

Similar to homeless PWD, the negative effects of homelessness are exacerbated for the elderly. Seniors who are homeless are at particularly high risk of early death and institutionalization (Ploeg et al., 2008, 594). Ploeg et al. (2008) identify that homeless seniors disproportionately face “lower incomes, poorer health, chronic disease, functional

impairment, alcohol abuse and social isolation... and [have] Poor mental health, including depression and cognitive impairment” (594). Thus, the consequences of homelessness are severe for both PWD and seniors.

2.4.1. Cost of Homelessness

In addition to the costs of homelessness for the individual, there are significant costs for governments, taxpayers, and homeless individuals. Costs of homelessness include the taxes spent on soup kitchens, shelters, day services, emergency health services, and corrections (Gaetz, 2012, 2). In 2007 costs of homelessness in Canada were estimated to be between \$4.5 to 6 billion dollars. Patterson et al.’s 2008 study estimated the cost of homelessness to be \$55,000 per year. The cost of housing one person for one month is approximately: \$2,000 in a shelter; \$4,300 in a provincial jail; or, \$11,000 in hospital (Gaetz, 2012, 5). Patterson et al. posit that providing adequate housing would save the province approximately \$211,000 annually (Gaetz, 2012, 5).²¹ It is possible that services such as health care and corrections are not accurately recording the housing status of those using their services. Thus, it is possible that the costs identified may be underestimated (Gaetz, 2012, 13).

2.5. Accessible and Adaptable Housing Policy in BC

Homelessness has been an area of growing concern in Canada since the first attempt to count homelessness in 1987 (Frankish, Hwang, and Quantz, 2009, 3). Ninety-five percent of Canadian’s obtain housing through the private market, two-thirds of which own their homes (Hulchanski, 2006, 223). In Canada, most housing is provided through the private housing market, on which Canadians rely for the types of homes being built

²¹ From Patterson, M., Somers, J., McIntosh, K., Sheill, A., & Frankish, J. (2008). *Housing and Support for Adults with Severe Addictions and/or Mental Illness in British Columbia*. Vancouver, BC: Centre For Applied Research in Mental Health and Addiction and Simon Fraser University.

and their locations (Hulchanski, 2006, 223). The federal government has focused housing policy on homeownership, since the immediate need for homes for veterans in 1919 (Hulchanski, 2007, 224; Carroll and Jones 2000, 278). Reliance on the housing market creates problems for those whose income makes market rental prices unaffordable as market mechanisms respond to market demands rather than social needs (Hulchanski, 2007, 223).

While the focus in housing policy in Canada has been on homeownership, in 1963 the federal government, with funding matched by provinces, began to subsidize rental housing for low-income households (Hulchanski, 2007, 224). Between 1964 and 1978 there was a surge of affordable housing built, with between 20,000 to 25,000 units built per year (Farris, 2010, 174). However, Canada has a relatively small amount of social housing when compared to other countries (Farris, 2010, 174). Federal cash transfers that fund affordable housing and social support programs have been decreasing since the early 1980s (Hulchanski, 2007, 231; Farris, 2010,174). While this has had a negative effect on affordable housing initiatives, provinces and municipalities now have the ability to take initiative for addressing housing concerns.

To address the need for more housing in BC there are several initiatives focused on creating more accessible and adaptable units. A revision to the BC Building Code now gives municipalities the option to include requirements for new buildings and renovations regarding standards of accessibility or adaptability (Evans, 2013, 6). Other requirements under the BC Building code include: accessible paths to housing, wider doors, hallways and stairs, lighter doors, lever handles on all doors and plumbing fixtures, and electrical receptacles higher on walls (Office of Housing and Construction Standards 2009,n.p.; Lee and Morton 2013, n.p.).

In 2012 the BC Building Code section on “Accessibility” was updated identifying new requirements for new buildings, additions, and alterations, renovations and changes in occupancy. In the updated BC Building Code access is required:

- From the street to either the main entrance or a clearly marked alternate entrance.
- To all areas where work functions can reasonably be expected to be performed by persons with disabilities.

- To all public areas and facilities available to the public (i.e., bank tellers and hairdressing sinks).
- To counters serving the public and intended as a work surface for extended business transactions with a knee space ...
- To an “accessible” toilet room.
- To an exit at grade or onto a ramp that leads to grade.²² (City of Nanaimo 2013)

In addition to these changes there is more detail on ramps and handrail requirements for public and private buildings and sidewalks. While the updated BC Building Code addresses many issues, making access better for PWD, it only scratches the surface of what is needed, especially in regards to housing units.

Municipalities individually interpret provincial building codes resulting in some variance between cities. Vancouver is unique in Canada for having its own municipal building code, and is able to regulate the design and construction of buildings within the city (City of Vancouver 2013², n.p.). The City of Vancouver released the “Developer Update of the Vancouver Building By-law” in 2013. The update mandates adaptable housing requirements such as wider doorways, stairways, and corridors, as well as requiring automatic door openers at the main entry of apartment buildings to support seniors and PWD (City of Vancouver 2013², n.p.). One of the new features in the 2013 By-law update is a requirement for all new units to have lever door handles rather than doorknobs (Lee, 2013, n.p.). Levels for opening doors is a basic universal design feature that will now be mandatory in Vancouver.

BC Housing’s Homeowner Protection Office (HPO) has been working with SAFERhome Standards Society on the Universal Design Research Project, a project that will use financial incentives to encourage developers of low-rise multi-story housing to include universal design (Evans, 2013, 6). The HPO also runs a Home Adaptations for Independence (HAFI) program, to assist PWD financially in order to modifying their

²² The Building Access Booklet has not yet been released to the public.

homes (Evans, 2013, 6). However, as this program is only for homeowners, many PWD do not qualify for this project. While most accessibility features can be implemented, the costs of adaptations are dramatically higher if the unit has not been designed to be adaptable (City of Edmonton, 2010, 8). Whereas the cost of certain accessibility features such as roll-in showers are expensive even if implemented during construction, other features such as zero-step entry can add only a couple of hundred dollars to the cost of the unit. Other features such as wider hallways, locating a bathroom on the main floor and creating wider doorways add negligible costs in the construction phase (City of Edmonton, 2010, 8). Conversely, the cost of retrofitting a unit to have wider doorways, ramps or accessible bathtubs can range from \$8,000 to \$15,000 (City of Edmonton, 2010, 8).

2.6. Dependency and Lower Quality of Life

How a person experiences their (dis)abilities in relation to daily life, such as levels of dependency, basic movement through public space, and the ability to find housing and employment deeply impacts how they view themselves, their self-worth, and their Quality of Life (QoL) (Saugeres, 2011, 4). Factors that impact QoL include: employability, living conditions, having enough food to eat (Gaetz, 2012, 15). The World Health Organization identifies QoL as an “individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns” (WHOQOL, 1997, 1). Table 2.2 below outlines Hays’ (2005) 8 determinants of QoL. As shown in Table 2.2 areas adequate housing can impact all eight determinants of QoL.

Table 2.3 Determinants of Quality of Life

Determinants of Quality of Life		Determinant as Relates to Adequate Housing
1.	Autonomy, Independence, Individuality, Empowerment and Control	Control over the everyday home environment
2.	Meaningful Activities or Stimulation	Being able to entertain, have guests over or exit and enter the home uninhibited
3.	Social Relationships or Social Integration	

Determinants of Quality of Life		Determinant as Relates to Adequate Housing
4.	Security, Safety, Comfort and Environmental Quality	Having a place to rest and keep belongings
5.	Privacy, Private Space and Personal Possessions	Control over who can enter the space
6.	Perceived Physical and Mental Wellbeing	Secure adequate homes can reduce mental stress and allow PWD to take care of their bodies
7.	Financial Security	Having secure housing can allow PWD to seek employment options
8.	Spiritual Wellbeing	Having a home can positively contribute to having time and energy to address other QoL determinants, such as spiritual wellbeing

Based on a table in Hay 2005

Having a stable home can reduce anxiety surrounding housing, and can allow PWD to take care of their bodies, and allow for medical care routines (Matter et al., 2009, 870). Not having access to affordable and appropriate housing increases dependency on family members, support workers, and social services (Saugeres, 2011, 2). Deteriorating health as a result of homelessness or fear of homelessness can result in “a decreased sense of hope for the future, decreased self-esteem, decreased sense of happiness and a loss of social connections; all important contributors to good mental health and wellbeing” (Gaetz, 2012, 15). While Canada is working to reduce stigmatization of PWD being seen as “dependent” (HRSDC, 2013, n.p.) lack of affordable and appropriate housing results in financial, physical and social dependency of PWD, contributing to lower QoL (Saugeres, 2011, 2). One way to combat dependency is to have supports in place that allow a person to remain in their homes and age in place (Stark, 2004, 33).

2.7. Aging in Place

Aging in place has been a trend in policy internationally that is designed to support people as they age to remain in their homes rather than transfer to care facilities. Aging in place policies can help an individual maintain the dynamic relationship

between a person, their home, and the surrounding environment (Hwang et al., 2011, 247). However, despite increasing support internationally for aging in place, the full impacts of remaining in one's home are not fully known. Factors that can complicate aging in place are issues of physical health, mental health, security, order, identity, connectedness, warmth and suitability of units (Sixsmith and Sixsmith, 2008, 221).

Supporters of aging in place highlight social and psychological benefits for individuals who are able to remain in their homes, as well as tax dollars saved from reducing the number of people living in high cost care facilities (Hwang et al., 2011, 247; Sixsmith and Sixsmith, 2008, 219). Positive impacts of staying in one's home can include improved or maintained general health, financial situations and social inclusion (Tang and Lee, 2011, 445; City of Edmonton, 2010, 6). Older people commonly indicate that they want to remain in their homes as long as possible. Designing homes that can facilitate remaining in one's home can assist people in this goal (City of Edmonton, 2010, 6; Sixsmith and Sixsmith, 2008, 221).

Critics of aging in place identify that there may be instances where remaining in one's home can have negative impacts on health and wellbeing (Thomas and Blanchard, 2009, 13). For some, the home environment is not a positive space, and may contribute to isolation and worsened health (Sixsmith and Sixsmith, 2008, 221). While staying in a well-built unit that meets the social and physical needs may be preferable to transferring to a care facility, remaining in poor living conditions can actually exacerbate health issues (Sixsmith and Sixsmith, 2008, 221). Aging in place may be complicated by changing environments within the home through adaptations, and through changes surrounding the home, such as neighbours moving, developments changing, or physical structures being removed, renovated or replaced (Hwang et al., 2011, 247). Furthermore, in-home services, close proximity to family members and informal support networks, financial support, and community involvement all facilitate aging in place (Tang and Lee, 2011, 447). Thus, the loss of a spouse or serious change in health may still necessitate moving to a care facility (Tang and Lee, 2011, 448). For some implementing adaptations in the home is a signifier of decline in autonomy, and thus, may be resisted (Sixsmith and Sixsmith, 2008, 234). Furthermore, seniors may attempt to obscure the difficulties they are facing in attempts to maintain independence (Thomas

and Blanchard, 2009, 13). While aging in place may be a good solution for those already in well built, adaptable homes, it is not for everyone.

Literature around aging in place most commonly focuses on seniors, at times making linkages to PWD with mental health issues. However, there are important implications for PWD of all ages and types in creating accessible and adaptable homes that allow them to age in place as PWD. Furthermore, PWD of all ages and types cite their desire to age in place (Inclusion BC, n.d., n.p.). Similar to seniors, PWD of all ages are often placed in long-term care facilities due to inability to locate accessible housing (Egg, 2008, 13²³; Alberta, 2012, 3). As youth transition out of the family home, for some, inability to locate accessible homes results in being placed in long-term care facilities (Taleporos et al., 2013, 6). It is estimated that younger adults comprise 10% of residents in long-term care facilities (Hay, 2005, 1; Egg, 2008, 6). When young PWD²⁴ are placed in long-term care facilities for seniors, this can have negative impacts on QoL, including lack of contact with peers, social exclusion, emotional isolation, and lack of appropriate social activities (Alberta, 2012, 3; Egg, 2008, 13; Hay, 2005, 2). Creating accessible and adaptable homes can positively impact PWD of all ages, by creating safe homes.

For those who want to age in place, there may be difficulties in doing so. As many PWD and seniors can only afford rental housing, modifying suites, or having live-in caregivers to accommodate needs can complicate the process of finding housing that facilitates aging in place (Saugeres, 2011, 11). Long wait lists for affordable housing options and difficulty in accessing information about housing options further complicates finding home that allow one to age in place (City of Vancouver, 2013, 12). Having adequate supports within the home and within the community are essential to safely aging in place (Tang and Lee, 2011, 446). Although implementing adaptations in the

²³ Egg references Parke, B. (1997). The young adult as a nursing home client: The challenge of Karl's legacy. *Canadian Nursing Home*, 8 (1), 27-28.

²⁴ While age categories vary, for this paper "young PWD" refers to PWD between the ages of 18 and 64, as 65 is the age when people are considered senior and can qualify for long-term care facilities.

home has had a positive impact on the ability to remain in one's home (Hwang et al. 2011, 253). Unfortunately, even with funding for making adaptations to the home, the costs to doing so may be too great for some to bear.

2.8. Up-to-Date Information

In order to understand and build strategies to address housing in BC, there needs to be up-to-date information (Jacobucci, 2005, 37). Registries are a way to record data on accessible and adaptable homes and to inform housing seekers and policy makers (Scotts, Seville-Smith, and James, 2007, 12). However, registries are only useful if the right information is recorded and the data remains current (Stack, 2013, 3). The following sections are an overview of the existing registries in Metro Vancouver, the target audience, how it operates and its usefulness for PWD seeking accessible and adaptable housing.

Chapter 3. Registries

This research builds upon Heather Evans' 2013 research, "Research Study on Scoping a Registry for Accessible and Adaptable Homes in British Columbia". Evans' study is a strong candidate for the basis of the current research due to the topic area. Furthermore, it was conducted recently and involved many of the major stakeholders in Metro Vancouver. Using Evans' (2013) study as a base for this research reduces duplication of contacting the same organizations for similar data and allows the researcher to expand to analyze ways to actually implement a registry in Metro Vancouver, rather than re-assessing the need to record accessible and adaptable homes. This section reviews the findings of Evans' (2013) study, and then explores the existing registries in Metro Vancouver.

3.1. Evans' 2013 Study

In 2013 Evans released her "Research Study on Scoping a Registry for Accessible and Adaptable Homes in British Columbia." This research, in partnership with BC Housing and REIBC, establishes the need for recording accessible and adaptable housing in BC, and recommends a registry as the most effective way to record this data. As there are already registries in place in BC, a collaboration of efforts could prove fruitful. Evan's key recommendations for creating a registry are:

- 1) The registry should include both market and non-market housing.
- 2) First implement a pilot registry in one region to identify challenges, resource requirements, and inter-organizational workings.
- 3) Have the registry host be an organization that is able to offer support to PWD, such as a non-profit organization that works in accessible and adaptable housing, or who provides services to PWD.
- 4) Registry funding can be government funds, commercial revenue and/or donations. It is likely the costs will be between \$35, 000 - \$100,000 a year.

Depending on the size and scope it is possible the registry can be kept current through one full time position.

- 5) It is highly recommended that there is stakeholder buy-in from real estate, building and development, rental, market and non-market representatives. The registry must maintain a critical mass to be a relevant and useful resource.
- 6) The Internet is a useful resource for gathering information and advertising units.
- 7) Units should list accessibility and adaptability features and there should be a feature on sites that allow users to filter options.

3.1.1. Resources, Registry Management, Partners

Evans (2013) identifies that a non-profit organization with support from a larger organization and external funding would be a good manager for an accessible and adaptable housing registry. Evans names non-profits as a strong candidate to host an accessible and adaptable housing registry as they are able to implement changes quickly, often have expert knowledge on the unique needs of their target group, and may be able to provide services with low overhead costs (Evans, 2013, 22; Trudeau, 2008, 2806). However, many non-profits face resource constraints that may necessitate a partnership with a larger organization to provide support (Evans, 2013, 22). Evans also identifies funding for a non-profit run registry could come from government and/or private funds (Evans, 2013, 22). If not a non-profit partnership with a larger organization, registries could also be implemented as a program or service and operated by a larger organization. However, critics of government/non-profit, or firm/non-profit organizations identify that inter-organization partnerships can be challenging and have negative impacts on non-profits (Trudeau, 2008, 2806; Seitanidi, May and Lindgreen, 2011, 1).

While Evans' (2013) research identifies non-profits as a strong candidate to host and/or operate a registry, there are some drawbacks to this type of service delivery. In his research base in Australia, "Governance and Competition: The Role of Non-profit Organisations in the Delivery of Public Services," Mark Considine identifies a general shift in the delivery of public services from government to private firms and non-profit organizations. Considine warns that a collaboration between government and non-profit can have a negative effect on both the non-profit and those it services (Considine, 2010,

64). Relying on governments for funding can fundamentally change the mandate of a non-profit due to their dependence (Trudeau, 2008, 2808). Competition among non-profits for government contracts and funding can result in decreased quality of the service provided. Fear of losing contracts or funding may result in non-profits engaging in “creaming strategies,” in which the easiest tasks, services, or clients are chosen over more difficult ones in order to maximize output (Considine, 2010, 70). Another negative outcome of competition between non-profits is secrecy, as there is reduced incentive to share information for fear of losing funding and government support. Considine (2010) also notes that the constant need to report back to governments or constant interference by government is a major disruption and source of frustration for non-profits collaborating with governments (74).

3.1.2. *Timeline and Funding*

The scope of the registry, depending on if it is municipal, regional or provincial, will alter the costs of implementation and upkeep, and impact the time required to get the registry up and running. The timeline for establishing an accessible and adaptable housing registry is cited as identified between one and seven years by Evan (2013) and Jacobucci (2005), though it is noted that they require constant monitoring and updating.

Similar to the timeline, the funding required to implement accessible and adaptable housing registries varies widely and is dependent on scope of the registry. Annual budgets range from \$435,000 to \$100,000. These expenses are typically designated for one full time staff program manager, information technology and training (Evans, 2013, 22). Funding sources identified by Evans include purely governmental, a mix of government and private donations, advocates and volunteers in cases where no funding was available, and advertising revenue (Evans, 2013, 23).

3.1.3. *Accessible and Adaptable Housing Features*

The types of features recorded and the terms used to identify these features are crucial to the usability of an accessible and adaptable housing registry. Even the terms “accessible” and “adaptable” are open to interpretation. Evans identifies that it is more useful to identify the specific feature rather than to use an umbrella term for the feature,

as this term can be misunderstood or unclear to the individual accessing the registry. Most registries track accessibility and adaptability features one of three ways: 1) Having levels, gradients of accessibility (one: basic requirements met; two: additional accessibility features; three: extensive accessibility features); 2) A checklist of features to be checked if feature is present in unit; 3) A list of features by room in the home (Evans, 2013, 26). For an example of an accessible and adaptable features checklist SCI BC has developed a list that is currently being used by Accessible Housing BC (Evans 2013, 26). This list includes a breakdown of accessibility features by room as shown in Table 3.1.

Table 3.1 Accessible Housing BC’s Accessibility and Adaptability Features List

<input type="checkbox"/> Adapted kitchen
<input type="checkbox"/> Adapted bathroom (level entry shower stall)
<input type="checkbox"/> Adapted bathroom (wheel-in shower)
<input type="checkbox"/> Adapted Bathroom (tub and grab bar)
<input type="checkbox"/> Caregivers room
<input type="checkbox"/> Ceiling track lift
<input type="checkbox"/> Environmental controls (automated system for controlling electrical applications)
<input type="checkbox"/> Hard surface flooring (laminated or tile or linoleum)
<input type="checkbox"/> Laundry room (raised washer/dryer with front mounted controls)
<input type="checkbox"/> Level or ramped access
<input type="checkbox"/> Lever handled fixtures (door and faucet fixtures)
<input type="checkbox"/> No step entrance
<input type="checkbox"/> Parking (accessible off street parking)
<input type="checkbox"/> Parking (accessible unrestricted on-street parking)
<input type="checkbox"/> Porch Lift access
<input type="checkbox"/> Residential elevator access
<input type="checkbox"/> Secondary accessible exit
<input type="checkbox"/> Switches and controls (mounted 400-1200 mm above the floor)
<input type="checkbox"/> Unmodified
<input type="checkbox"/> Wider doorways (minimum 860mm width)

Based on a table in Evans 2013

In addition to these unit features, Accessible Housing BC also identifies if the unit is subsidized, non-subsidized or co-op.

3.1.4. Accessible and Adaptable Housing Information Sources

Data for an accessible and adaptable housing registry can come from myriad sources. Non-profit housing providers currently provide annual aggregate housing reports to BC Housing. In BC Housing's The Housing Registry applicants can click on the link "Seniors and Adults w disabilities." Clicking on a specific zone, applicants can access a list of the types of housing provided within the chosen zone. There are a number of features recorded in the registry, such as if the housing provider allows pets, smoking, or if there are requirements, such as age to apply. Categories that apply specifically to PWD are "D – People with Disabilities Accepted", "W – Wheelchair Accessible Units" (BC Housing, 2014, 1). Reporting requirements could be altered to include more specific features. For information on non-market rental units, previously collected data can be updated on annual reports. Creating checkboxes for features and open text for explanations can be used in conjunction with making it possible for landlords, homeowners and housing providers being given the opportunity to update accessible and adaptable housing information in a registry themselves. Having a log-on or sign-in to information entering can allow registry staff to ensure that the postings are legitimate, although a legal and liabilities disclaimer may be necessary. Other suggestions for gathering data identified by Evans include a working relationship with the HAFI program to record which units are receiving accessibility modifications, the Homeowners Protection Office tracking which developers are receiving grants to build universal design units, encouraging municipalities to track accessible and adaptable units, targeting real estate agents to begin tracking units they encounter that are accessible and adaptable (Evans, 2013, pp. 28-29).

3.1.5. Data Provision

The registries reviewed by Evans (2013) identified that the Internet housing listings are the best method for linking available accessible and adaptable housing to those searching for this type of housing. An alternate, though not as effective, tool for providing information is through having staff available to answer the needs of the

buyer/renter seeking housing via email or telephone. Staff responsible for answering emails or phone calls can then either search for appropriate information, units, or refer the caller/writer on to another organization that provides specialized assistance.

3.1.6. *Challenges to Tracking Accessible and Adaptable Housing*

3.1.6.1. Stigma

For landlords looking to rent, and homeowners looking to sell listing the unit's accessible and adaptable features could be seen as a way to highlight "perks" of the unit. However, homebuyers identified that they are uncomfortable listing accessibility and adaptability features, possible due to negative associations with aging and (dis)abilities (Evans, 2013, 26).

3.1.6.2. Keeping Up-to-Date

Keeping a comprehensive registry of accessible and adaptable units requires continual upkeep. For registries focusing on listing available accessible and adaptable units for rent or sale this data needs to be kept very current. Some registries have dealt with this issue by having a 90-day posting limit after which the posting expires. While this does not catch all units that are no longer available within a 90-day limit, this reduces the presence of very out of date listings (Evans, 2013, 30). Representatives of the registries interviewed by Evans also noted that it would be useful to track successful placements as a way to measure the effectiveness of the registry.

3.2. Existing Registries

In BC there are three registries currently available for those searching for accessible housing

- Spinal Cord Injury BC's (SCI BC) "Accessible Housing BC"
- The Real Estate Board of BC's MLS
- BC Housing's "The Housing Registry"

These registries each take use a great deal of resources to maintain. On average a registry costs approximately \$30–80 grand/year depending on the number of staff who operate and update the registry, the services that are provided, and the size of the registry (Stack, 2013, 2). While the cost of a registry can be reduced by charging posting or membership fees there is still a great cost to hosting the site and keeping it current. Having multiple registries not only duplicates the work for applicants, but also for the organizations that host the registries (Stack, 2013, 7).

Table 3.2 Existing Registries

	Accessible Housing BC (SCI BC)	MLS	The Housing Registry (BC Housing)
Target Audience	PWD looking for accessible housing to buy or rent Spinal Cord injury and/or Mobility issues	MLS members, mostly realtors	Anyone searching for affordable rental units (Both housing providers and individuals seeking housing)
Size	The Housing List of Vacancies mailing list has over 135 people they contact through “email blasts” Spinal Cord Injury and/or other mobility issues	Almost 14,000 units for sale on the MLS for Greater Vancouver (November 2013)	116 housing providers, with approximately 24,000 units of subsidized units across BC (as of 2014) 700 units are classified as accessible and 500 are classified as adaptable Over 14,000 applicants in the registry, 550 of which are identified as being in a wheelchair, the only (dis)ability specific category available

Operations	<p>Hosted on the SCI BC website in addition to links to other services and information</p> <p>There is also a call-in service available for people with no access/Internet knowledge</p>	<p>15 staff members who enter data, update information, and upload and change photos of units</p> <p>When they first established the MLS there was 25-30 staff working full-timetable</p>	<p>A standardized application form that all groups associated with the Housing Registry can access</p> <p>Managed by the Housing Registry Council comprised of housing providers, community</p>
		<p>Downsized their staff by using a service which allows brokers to enter and update their own information free of charge</p>	<p>Associations BC Non-Profit Housing Association, the Co-operative Housing Federation of BC, and BC Housing</p>
Challenges for PWD	<p>Has only a few units that are available across BC at a time Not enough postings for areas outside of Metro Vancouver</p> <p>Waiting list is too large and units are not available long enough to be posted on their registry</p> <p>Do not have the funding to keep the site robust and up-to-date</p>	<p>The only (dis)ability related field that is currently available is a search option for “wheelchair accessible”</p>	<p>As accessible and adaptable units are mixed in with other units they can be difficult to locate</p>

For full write-up on table see Appendix A

3.3. Inadequacies of Existing Registries

While SCI BC’s registry and BC Housing’s Housing Registry are useful tools for PWD seeking rental units, there are units that are either adaptable or adaptable that do not make it into these registries. While the Housing Registry is seeking to include all

affordable housing providers in BC in order to reduce duplicated efforts for PWD and housing providers, the registries are currently not exhaustive. In cases where an accessible unit becomes available, if a suitable PWD is not located quickly the unit is rented to non-PWD in order to ensure rent is coming in to the landlord (Evans, 2012², 3). Furthermore, buyers seeking accessible or adaptable housing do not have adequate resources for locating available units (Stack, 2013, 10). The current housing registries in Metro Vancouver are inefficient, while not providing adequate assistance to PWD seeking to buy or rent accessible or adaptable housing.

3.4. Summary

Policy Problem

Currently there is no combined recording system to catalogue newly built or renovated accessible or adaptable homes in Metro Vancouver as a region. While accessibility features may be obvious, adaptable features exist “behind the walls”²⁵ it is not readily apparent that a unit may be adaptable. As home owners buy and sell units, adaptable units are “lost,” as information about the housing structure may not be passed on to new owners (Stack, 2013, 13). Housing for PWD is already a problematic issue in Metro Vancouver, and as the rate of PWD grows, this will continue to be an issue of importance.

²⁵ Adaptability features that are “behind the walls” are structural designs to a unit that exist behind the finished walls, making them difficult to detect visually.

Research Questions

The research questions for this study are:

1. Which Municipalities, Regional/Provincial Bodies and/or Organizations in Metro Vancouver are currently recording accessible and adaptable housing?
2. Which approach to recording data on accessible and adaptable housing can be implemented efficiently by Municipalities, Regional/Provincial Bodies and/or Organizations?
3. What information would a registry need to include so that it is a useful resource for Municipalities, Regional/Provincial Bodies and/or Organizations and people seeking accessible and adaptable homes?

Two Internet surveys were designed to answer the research questions: a Full Survey, and an amendment of the Full Survey, a Technical Survey.²⁶ In addition to the Internet surveys, a Secondary Data Analysis of Evans' (2013) interviews was conducted.

²⁶ Full Survey and the Technical Survey are available in Appendices B and C.

Chapter 4. Methodology

4.1. Methodological Framework

The methodological framework of this research involves qualitative data collection and analysis. This research is informed by the human rights, social approach to (dis)abilities. This approach is linked to constructionism, which explores how “events, realities, meanings, experiences and so on are the effects of a range of discourses operating within society” (Braun and Clarke, 2006, 81). Through a constructionist framework “(dis)ability” is seen as a result of built and social environments in which PWD become “disabled” through social exclusion, discrimination and poor design features (Scotts, Saville-Smith and James, 2007, 2). While the researcher acknowledges the importance of individualistic, needs based approaches that view PWD as (dis)abled by a personal functional impairment (Scotts, Saville-Smith and James, 2007, 2) the individualist approach dangerously identifies (dis)ability as a personal deficiency or abnormality (Saugeres, 2011, 3). In contrast, the human rights approach posits that it is the social and cultural responses to illness and impairment²⁷ that create “disability,” not the sensory, physical or mental impairments or illnesses or PWD themselves (Saugeres, 2011, 4).

Planning and policymaking not only work within existing power relations; they also can challenge or re-create power inequalities (Forrester, 1989, 7). Our values and beliefs are transposed through our planning and policies onto lived environments, both physical and social (Grant, 2006, 433). Through planning we literally create space to be

²⁷ Impairment is activity limitations or participation restrictions due to a problem with body function or structure (HRSDC, 2013, n.p.)

inclusive or exclusive of certain people. Placing the onus on planners and policy makers to design inclusive plans and policies that are inclusive of all people, regardless of varying aspects of their being (age, sexuality, ethnicity, socio-economic status, ability, etc.) places the responsibility on those who design space, rather than on those who are already facing inequalities.

Thematic analysis is compatible with constructionist and essentialist paradigms, being able to both “reflect reality, and to unpick or unravel the surface of ‘reality’” (Braun and Clarke, 2006, 81). While the researcher conceptualizes “(dis)ability” in a constructionist epistemology, the data corpus was analyzed with an essentialist/realist approach. Constructionism seeks to explore the ways that experiences, reality, and meaning come from societal discourses. In constructionism meaning is not fixed, rather it is a subjective experience, an active and continual process of interpretation (Jacobs and Manzi, 2000, 35). Constructionist research “focuses on how certain issues become defined as ‘problems’ and to identify collective strategies developed to confront these issues (Jacobs and Manzi, 2000, 37). Jacobs and Menzi (2000) claim that constructionism can be particularly useful in housing research regarding discourse analysis, ethnographic research, interpersonal issues, how “problems” and “solutions” are created, and power relationships. While the researcher acknowledges the importance of this type of research, the researcher deemed an essentialist/realist approach as more fitting to answer the research questions. In the context of this paper, “reality” refers to policies, plans, and built environments that affect the daily living of PWD. Conversely the essentialist/realist approach the researcher can theorize “motivations, experience, and meaning in a straightforward way” through assuming a unidirectional relationship between words, meaning and language (Clarke and Braun 2006, 85). Using an essentialist/realist approach allowed the researcher to theorise experiences and meaning in a straightforward manner, rather than seeking to identify the way that meaning was produced and reproduced by the survey participants and interviewees. An essentialist/realist paradigm is appropriate for this research as it identifies the workings of current policy “reality” and identifies policy alternatives to improve information on accessible and adaptable homes.

4.2. Selection of Study Area

Metro Vancouver encompasses 22 municipalities, one electoral area, and one treaty First Nation²⁸ (Metro Vancouver 2011⁴, n.p.). From 2006 to 2011 Metro Vancouver had the second highest population growth in Metropolitan areas in Canada (Metro Vancouver 2011², n.p.). Absorbing 68.3% of provincial growth in this period (Metro Vancouver 2011¹, n.p.), as of 2011 Metro Vancouver contained 52.5% of BC's population (Metro Vancouver 2011², n.p.). As a pilot project for a province-wide registry in the future, the density of population and housing in Metro Vancouver makes this region an informative case study. This research can inform decisions about building additional region-wide registries, or a province-wide registry in BC in the future.

4.3. Research Tools

This research began with a literature review of the current housing situation in Metro Vancouver, paying special attention to housing for PWD in regards to affordability and accessibility and the risk of unsuitable housing. The literature review covered the current economic situation of PWD including income and income assistance, the cost of housing in Metro Vancouver, changes to Disability benefits, and the risks and costs associated with having PWD in inadequate housing. It also included information on the need for a registry to track accessible and adaptable housing and how registries are currently being used to track housing in Metro Vancouver. A review of research on current housing registries in Metro Vancouver was conducted to identify how registries are being used in this area, including the successes and challenges for PWD. A scan of literature on ways to track accessible and adaptable housing was conducted, and case studies were contextualized and evaluated on how well these strategies would work for municipalities in Metro Vancouver. All municipalities in Metro Vancouver were contacted and asked if they currently had a system in place for tracking accessible and adaptable

housing, and if so, how the system worked. At this time, municipalities were also asked if they would be interested in being part of a survey on tracking accessible and adaptable housing.

4.4. Research Instruments

The two research instruments used in this study include secondary data analysis of pre-existing interview data, and Internet surveys.

4.4.1. Internet Surveys

The primary research data in this study was collected through two Internet surveys.

- 1) Full Survey: The Full Survey was designed to address all research questions. Those who participated in Evans' (2013) study were invited to participate as well as all municipalities in Metro Vancouver. Those contacted were encouraged to pass along the survey to others they felt would have knowledge on the topic of registries, housing information and PWD.
- 2) Technical Survey: Some individuals who were invited to be participate in the Full Survey identified that the survey was too complex, or was outside of their area of expertise. In order to include as many participants as possible the Technical Survey was amended from the Full Survey and specifically addressed research questions 3. Those who indicated that they were not a good fit for the Full Survey were asked if they would be interested in completing the Technical Survey. As with the Full Survey participants were encouraged to pass the Technical Survey on to others they felt would have knowledge on the topic of registries, housing information and PWD.

Internet surveys were chosen as the method for collecting data as they are a way to provide "expert interrogations," are useful in terms of time benefits and reach (Wright, 2005, n.p.; Van Selm and Jankowski, 2006, 438) and are attractive to certain groups of people and age groups (Wright, 2005, n.p., such as the target population of this study. Internet surveys are easy to navigate for participants that are "connected and technologically savvy" (Van Selm and Jankowski, 2006, 439) and provide the participant the opportunity to follow up on data before answering a question. Internet surveys can be convenient for participants as there is no need to schedule a specific time to meet with a researcher and can be completed in their own time (Wright, 2005, n.p.). As the

researcher does not meet face-to-face or over the phone with the participant travel costs, recording equipment and transcription are not necessary and there is reduced risk of interviewer bias (Van Selm and Jankowski, 2006, 438; Wright, 2005, n.p.).

While there are many benefits to Internet surveys, there are also disadvantages to this form of data collection. Technical problems associated with the use of Internet surveys can create time costs (Van Selm and Jankowski, 2006, 438). Time-costs involved in Internet surveys include searching for correct email addresses, explaining the procedure to less technological savvy participants, and programming the survey (Van Selm and Jankowski, 2006, 438). It may also be difficult, if not impossible to contact some people via Internet.

Anonymity is very hard to guarantee with Internet surveys, especially in email-based surveys (Van Selm and Jankowski, 2006, 445) as the sender is identified in the email. Although it is possible to have participants use an anonymous remailer, this can be difficult for less technologically savvy participants. Participants in this study were asked to identify if they wanted to their responses to be confidential in the report. They were also asked if their responses could be directly quoted. If a participant wished to be confidential, their name was excluded from quotes and the municipality they represented was not identified. If they also did not wish to be directly quoted, no direct quotations were used, and only a theme analysis was conducted on their response. All responses were downloaded from the Internet, saved onto an encrypted USB and the original emails were deleted. For participants that wished to remain confidential their name and email was not saved with the response, creating confidentiality. The study was not of a highly sensitive nature, as was classified as low risk. Confidentiality was considered to be sufficient to protect the participants.

Web based surveys can be administered in three ways, emailing participants an introductory letter with a hyperlink to a survey hosted on the Web, posting a request for participants on a web-page, web-group or forum, or sending an email with the survey attached. In the third option, the survey can be attached in two ways. Either as a part of the body of the email, in which the participants use the “reply” function and fill in their answers within the email body, or the survey can be sent as an attachment that must be downloaded, opened, completed, saved, and returned as an attachment through email.

In this study the participants were sent the survey as a separate attachment, the second option.

The invitation to be a part of the study included a Statement of Informed Consent.²⁹ If there was no response received within one week, a follow up email was issued. If there was no response to the follow-up email after one more week, a telephone call was made after to invite the municipality or organization to be involved in the study. Once a participant had identified that they wished to be a part of the study they were sent an email with the survey attached. Instructions for how to fill out the survey and return it were included in the body of the email. Participants were asked to fill out the survey using a word processor³⁰ and to return the completed survey as an attachment to an email sent back to the primary researcher. If the survey had not been returned two-weeks after it had been issued, a follow up email was sent reminding the participant to complete and return the survey.

One of the downsides to this type of survey delivery is the need for access to software that can process the survey (Van Selm and Jankowski, 2006, 443). While Van Selm and Jankowski (2006) recommend that a program file as an additional attachment to the email can reduce negative response rate by providing software to open the survey (Van Selm and Jankowski, 2006, 443), this was not done in this research. Software programs designed to edit documents are commonplace on most computers, many of which come equipped with a program to open Microsoft Word documents. In addition, there are free word processors available for download on the Internet. Thus, it was assumed that all participants had access to appropriate software to access the survey. The second downside to this type of survey administration is that it places the burden on the participant to download, complete and return the survey. Kay and Johnston (1999) identify that the more burdensome it is for participants to respond, the less likely it is that

²⁹ Consent Form available in Appendix D, and Invitation to participate in Survey is available in Appendix E.

³⁰ Word processors are software on online applications that allow for writing, editing and formatting written material ("Word Processor" 2013)

they will (325). While Internet surveys place the burden of work on the participant, it also allows them to take breaks, check data, and complete the survey in their own time. Thus, the benefits of Internet surveys were considered to outweigh the costs.

Pre-notification and personalized cover letters have a positive impact on response and completion rates (Van Selm and Jankowski, 2006, 443). As consent to be involved in the study was obtained prior to sending the surveys, all participants were pre-notified. The body of the email with the survey attached functioned as a personalized cover letter inviting the participant to be involved and thanking them for their time and effort. For the Full Survey 46 individuals, organizations, municipalities and regional or provincial bodies. Of these 46 invites 15 responded with interest to be involved in the study and completed the study, a 30% response rate. As the technical survey was designed to address the concerns of some of those invited to the Full Survey only 12 Technical Surveys were issued. Of the 12 individuals, organizations, municipalities and regional or provincial bodies response invited to participate in the Technical Survey 6 completed the survey, a 50% response rate.³¹

4.4.1.1. Probability and Non-Probability Sampling

As there is no central registration for Internet users probability sampling is difficult to achieve. Probability sampling randomly selects units from a large number of possible participants (Yu and Teddie, 2007, 77). Random selection ensures that probability of selection from the greater population can be determined (Yu and Teddie, 2007, 79). Van Selm and Jankowski (2006) identify that Internet surveys are best suited for non-probability samples that are not representative of the greater population as it is difficult to identify the total population of internet users (Van Selm and Jankowski, 2006, 439). As there is no way to ensure that all Internet users can be selected for the study probability cannot be identified.

³¹ For both the Full Survey and the Technical Survey it was not always the first contact for the municipalities, regional/ provincial bodies and organization that completed the survey. For example, SCI BC the initial contact was not the individual who ended up completing the survey. However, as the organization responded to the invite this is counted as a response.

4.4.1.2. Mixed Methods Sampling

This research used mixed methods of sampling: recruited sampling, screened sampling and participant driven sampling. Three ways of the most common ways to sample in Internet surveys include unrestricted samples, screened samples and recruited samples (Van Selm and Jankowski, 2006, 440). Unrestricted sampling makes surveys public on the web, allowing anyone to access it. In recruited samples, participants are gathered from a pre-existing sampling frame (Van Selm and Jankowski, 2006, 440). In screened sampling, responses are screened for relevant data, and those who meet the criteria of the study are contacted (Van Selm and Jankowski, 2006, 440). Of these more common sampling techniques recruited sampling and screened sampling were used.

For recruited samples, the pre-existing sampling frame included all municipalities in Metro Vancouver, and all municipalities were invited to be a part of the study. Contact information was gathered from municipal websites, and an invitation to be a part of the survey was emailed to all municipalities in Metro Vancouver. Screened sampling was used for determining which organizations to invite to participate in the study. Organizations that focus on PWD or recording housing data were also invited to participate. Coverage errors were avoided as all Municipalities and organizations contacted had contact information provided online, and all were invited to be a part of this study.

Finally, all municipalities/organizations invited to participate in the study were asked to forward on the invitation to participate to individuals they felt would be knowledgeable and interested in the research, resulting in participant driven sampling. Participant driven sampling was originally created as a methodology to recruit hard-to-reach populations (Dombrowski et al., 2013, 1). However, more recently it has been adapted and accepted as a methodology for general social network analysis (Dombrowski et al., 2013, 1). Participant driven sampling has become a way for the initial contacts, the “seeds” to recruit other knowledgeable individuals (Dombrowski et al., 2013, 1). Participant driven sampling is a useful tool for recruiting from an unknown population. Municipalities and organizations were asked to invite anyone they felt could contribute, regardless of their association with a municipality or organization working on

housing and/or PWD. Thus, the municipalities/organizations recruited individuals from their personal and professional networks. There is the potential for a bias of over-recruitment in which some “seeds” do not provide further contacts, while other “seeds” provide multiple referrals. This bias was avoided only contacting the first three of any one seeds “recruits”. As no seed made more than three referrals, over-recruitment bias was avoided. The second problem associated with participant driven sampling is homophily, or the likelihood of seeds only recruiting people who are like themselves (Dombrowski et al., 2013, 4). This most commonly occurs in regards to gender. However, homophily was reduced by including a range of participants regarding gender, age, and spectrum of ability and by including representatives of municipalities, organizations and knowledgeable individuals as seeds.

4.4.1.3. Survey Design

Two surveys were designed and distributed to gain in-depth information on which organizations are currently tracking housing, to determine how best to track accessible and adaptable housing, and to identify what information would need to be tracked in order to provide the necessary information to municipalities, regional or provincial bodies, organizations and people seeking accessible and adaptable homes. The surveys were designed to explore ways to build or modify accessible and adaptable housing registries in Metro Vancouver and to answer specific questions that were not discussed in the literature reviewed. The first longer survey, the Full Survey, was designed to assess the interest of a municipality or organization in tracking accessible and adaptable housing as well as to gather ways to track this data. The second smaller survey, the Technical Survey, was an amended version of the longer survey and was designed specifically to address how to track accessible and adaptable housing at a municipal and regional level. Upon initial invitation to participate in the study some organizations and individuals expressed concern that the scope of the questions in the first survey were too broad, resulting in reluctance to participate. Creating a second, smaller and more focused survey allowed the principal researcher to invite a larger spectrum of organizations and individuals with an improved response rate.

The information gathered from the surveys was used to evaluate the policy alternatives for building an accessible and adaptable housing registry. Together the

research instruments, the secondary data analysis and Internet surveys, informed a set of recommendations for tracking accessible and adaptable housing in Metro Vancouver.

The Full Survey contains four main sections:

- 1) The Background Section: The first section is designed to gather information on the organization/municipality. Questions in this section ask if working to build an accessible/adaptable housing registry aligns with the goals of the municipality/organization, whether or not the municipality/organization currently tracks housing data, and if so, how they collect data and any issues they have faced regarding tracking data.
- 2) The Gathering Data Section: This section asks participants to identify if their municipality/organization is interested in tracking accessible and adaptable housing data, which groups the organization would be willing to share data with, what they consider to be useful information on accessibility and adaptability.
- 3) The “How-To” Section: The third section covers the needs of the municipality/organization to track accessible and adaptable features, and asks for recommendations for how to track data at a municipal and regional level.
- 4) The Additional Thoughts Section: This is the last section of the survey. It asks participants to identify any concerns to additional thoughts they would like to share and asks the participant to identify if they recommend any other people or organizations that they feel should be involved in the project.

These sections of the survey are designed to answer the full range of research questions and provide data for analyzing the policy options.

The Technical Survey was designed to answer research questions 3 and 4: What are the best ways to track accessible and adaptable housing for PWD?; What information would a registry need to include so that it is a useful resource for municipalities, organizations and people seeking accessible and adaptable homes?

The Technical Survey consists of two sections:

- 1) The Background Section: The first section whether or not the participant’s municipality/organization currently tracks housing data, and if so, how they collect data and any issues they have faced regarding tracking data. It also asks what data/features should be included in an accessible and adaptable registry
- 2) The “How-To” Section: The second section asks for recommendations on how to track data at a municipal and regional level.

- 3) **Additional Thoughts Section:** The final section asks for any additional thoughts or advice for how to track accessible and adaptable housing data.

Special attention was given to the length of the survey, question design and follow-up on slow responses. Van Selm and Jankowski (2006) identify that Internet surveys with many questions can make the survey appear to be extremely long (441). Whereas pen-and-paper responses have limited space to fill in answers, there is no such length restriction for a survey filled out in word processors. This impression can negatively contribute to the response rate, as the longer the questionnaire is, the less likely people are to respond (Van Selm and Jankowski, 2006, 441). Internet surveys generally have a lower level of non-response on questions, and more complete answers in open-ended questions (Van Selm and Jankowski, 2006, 228). However, abandonment can occur as people download the survey and forget about it. In this study participants who had not returned the survey were contacted after one week after they had been sent the survey and reminded to complete it. Incentives can significantly increase Internet survey response rates (Van Selm and Jankowski 449, 2006; Wright 2005, n.p.), however, in this study, the only incentive that was offered was a copy of the final report and a presentation on the findings.

4.4.2. Secondary Data Analysis: In-Person Interviews

Qualitative secondary analysis allows a researcher to use already produced data to inform their research questions, and elaborate upon a research question, or area of research, or compare and contrast their won findings with previous studies (Irwin, 2013, 295). Secondary data analysis allows the researcher to explore previously collected data; saving time spent gathering the same or similar data, which may be particularly useful for hard to reach populations (Irwin, 2013, 296; Windle, 2010, 322). Secondary data is best used in combination with primary data (Windle, 2010, 322). Whereas in primary data collection the researcher has control over the research questions, the method of data collection and the accuracy of the data provided, in secondary data analysis the researcher cannot control these factors (Windle, 2010, 322). In reviewing previously collected data it is important to understand the methods, variable definitions and methodology of the researcher who collected the data (Windle, 2010, 323).

Controversy regarding qualitative secondary data analysis involves concern over ethical implications of participant consent to use data, and interpretations of interaction and meaning (Irwin, 2013, 296). Interactions between researchers and research participants shape the data collected, affecting project design, interpretation, disciplinary assumptions and theoretical and methodological decisions (Irwin, 2013, 297). This may place limitations on the ability to analyse the previously collected data. Ethical considerations regarding secondary data analysis involve both the research participants and the researcher involved in the data collection. Furthermore, critics of secondary data analysis for qualitative data posit that the researcher is too removed from the context of data collection to be able to properly analyze it (Irwin, 2013, 297). Conversely, supporters of secondary qualitative data analysis identify that the distance from the context of data collection may provide the secondary researcher to work from a critical distance and identify things that may have been missed by the primary researcher of the original data (Irwin, 2013, 298).

The pre-existing data in this study came from Evans' 2013 study "Research Study on Scoping a Registry for Accessible and Adaptable Homes in British Columbia" to identify the need for an accessible and adaptable housing registry. This secondary data analysis identified current challenges faced by PWD, health authorities, and non-profits in locating available accessible and adaptable units in Metro Vancouver. For this study, consent to do a secondary data analysis was obtained from the researcher as well as all the research participants. Consent was given for four of Evans' interviews.

4.5. Thematic Data Analysis

The data corpus, both the Internet Surveys and the Secondary Data Analysis were qualitatively coded using thematic analysis. Clarke and Braun identify thematic analysis as "a method for identifying, analysing, and reporting patterns (themes) within data" (Braun and Clarke, 2006, 6). There is much flexibility within thematic analysis. The importance of themes is not contingent on the amount of "space" they take up in the data set, some themes that were deemed important occupied considerable space while others were only mentioned briefly (Braun and Clarke, 2006, 10). Themes were included if they were deemed to capture an important feature of the research questions (Braun

and Clarke, 2006, 10). The importance and prevalence of a theme can be determined whether a theme is present in a response at all, or by the number of times the theme comes up within a response. In this research the prevalence of a theme was identified by presence in a response rather than by the number of times it was present. A rich thematic description of the surveys was conducted to identify a general sense of the predominant and important themes (Braun and Clarke, 2006, 11). This rich thematic description informed the analysis of the policy alternatives.

4.5.1. Surveys

The Internet surveys were analyzed using thematic analysis to determine the presence of any tracking systems currently in place, and to gauge openness to being part of a region-wide registry of newly built accessible and adaptable homes. While coding does not happen in an epistemological vacuum and the researchers theoretical and epistemological commitments affects the analysis (Braun and Clarke, 2006, 12) as much as possible the survey data set analyzed with the intent to reflect the opinions and concerns of the participants. Analysis was primarily done to inform the research questions, although there was allowance for discussion of themes that emerged outside of the research questions. A semantic approach to identifying the themes resulted in the “explicit or surface meaning of the data” being identified (Braun and Clarke, 2006, 13). The researcher did not look beyond what the participant had written to explore what may have informed these responses; rather they were taken at “face-value,” and used to identify themes. These themes were used to inform the analysis of the policy alternatives.

4.5.2. Secondary Analysis

A thematic analysis was conducted on Heather Evans' (2013) interviews for her research on "Scoping a Regional Registry for Accessible and Adaptable Homes" as a secondary data analysis. The interviews were analyzed to identify if similar themes arose in Evans' interviews as in the Internet surveys. Evan's interviews were analyzed to identify the organizations interest in hosting an accessible and adaptable housing registry, challenges encountered in tracking housing features, and recommendations for how to establish an accessible and adaptable housing registry at a municipal and/or regional level. As with the Internet surveys a semantic approach to the interviews was conducted, looking at the surface meaning of the data.

Chapter 5. Findings

In total 16 Full Surveys and 6 Technical Surveys were completed (total sample = 22 participants). For the Full Survey 9 of the 24 municipalities in Metro Vancouver completed the survey: City of Burnaby; City of Coquitlam; City of North Vancouver (2 responses³²); Mun1; Mun2; Mun3; Mun4³³; and the Township of Langley. In addition to these municipalities, 6 organizations completed the Full Survey: BC Housing, Suzanne Klassen, of the North Shore Disability Resource Center; Heather McCain, the Executive Director of BC Citizens for Accessible Neighborhoods; Harriet Permut, Manager of Government Relations with the Real Estate Board of Metro Vancouver; Org1; Org2³⁴; and Spinal Cord Injury BC (SCI BC). Finally, one participant with unique knowledge on housing and PWD completed the full survey. For the Technical Survey there was a total of 6 participants: Danielle Noble-Brandt from the City of Kelowna, Karyn French from Pacifica Housing in Victoria, Pam Moore of Interior Health, Luke Stack, City Councillor for the City of Kelowna, and Meganne Sholdice, a Project Coordinator for a Ministry of Health funded provincial provider, and Mun5³⁵. For the Secondary Data Analysis of Evans' (2013) interviews, permission was obtained from BC Housing, BC Housing's HAFI program, MassAccess in Massachusetts, and SCI BC.³⁶ In the remainder of the paper the name of the municipality, organization or the non-descript identifier is used as the name of the participant unless the participant permitted the use of their name.

³² Both responses from North Vancouver are counted as 1.

³³ Mun1, Mun2, Mun3, and Mun4 did not wish to be identified.

³⁴ Org1 and Org 2 did not wish to be identified.

³⁵ Mun5 did not wish to be identified.

³⁶ For list of participants see Appendix F

Data for the themes comes from the Full Survey, the Technical Survey and a Secondary Data Analysis of Evans (2013) study. As the data comes from a range of sources, themes are not always present in some data sources as they were not always prompted, or happened to arise unprompted. As the Technical Survey was an amendment of the Full Survey and did not ask the questions contained in the first section of the Full Survey. Namely, if the municipality/organization is interested in tracking accessible and adaptable housing, if recording accessible and adaptable housing information is consistent with the municipality/organizations goals, and what the municipality/organization would need to begin and continue tracking accessible and adaptable housing features. Themes that arose in the surveys were not always present in the Secondary Data Analysis of Evans' (2013) study. Data from Evans' (2013) interviews is limited by the questions asked by Evans. For each theme it will be clarified if the theme includes participants from the Full Survey, the Technical Survey or the Secondary Analysis of Evans' (2013) interviews.

5.1. Themes

The following sections are the themes that arose from the thematic analysis of the Internet surveys and the secondary data analysis. Themes that arose from the Internet surveys and themes that arose from the secondary data analyses of Evan's (2013) interviews were combined. Evans' (2013) interviews and the Internet surveys for this study occurred within a relatively short time frame. Evan's (2013) interviews occurred in November 2012 and surveys were completed between March and June 2014. In the Full Survey and the Technical Survey themes were either prompted by a question seeking information on a topic, or as a general theme that emerged in open-ended questions.

5.1.1. Housing Features³⁷

The following section identifies the housing features that are currently being tracked by municipalities and organizations in Metro Vancouver and participant recommendations for accessible and adaptable housing features that should ideally be tracked. Answers regarding what is currently being tracked at a municipal/organizational level are prompted in both the Full Survey and the Technical Survey and were present in Evans' (2013) interviews.³⁸

5.1.1.1. Features Currently Recorded³⁹

From all the data sources there were 7⁴⁰ municipalities and 8 organizations that indicated they track housing features. Of the 7 municipalities, features tracked include: Adaptable units (2), Address (1); Number of bedrooms per unit (2); Number of units in the building (1); Units by type (rental, private, etc.) (1).

Participants from the 8 organizations that identify they track housing identify the following as features being currently tracked: Age of unit (1); Asbestos (1); By-laws (1); If it is a Heritage Home (1); If there was ever a grow-op in the unit (1); If the site allows upgrades (1); List of individuals with disabilities, family members or others looking for housing (1); Location of Units (1); Nearby amenities (1); Number of bedrooms (1); Pets in unit (1); Strata (1); Total number of all units in the area (1); Units that have been modified (1); Unit type (i.e. affordable, market, etc.)(2); and, "Wheelchair accessible" (3).

³⁷ 41 total participants in 5.1.1. While there are only 25 total data sources including both surveys and Evans' (2013) interviews, the same participant may have offered input in multiple sub-themes. The "total participants" indicates the count of participants in all sub-themes combined.

³⁸ For a table of the breakdown of housing features see Appendix G

³⁹ 17 participants. If two participants from the same municipality each noted slightly different features: repeated features identified are counted as 1; if different features were identified each new feature was recorded. MassAccess and French were excluded, as they are not within Metro Vancouver. SCI BC made reference to features they track in both the Full Survey and Evans' (2013) interviews. They are only counted in this section as 1 participant.

5.1.1.2. Recommendations for Housing Features to Record⁴¹

Participants had a wide range of recommendations for what should ideally be tracked in an accessible and adaptable housing registry.⁴² The following list identifies all features recommended for being tracked. The number next to the feature is the number of participants who recommended this feature. Recommended features to track are ranked from most to least commonly identified:

- **Entrance/Exit/Movement (18):** General entrance and exit to building accessibility, including door width and ramps (9); Chairlift or elevator (6); Automatic doors (2); Room to room access/hallways (3); If there are barriers /stairs (1); Non-slip flooring (1); Visual alarms (1)
- **Bathroom Fixtures (13):** Bathtub or shower (5); Grab bars or railings (3); “Wheelchair accessible” (2); Height of toilet (1); Type of Fixtures/radius (1); reinforced walls (1)
- **Amenities (Proximity to) (10):** Medical or support services (3); Shopping/Groceries (3); Accessible parks (1); Basic amenities (not defined) (2); Library (2).
- **Kitchen Features (10):** Counter height (5); Burners/Oven roll under (2); Cupboard height (2); “Adapted kitchen” (1)
- **External Features (8):** Parking stalls (wheelchair accessible or other)(5); Canopies, Balconies (2); Lighting (1); Wheelchair storage/charging (1)
- **Address and Basic Unit Information (7):** Address (2); Square footage (2); Basic geographic information (region, community) (1); Number of units in building (1); Layout (1); Views (1)
- **Bedroom Features (6):** Number of bedrooms (3); Bedroom Mix (1); Bedroom locations (1); Caregiver bedroom (1)

⁴¹ 24 participants. The total count of participants includes those outside of Metro Vancouver. If there are 2 two responses from the same municipality or organization each response is identified as 1. (e.g. North Vancouver1 and North Vancouver2 are counted as 2 participants). This count is given as responses varied even if from the same municipality or organization

⁴² A table of features currently tracked and the recommended features to be tracked is available in Appendix H.

- **Transit and Transportation (6):** Proximity to transit (6); Wheelchair transportation provided (1)
- **Type (6):** If the unit is Market, Non-Market, Affordable, Private Ownership (3); Physical Type of Property (Town home, Apartment, Bachelor, etc./ High-rise, low-rise) (3)
- **Other (20):** If the features are for a specific group it should be identified (Women, Visual Impairment, Hearing Impairment, Elderly, Wheelchair accessible, Family) (7); All features should be tracked (6); Specific physical features (light switch height, electrical socket height etc.) (2); Ability to adapt units to accommodate accessible features (2); Building frame if concrete or wood (1); Building surveillance (1); Broader site conditions (i.e. building on steep slope) (1); Ceiling rack lift (1); Extra support available or not (1); Pets Allowed (1); Smoking (1)

Two recommended that accessible and adaptable housing should only be identified by a general term “Accessible and adaptable” rather than identifying specific features. This was recommended as a way to simplify the process and as a way to get registries up and running to test efficiency. Mun4 identified that tracking more features could be done as an upgrade to a tracking system in the future, but that keeping it simple was the best way to launch a tracking system.

5.1.2. Challenges and Concerns⁴³

This theme was present in all data sources. In the Full Survey and the Technical Survey’s this topic was prompted in an open-ended question, allowing for a broad range of responses. In total there were 2 main themes of challenges and concerns regarding creating an accessible and adaptable registry: Burden and Data Fatigue and Buy-In.

5.1.2.1. Burden and Data Fatigue⁴⁴

The following 5 sub-themes arose as areas of concern regarding the burdens and challenges of tracking accessible and adaptable housing data. All data sources informed these subthemes.

⁴³ 51 total participants in 5.1.2

⁴⁴ 25 total participants in all sub-sub-themes in 5.1.2.1

Burden of Reporting and Entering Data⁴⁵

City of North Vancouver2, Mun2, Permut and Org1 all voice concern over the time and resources required to track housing data. City of North Vancouver2 highlights concern over the additional time and resources likely necessary to report adaptability features to a registry. Similarly, Org1 identifies that asking providers to fill out surveys and provide data can be challenging, especially as they have other, more immediate priorities. Mun2 communicates that it takes considerable staff time to track housing data and that staff time, and funding for that time, are important factors and potential areas of concern.

Limited Scope and Difficulty Accessing Data⁴⁶

MassAccess, Mun2, Mun4, Mun5, Permut and Sholdice all express concern regarding the scope of housing data recorded by their organization, scope of data being tracked. The specific areas of concern are obtaining accurate assessments/information of what exists today (MassAccess, Mun2) and the limited scope of what the municipality or organization currently tracks (Mun4, Sholdice). Sholdice identifies that her organization only records sites that do not allow electrical and/or plumbing upgrades. Thus, the information recorded is limited to sites her organization has already been in contact with, and only regarding plumbing and electrical upgrades. Thus, the data tracked is subject to institutional memory and has a narrow scope. Mun5 similarly identifies a limit to the scope of the housing tracked by his or her municipality. Housing data recorded by Mun5's municipality is limited to only new housing being built, not for already existing accessible and adaptable housing.

Accessing accurate data on existing units was a concern for MassAccess, Mun2, Mun5 and Permut. MassAccess identifies that obtaining accurate information on units is challenging. Mun2 and Mun5 mirrored this response, but Mun4 notes that tracking new

⁴⁵ 4 participants

⁴⁶ 5 participants

units may be possible with enough resources. Permut notes that within the private market, if an owner makes a minor change in their home that does not require a permit, it is unlikely that a city would be aware of changes occurring in the home, making these features hard to track.

Data Fatigue and Incorrect Data Entry⁴⁷

City of Coquitlam, City of North Vancouver¹ and City of North Vancouver² all express concern regarding correct data entry. City of North Vancouver² identifies that data entry fatigue can lead to missed fields, and City of North Vancouver¹ recommend ensuring that all plan checkers are entering data correctly.

Follow-up on Accuracy⁴⁸

There was some disagreement among participants on the necessity of following up with owners, renters, landlords, or the private market to ensure that information being recorded on the accessibility of the unit was truthful and correct. Klassen identifies that the terms “accessible” and “adaptable” might have different meanings to different people. While a unit may appear accessible to someone unfamiliar with accessibility issues, it may in fact, not meet accessibility needs. SCI BC notes that they do not currently follow up on units, but that their website lists questions and answers on how to properly identify the accessibility features of their units for those with little to no working knowledge on accessibility.

BC Housing stated that they currently do not have a way to confirm accessibility of units, and further note that this is a big concern for units in the private market. Identifying the condition of the housing and the life/safety issues, especially if the unit is being marketed to people with mobility concerns is identified as a need, especially as there is potential for liability issues. BC Housing highlights inspection resources as a way

⁴⁷ 3 participants

⁴⁸ 4 participants

to address this concern. Finally, MassAccess also identifies that they do not do follow-up on units as they feel the likelihood to misrepresent units is not in anyone's best interest. For example, a landlord falsely claiming to have an accessible unit will not benefit from misrepresenting the unit. If misrepresented PWD coming to view the unit would immediately be able to discern that the unit was not accessible and would not apply to rent it. While this would result in an extra burden for PWD, travelling to units that were falsely claiming to be accessible, the landlord would not benefit from misrepresenting their unit in a housing listing. Presumably, as there is no benefit to misrepresent a unit, landlords would not be inclined to misrepresent units.

Keeping Up-to-Date⁴⁹

BC Housing⁵⁰, City of Burnaby, City of Coquitlam, City of Kelowna, MassAccess, Mun2, Mun3, and Noble-Brandt all indicate the importance of keeping housing features being tracked up-to-date. One of the concerns with keeping data up-to-date is the timeline of when data is initially recorded and if/when modifications are updated (City of Burnaby, City of Kelowna, Mun2, Mun3). Some participants suggest tracking housing features when a developer or owner applies for permission to build. When the municipality issues a developer permit, permission to build, the municipality could record housing features as they review the proposal to build. However, if housing features are only recorded when a municipality issues a development permit, it may not represent what is actually built (Mun2), or include later changes to the unit (Mun3). This is a particular area of concern as housing features such as kitchen modifications and changes to the building can impact accessibility features (City of Burnaby, City of Kelowna). Mun3 identifies that if accessible and adaptable units are not tracked when bought, sold, or modified there is potential for them to get "lost." Furthermore, City of Coquitlam, City of Kelowna, MassAccess, and Mun3 all stress that the data must be kept up to date for the tracking system to be useful. MassAccess recounts how incorrect data

⁴⁹ 8 participants

⁵⁰ Both the Full Survey and the Secondary Data Analysis of Evans' (2013) interview.

is extremely frustrating for those seeking housing to buy or rent, although they note that it is better to have slightly out of date information provided than no information at all. One way they have address out-of-date information is having a 90-day expiry date on postings with the option to renew the posting if the unit is still available (MassAccess).

If the data being tracked is for occupants of a building or unit accessibility, BC Housing identifies the importance of staying in touch with landlords to ensure data is relevant and available units are being reported. Noble-Brandt recounts that if the data being tracked is a registry of occupants in private units, once the developer has sold the units the vested interest in the project may disappear and no further data is likely to be reported. Furthermore, for privately owned accessible and adaptable units, City of Burnaby articulates that it would likely be difficult to identify if the occupant is a person with (dis)abilities, or who requires an accessible and/or adaptable unit.

5.1.2.2. Buy-In⁵¹

Relationship Between the Number of Units and Tracking Them⁵²

Mun4 identifies that there is a challenging cyclical relationship between the need to track accessible and adaptable units and justification for doing so if it unknown how many units exist. As implementing tracking systems is expensive and time consuming it may be a hard sell to provincial bodies, municipalities, and organizations without a rough idea of if there are enough units to justify tracking them. Furthermore, adjusting a tracking system to be able to track accessible and adaptable housing features may be difficult to justify if it is only going to be used infrequently. Mun4 As there is no data being tracked in Mun4 revealed that they currently do not know the number of accessible and/or adaptable units in their municipality, and thus have no way to know if they can justify tracking this information. In a similar vein, SCI BC notes the need for both more

⁵¹ 11 total participants from all sub-sub-themes in 5.1.3.3

⁵² 2 participants

accessible and adaptable housing to be built as well as the need to start tracking these houses.

Private Market Participation⁵³

While getting buy-in from property managers and landlords is necessary to maximize the utility of the tracking system, it will likely be difficult to achieve. In Evans' (2013) interview, representatives from BC Housing recount a past initiative in the 1990s to get private market landlords to identify available "wheelchair modified" units to be tracked in a "wheelchair modified registry." The concept was to connect available accessible units to individuals seeking these types of units. However, landlords rarely contacted BC Housing to fill the units. Similarly French recalls how Pacifica Housing faced extreme difficulty in getting buy-in from property managers, landlords, and even some non-profit housing organizations. She indicates that many felt that providing information for a housing registry was not a valuable use of their time, especially when they were already stretched to the limits (Full Survey results French). Of all the groups, French identifies that private sector landlords were the most resistant to providing data. Noble-Brandt similarly notes that the lack of enforceability made it difficult for the City of Kelowna to make registered agreements and/or covenants a useful tracking tool. She further states that failure to report changes in ownership and the city's ability to ensure that housing was being used for its original intent made tracking housing information challenging.

In the Full Survey representatives of SCI BC report that getting housing providers to inform them of available units, and related information is their biggest challenge. Their second biggest challenge is identifying which units are being bought, sold or renovated in the private market.⁵⁴ Org1 identifies that housing providers often have concerns over privacy, due to these concerns Org1 cannot share specific information on units they

⁵³ 7 participants

⁵⁴ SCI BC did not clarify why this is a challenge.

track, only information in aggregate. Thus, Org1 cites concerns over housing provider privacy as a challenge for their organization in sharing housing information with registries. MassAccess similarly identifies that there can be challenges to getting buy-in from necessary groups, stating a 10-year process for establishing their housing registry. However, MassAccess contributes their current success in part to Massachusetts' pro-accessible housing law requiring landlords to publicly list available accessible units for 10 days to allow the public to be aware of available units. MassAccess identifies that without the enforcement capability; it would have been difficult to get buy-in from market rental housing providers.

Privacy Concerns⁵⁵

Org1 and Permut note concern over privacy issues relating to reporting of housing features. Org1 states that they are unable to provide housing data to those outside of their organization due to privacy concerns. They are only allow to share aggregate data. Overcoming privacy concerns is noted as Org1's greatest challenge to tracking housing data. Permut notes that requiring private owners to report housing features data would likely cross a fine line into invasion of privacy. However, if supplying information in housing features is voluntary then privacy will likely not be an issue.

5.1.3. Listing vs. Tracking Data⁵⁶

BC Housing, Mun4, Org1 and SCI BC all note the difference between listing and tracking housing. SCI BC distinguishes the difference in terms as the following. "Tracking" housing means recording total numbers, and housing features, whereas "listing" housing denotes making available information on available units to those seeking them. Org1 and SCI BC both note that if the goal is "listing" housing the registry needs to clarify in advance which side of the transaction the registry is ultimately

⁵⁵ 2 participants

⁵⁶ 4 participants

designed for: the renter/buyer or the landlord/seller. All three participants felt that depending on which group the registry is primarily designed for different methodologies, ways of tracking data, and ways to make data accessible may be necessary.⁵⁷ Mun4 suggests that there is a possible need for two types of registries. One registry at a higher level that will track the total number of accessible and adaptable housing run at the provincial or municipal level, and one to match those looking for available accessible and adaptable units to available ones. This second registry could, perhaps, be further pursued by (dis)ability focused organizations.

5.1.3.1. Consistency and Standardization⁵⁸

BC Housing⁵⁹, City of Kelowna, City of North Vancouver¹, City of North Vancouver², Indep¹, Noble-Brandt and Permut all agree that standardization and consistency are necessary to properly track data. BC Housing notes that demand for accessible and adaptable housing cannot be determined unless there is a registry to track this data, and everyone is using the same or compatible registries. If there are multiple registries tracking accessible and adaptable housing it is possible that there will be duplication and thus misrepresentation of actual numbers of units (Secondary Data Analysis of interview with BC Housing). City of North Vancouver recommends using as few data points as possible to encourage reliability and consistently collected data. Indep¹ highlights that if data is to be tracked when built, as well as updated as units are modified, there needs to be a registry and a consistent list of features to be tracked. Consistency with tracking data across municipalities is also important, as stated by Noble-Brandt and BC Housing.⁶⁰ She cautions that without consistency across municipalities in tracking accessible and adaptable housing, the development community

⁵⁷ Participants did not clarify beyond this caution.

⁵⁸ 7 participants

⁵⁹ Noted by both the participant in the Full Survey as well as in the Secondary Data Analysis of Evans (2013) interview. Both responses are counted as 1.

⁶⁰ Full Survey response

and municipalities may begin to see tracking data as a burden rather than a positive step in tracking important information.

BC Housing⁶¹ and Permut both identify that there needs to be a clear definition of “accessible” and “adaptable.” BC Housing identifies consistent use of the terms “accessible” and “adaptable” as their primary concern regarding recording housing data. BC Housing recommends that clear definitions should be provided to housing providers of all kinds to ensure consistent use and clear understanding of how to properly apply terms. Noble-Brandt also notes that the definitions would need to also identify key features that these terms include.

5.1.3.2. Education and Awareness⁶²

BC Housing⁶³, HAFI, MassAccess, McCain, Mun4, Permut, SCI BC and Township of Langley all recommended education and/or awareness campaigns on the importance of building and tracking accessible and adaptable housing. Mun4 recommends starting with the housing developers to encourage them to start building adaptable units. Recounting a recent attempt to persuade developers to build more adaptable units, Mun4 notes the general confusion between accessible housing and adaptable housing. Conflating the two, developers were resistance to building adaptable units as they expressed concern that the units were going to look like “hospital rooms.”

BC Housing identifies the importance of getting housing providers and municipalities to see the value in making accessible and adaptable housing information available, and to educate them on how to properly and consistently identify accessible and adaptable units. HAFI states that if landlords knew that there was a market seeking to rent accessible and adaptable housing units this might be incentive to begin building and providing information on these types of units. Thus, educating developers and

⁶¹ Full Survey response

⁶² 8 participants

⁶³ Both the Full Survey and the Secondary Data Analysis of Evans' (2013) interviews.

landlords could be a useful tool to encourage participation in the private market. Ways to educate the private market could include highlighting the successes of other registries and showing how these successes are possible in BC (HAFI). SCI BC identifies that alerting realtors to the presence of a registry, and letting them know how to use this information could encourage promoting the use of the registry to ensure it is relevant and useful. Similarly, Township of Langley identifies that it would be useful to educate realtors that accessible and adaptable housing units exist and to educate realtors on what these units are, how they are useful, and who most benefits from living in these types of units. Mun4 identifies that ageing homebuyers who are looking to downsize need to be informed about adaptable housing that will allow them to age in place. Mun4 recommends that as health authorities are promoting aging in place, they should get involved in awareness and education on the housing side. Finally, if a tracking system is established it may be necessary to educate people in how to use it. MassAccess identifies that the majority of questions they receive concern property managers seeking information on how to use their site.

From a private market perspective Permut identifies the importance of showing builders, developers, realtors, and people selling their houses of the benefits of creating, and listing accessible and adaptable housing. If the private market is made aware of the need for this housing, and more importantly, the demand for it this will help in both the creation and tracking of accessible and adaptable housing.

5.1.3.3. Incentives, By-laws and Regulations⁶⁴

All data sources were analyzed to identify this theme. Of all the data sources, this theme came up in 1 Full Survey and in the Secondary Analysis of three of Evans' interviews. BC Housing, HAFI, MassAccess, and Indep1 all discuss the pros and cons of using incentives, policy implementation, and sanctions to encourage participation in both providing and tracking housing data. BC Housing and Permut identify possible negative

⁶⁴ 5 participants

side effects of using legislation to force participation in providing and tracking data, including damaging the relationship between the level of government that instates this policy and private housing owners and developers. BC Housing suggests that better data may be provided if doing so is voluntary. They clarify that when reporting is mandatory housing providers may not be invested in the project, and therefore put little effort into properly recording data. Conversely, if reporting is voluntary those reporting housing data are likely on board with the importance of listing or tracking housing data and will likely put more effort into properly and accurately reporting unit information. HAFI, Indep1 and Permut all identify that if providing data on accessible and adaptable housing is completely voluntary there may need to be some incentives to encourage the private market to participate. Without incentives the data that comes in will likely be inconsistent. If not incentives, then educating the private market on the presence of the registry or accessible and adaptable housing tracking system may be a good place to start. Alternatively, MassAccess contributes the success of their registry largely to having legislation on their side. For MassAccess, even without strict monitoring and enforcement of the requirement for landlords to list accessible and adaptable homes, there is still strong compliance due to it being legislated.

5.1.3.4. Start Simple⁶⁵

From all the data sources, MassAccess and BC Housing in the Secondary Data Analysis and Mun4 in the Full Survey both recommend starting small when implementing a tracking system. MassAccess recounts how they started their registry with just tracking accessible and adaptable housing that they already had information for, and that it was not till later that they began recording more features, and involving the private market. They note that it is better to have one registry than multiple ones. Similarly, BC Housing mentions that it is better to integrate new features being tracked into registries that already exist, rather than creating new ones. Mun4 stressed the importance of starting simple, only recording the general terms “accessible” and

⁶⁵ 3 participants

“adaptable.” Starting at simply tracking the numbers of accessible and adaptable housing, they recommended getting the project started at a small scale, and putting off recording specific features to a future date when there is better tracking systems that will make the process for efficient. However, if only general terms are recorded there will need to be consensus on a definition for these terms and how to apply them properly in a consistent way.⁶⁶

From all the data sources, MassAccess in the Secondary Data Analysis and Mun4 in the Full Survey both recommend starting small when implementing a tracking system. MassAccess recounts how they started their registry with just tracking accessible and adaptable housing that they already had information for, and that it was not till later that they began recording more features, and involving the private market. Mun4 stressed the importance of starting simple, only recording the general terms “accessible” and “adaptable.” Starting at simply tracking the numbers of accessible and adaptable housing, they recommended getting the project started at a small scale, and putting off recording specific features to a future date when there is better tracking systems that will make the process for efficient.

5.1.3.5. Find a Champion⁶⁷

Both Org1 and MassAccess cited the importance of having a champion to push building a registry and to become a leader in tracking accessible and adaptable housing. A Champion or champions are needed to pursue and encourage different stakeholders to begin to list and track accessible and adaptable housing. Champions can be In order to keep momentum of implementing registries in Metro Vancouver dedicated municipalities, organizations, regional bodies, or provincial bodies are needed to ensure discussions continue. Champions can act as an educator or resource for groups interested in listing or tracking accessible and adaptable housing features, or as a role model in how to establish a registry. Creating a committee or planning group dedicated

⁶⁶ See Table 6.4 for a working definition of “Accessible” and “Adaptable.”

⁶⁷ 2 participants

to pursuing implementing registries is one way to reduce the burden and provide support for champions.

5.1.4. *Benefits of Recording Accessible and Adaptable Housing*⁶⁸

5.1.4.1. Groups That Benefit⁶⁹

Participants in the Full Survey were prompted in an open-ended question to identify which groups they felt would benefit from tracking accessible and adaptable housing. The prompt in the question states “consider your municipality/organization, a regional registry, People with (Dis)abilities – consider a broad range of (dis)abilities.”⁷⁰ The following groups were identified as benefitting from tracking accessible and adaptable housing.

While participants strongly indicated that PWD would benefit from tracking accessible and adaptable housing, there was also strong support for the idea that all levels of government and the private sector could benefit strongly as well. If the categories “All levels of Government”, “All or some Municipalities,” “Metro Vancouver region” and “Policy Makers/ Planners” are categorized together the total count is 15, ranking this as the group(s) that most benefits from tracking accessible and adaptable homes.

⁶⁸ 19 total participants in 5.1.5

⁶⁹ 14 participants

⁷⁰ Two participants identified “all mentioned in the question”. The score of 2 was added to the categories: “People with (Dis)abilities”, “All or some municipalities”, and “Metro Vancouver Region.”

Table 5.1 Groups That Benefit

Groups	Total Score
PWD	12
Some or all Municipalities	7
Sales and Marketing	6
Housing or service providers/Landlords ⁷¹	4
Seniors	4
Metro Vancouver region	3
Policy makers/ Planners	3
Advocates/Non-profits	2
All levels of government (Including Provincial)	2
Developers/ Industry	2
Families of PWD and Seniors/Caregivers	2
General Public	1
Organizations involved in Evans' 2013 study ⁷²	1
All levels of government combined ⁷³	15

⁷¹ SCI BC mentions multiple housing and service providers: “housing seekers agencies assisting housing.

⁷² It is unclear if the respondent meant all interviewees in Evans (2013) study, or all organizations mentioned in any capacity in Evans’ Study. Evans identifies the following participants in information interviews and discussions: BC Housing Applicant Services (includes The Housing Registry) Staff, BC Housing Staff Housing Adaptations for Independence Staff, MetroVancouver Regional Planning Advisory Committee, Housing Subcommittee, Spinal Cord Injury BC Information Services (includes Accessible Housing BC) Staff, MassAccess Housing Registry Staff, Accessible Housing Society (Calgary) Staff, Occupational Therapist and Real Estate Agent, MetroVancouver Residential Developer, Development Manager, Municipal Accessibility Coordinator].

⁷³ Combination of all the shaded government related groups that benefit as listed above.

5.1.4.2. Recording and Sharing Data is Good for Everyone⁷⁴

This theme was open to all data sources, but arose only in the Full Survey and the Secondary Data Analysis of Evans' (2013) interviews. Two responses from the Full Survey indicated that tracking accessible and adaptable housing is good for everyone. Both participants from the City of North Vancouver note the importance of matching people looking for accessible and adaptable housing to available units. City of North Vancouver² indicates that sharing information between each municipality helps everyone to learn from one another. Similarly, BC Housing identifies in the Secondary Data Analysis that it is important to understand the demand for accessible and adaptable housing, something that will never be known unless everyone works together and uses the same registry. Revisiting the data from the above section, 5.1.9.1 "Which Groups Benefit from Tracking Accessible and Adaptable Housing," the broad range of groups identified as benefitting from tracking accessible and adaptable homes indicates that gathering and sharing this information is beneficial for everyone. Similarly, in section 5.1.4 "Access to Data" there is a tendency for participants to identify they are willing to share data with multiple groups, if not all groups. This again indicates support for the idea that everyone can benefit from tracking and sharing data. Permut further notes that access to data helps facilitate the process of buying/selling or renting housing. Thus, having this data available could benefit all those looking to do rental or buying/selling of housing.

5.1.5. Feasibility and Clear Objectives⁷⁵

Four participants, out of all data sources, mentioned feasibility of the project: City of Kelowna, French, Mun⁴ and Org². While Mun² has reservations about finding correct data on already existing units, they identified that beginning to track data would be more feasible if there were enough resources allocated. Similarly, Mun⁴ identifies that while

⁷⁴ 5 participants

⁷⁵ 4 total participants in 5.1.6

they currently do not have an efficient system for tracking accessible and adaptable housing; they felt that this could be done in the future. Both French and Org2 cautioned that it is necessary to be very clear on the goals and objectives of the project. French expands to note she cannot see why a municipality or region would attempt to track accessible and adaptable housing features based on her experiences on Victoria.

5.1.6. *Involvement and Responsibility*⁷⁶

There was a broad range of opinions expressed in all data sources on who should be involved in the project as well as ultimately who should be responsible to track the data.

5.1.6.1. Groups to Involve⁷⁷

In both the Full Survey and the Technical Survey participants were prompted to identify which groups and organizations they felt should be involved in building an accessible and adaptable housing registry. Identifying who should be involved yielded a wide range of suggestions. The number beside each suggestion indicates the number of participants who mention this group.

McCain advises that if an organization is put in charge of tracking the data, that it not be an organization directly associated with a single (disability). She notes, “If there is a mention of a specific disability in the title of the principal tracker, people with other disabilities will not use that resource” (Full Survey results McCain).

⁷⁶ 60 total participants in 5.1.7

⁷⁷ 14 participants

Table 5.2 Groups to Involve

Groups	Total Score
(Dis)ability organizations/ Non-profits/Advocates	4
Metro Vancouver	3
SCI BC	2
Real Estate Board	2
Private Sector	2
Municipalities in Metro Vancouver	2
MLS	2
Homebuilders Association of BC	2
Development Community	2
Urban Design Institute	1
PWD and their families	1
Organization in Evans' study ⁷⁸	1
Municipal planners focus group	1
Landlord BC	1
Health authority	1
BC Paraplegic Association	1
BC Housing	1
BC Co-op Federations	1

5.1.6.2. Groups to Track Data⁷⁹

Participants in the Full Survey and the Technical Survey were prompted to identify how to track accessible and adaptable housing at a municipal and regional level. While the question was intended to yield recommendations for ways to track data, the theme that arose was instead identification of which groups should be responsible to

⁷⁸ See Appendix H for list of organization listed in Evans' (2013) study

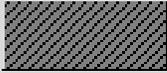
⁷⁹ 16 participants

track data. Data for this theme was also present in Evans' (2013) interviews. Table 5.3 below illustrates the breakdown of groups recommended by participants.

Table 5.3 Groups to Track Data

Participants	Municipal Body	Regional Body	Non-Profit Organization	Coded
BC Housing	✓ Municipalities should track and send data to regional database	✓ Regional Database needed	✓ Organizations should track and send data to regional database	Mun and Org Pass to Reg
City of Burnaby	○ Municipalities could provide some data to Regional Database	✓ Regional Database needed		Mun Pass to Reg
City of Coquitlam	✓ Municipalities should track and send data to regional database	✓ Regional Database needed		Mun Pass to Reg
City of Kelowna	✗ Should not track data unless they own housing stock	○ Regional body could provide a list of Housing providers	✓ Organizations should track their own housing data	Org, Mun (-)
City of North Vancouver1				
City of North Vancouver2	✓ Municipalities should track and send data to Metro Vancouver	✓ Metro Vancouver should record data		Mun Pass to Reg
Indep1	✓ Should track data	○ Regional Body could play a convening and resourcing role		Mun

Participants	Municipal Body	Regional Body	Non-Profit Organization	Coded
HAFI				
Klassen		✓ Regional database should record data from Organizations	○ Organizations could feed data into a database	Org Pass to Reg
McCain			✗ Organization in charge should not be a specific (dis)ability group	Org (-)
Moore	○ Municipalities should make provisions in OCPs	○ Health Authority should be involved		Other
Mun1				
Mun2	✓ Municipalities should track data and provide data to Metro Vancouver	✓ Metro Vancouver should record data		Mun Pass to Reg
Mun3	✓ Municipalities should track data and provide data to Metro Vancouver	✓ Regional Body should host database		Mun Pass to Reg
Mun4		✓ Metro Vancouver should record data		Reg
Mun5				
Noble-Brandt	✓ Municipalities should track data and provide data to Metro Vancouver	✓ Regional Body should host database		Mun Pass to Reg

Participants	Municipal Body	Regional Body	Non-Profit Organization	Coded
Org1				
Org2	<ul style="list-style-type: none"> ○ Municipalities could track data 	<ul style="list-style-type: none"> ○ Metro Vancouver could play a convening and resourcing role 	<ul style="list-style-type: none"> ○ Organizations could track data 	Mun and Org Pass to Reg
SCI BC			<ul style="list-style-type: none"> ○ Housing providers could track this 	Org
Sholdice	<ul style="list-style-type: none"> ○ Tracking housing data should be possible at a municipal level 			Mun
MassAccess	<ul style="list-style-type: none"> ✓ Tracking housing data should be possible at a municipal level 	<ul style="list-style-type: none"> ✗ Will be difficult at a regional level 		Reg (-)
Codes				
	Participants who did not provide a response			
✓	Positively identified this group to track accessible and adaptable housing data			
✗	Participant felt this option was not a good fit			
○	Participant had some hesitation, or uncertainty about this option			

For full write-up on Table see Appendix I

There are four main categories for who should track accessible and adaptable housing data as shown in Table 5.4 below. Participant responses were coded into one category of the group they felt should ultimately track data, unless they also mentioned a caution against another group. If they responded both positively about one group in addition to cautioning against another group the caution was included as well as a negative count for that category.

Table 5.4 Breakdown of Participant Recommendations for Recording Data

A Regional Body could/should record data passed on by a Municipality or Organization		Total: 9
	Municipalities should record and pass on information to Regional Body	6
	Municipalities and Organizations should record and pass on information to Regional Body	2
	Organization should record and pass on information to Regional Body	1
Municipalities could/should track information		3 (2+, 1-)
A Regional Body could/should track information		2 (1+, 1-)
Organizations could/should track information		3 (2+, 1-)

For the category “A Regional Body could/should record data passed on by a Municipality or Organization” there are 3 sub-categories. Participants identify that either: 1) Municipalities, 2) Organizations, or 3) both Municipalities and Organizations should track data and pass this information to a regional body who records data. In total there are 9 responses in the category “A Regional Body could/should record data passed on by a Municipality or Organization.” In the category: “A Regional Body could/should record data passed on by a Municipality or Organization” 3 participants name Metro Vancouver as the Regional Body that should record accessible and adaptable housing data, and 1 participant identifies they should play a convening or supportive role.

For the category “Municipalities could/should track information,” 2 of the 3 participants felt that Municipalities should track housing data, while 1 participant recommends that they should not unless they have housing stock they operate themselves (Technical Survey City of Kelowna).

For the third category “A Regional Body could/should track information” there was one participant who felt that a Regional Body should track data, and one participant cautioned that it would be difficult, but did not necessarily rule Regional Bodies out.

Mun4 and Moore both stress that Health Authorities need to get more involved in accessible and adaptable housing issues in recording housing data or in education and awareness campaigns.

Finally, 2 participants recommend the fourth category, “Organizations could/should track information.” However, McCain notes that the organization in charge of recording data should not be a specific (dis)ability group as this could alienate other PWD or seniors who do not identify with that particular (dis)ability (Full Survey response McCain).

In other related comments, Mun1 recommends that the group ultimately that ends up tracking accessible and adaptable housing data should review BC Housing’s model of tracking information as a guide.

5.1.6.3. Consistency with Goals⁸⁰

Identifying consistency with municipal or organizational goals was a question limited to the Full Survey, and was a prompted question with a “Yes/No” checkbox. If participants checked the “No” box they were prompted to explain their answer. All of the participants of the Full Survey, save two, indicated that tracking accessible and adaptable housing was consistent with their municipality, or organization’s goals.⁸¹ Org1 clarified that tracking accessible and adaptable housing is not an explicit goal of the organization, but that his or her organization was committed to promoting housing diversity. The second participants not associated with a municipality or organization, and thus disqualified himself/herself from answering this question.

⁸⁰ 21 participants

⁸¹ Participants were not asked to identify the goals that are consistent with tracking accessible and adaptable housing.

5.1.6.4. Groups Interested in Tracking Accessible and Adaptable Housing Data⁸²

The Full Survey had a prompt for participants to indicate their interest in tracking accessible and adaptable housing features with a “Yes/No” checkbox. Participants who chose “No” were asked to explain their answer. Of the 14 participants, 10⁸³ indicated that they would be interested in tracking, or providing data to organizations that were tracking accessible and adaptable housing features. The Following participants indicated interest in tracking data: City of Burnaby, City of Coquitlam, City of North Vancouver, Org2, HAFI⁸⁴, McCain, Mun1, Mun4, Org1, SCI BC, and Township of Langley. The Table below indicated participants interested in tracking accessible and adaptable housing and the supports they would need, if any, to do so. This high level of support for tracking accessible and adaptable housing by municipalities and organizations that completed the Full Survey indicates that establishing registries in Metro Vancouver should be pursued.

Table 5.5 Groups Interested in Recording Data

Interested in tracking accessible and adaptable housing data	Require additional funding to track data	Require additional funding to keep data up-to-date	Other supports needed to track data	What they could commit
BC Housing	(Not specified)	(Not specified)	Resources to audit the housing currently in their registry	They could provide a report on the housing listed in their registry

⁸² 10 participants

⁸³ Both participants from City of North Vancouver identified that their municipality is interested in tracking accessible and adaptable housing. These two participants have been counted as one response in favour of tracking accessible and adaptable housing. Thus, in actuality 11 participants identified interest in tracking housing.

⁸⁴ Identified through the Secondary Data Analysis of Evans’ (2013) interview.

Interested in tracking accessible and adaptable housing data	Require additional funding to track data	Require additional funding to keep data up-to-date	Other supports needed to track data	What they could commit
City of Burnaby	✓ No	✗ Yes	(Not specified)	They would be limited in the amount of data they could track. Likely they could record the basics (address, number of units, number of bedrooms) to be recorded at the time of development.
City of Coquitlam	✗ Yes	✗ Yes	Would require more information on how to track data, and on-going data management	(Not specified)
City of North Vancouver	✓ No	✓ No	Possibly additional staff time or assistance from a summer student	Can provide the number of units by level of adaptable design (per the zoning bylaw) without any additional resources. Providing a greater level of detail would require additional staff time during plan checks.
Org2	(Not specified)	(Not specified)	Participation from other organizations or municipalities	Could be a partner, but not the leader or main tracker.
HAFI Program	(Not specified)	(Not specified)	(Not specified)	Could promote that tracking is happening, but could not give out clients' information to a tracking system. We would have the capacity to collect data on the non-profit sector only
Mun1	✓ No	✓ No	(Not specified)	(Not specified)
Mun3	✗ Yes	✗ Yes	Staff resources	(Not specified)

Interested in tracking accessible and adaptable housing data	Require additional funding to track data	Require additional funding to keep data up-to-date	Other supports needed to track data	What they could commit
Mun4	✓ No	✓ No	Proper technical computer support and software	Could potentially track general “accessible” and “adaptable” terms in their development checklist in the future – if made efficient to do so
Org1	✗ Yes	✗ Yes	(Not specified)	Due to privacy concerns, they can only share data at the aggregate.
Codes				
✓	Coded for responses where additional funding is not needed. Not requiring additional funding will help streamline to process of implementing a listing or tracking registry.			
✗	Coded for responses that identify additional funding is required. The need for additional funding will result in it being more challenging to record or keep data up-to-date.			

While additional participants articulated they would require additional funding to begin tracking data and/or to keep the data up-to-date these participants are not recorded in this section if they previously identified they are not interested in tracking accessible and adaptable housing data, or if they are outside of Metro Vancouver. Excluded for these reasons are Citizens for Accessible Neighborhoods and MassAccess. Evans (2013) did not specifically ask her interviewees if they were interested in tracking accessible and adaptable housing. Of Evans’ (2013) interviewees, the representative of HAFI identified the need for more information on accessible and adaptable housing and voiced that having a registry to help people find units is important. The representative of HAFI identified they could work to promote the registry and provide housing data.

5.1.7. Other Themes

Beyond the themes identified in Section 5.1 there are additional themes that were either somewhat outside the scope of the research questions, were only identified by one or two participants, or were deemed to be of less importance.⁸⁵

5.2. Analysis and Synthesis

The following themes are elements that municipalities, organizations, regional bodies, or provincial bodies interested in creating registries will need to consider. The highest-ranking themes are included in this table, along with the 2 highest ranking 2 sub-themes. If a sub-theme has sub-sub-themes the top two ranking sub-sub-themes are included. For all levels of themes if there is a tie in ranking all themes will that score are included as they are all identified at the same level. At the bottom of the table under “Other important themes” themes that did not rank highly by number of respondents who identified this theme but were identified as important by the researcher are also included.

⁸⁵ These themes are included in Appendix J.

Table 5.6 Analysis and Synthesis of Themes

Themes		Score
Tracking Features (Top 2 Sub-themes)		41 Total Responses
Recommendations for Features to Track (top 2 sub-sub-themes)		24 Total
	Entrance/Exit/Movement General; entrance/exit to building accessibility Chairlift/Elevator	18 9 6
	Bathroom Features	13 Total
	Bathtub/shower type	5
	Grab bars	3
	Top 2 highest ranking from any category (not incl. above)	
	If Unit for Specific Group (i.e. Those with blindness)	7
	Proximity to transit	6
	Counter Height	5
Access to Data		14 Participants
Should be provided to 3+ groups (Highest 2: PWD (15), Other municipalities (14), General Public (13), Housing Providers (13); Regional Registry (13)		-
Challenges and Concerns (Top 2 Sub-themes)		51 Total Responses
Burden and Data Fatigue (Top 2 sub-sub-themes)		25
	Keeping up-to-date	8
	Accessing Data and Scope	5
Buy-in		11
	Private Market Participation	7
Suggestions (Top 2 Sub themes)		29 Total Responses
	Education and Awareness	8
	Consistency and Standardization	7

Benefits of Tracking Accessible and Adaptable Housing (Top 2 Sub-themes)		19 Total Responses
Groups that Benefit (top 2 sub-sub-themes)		14
	PWD	12
	Some or all Municipalities (Combined) Government	7
		15
Tracking and Sharing Data is Good for Everyone		5
Involvement and Responsibility (Top 2 Sub-themes)		60 Total Responses
Groups to Involve		Inconclusive
Groups to Track Data		16
	Regional Body should record data passed on by a Municipality or Organization	9
	Municipalities could/should track data	3 (2+ and 1-)
Consistency with Goals		All
Other Important Themes		-
	Tracking vs. Listing Data	4
	Start Simple	3
	Incentives, By-laws and Regulations	5
	Find a Champion	2

Ranking of themes, sub-themes and sub-sub-themes by number of responses was a way to differentiate between the myriad responses by participants. For features to track is interesting to note that the highest-ranking features to be tracked a meet basic living requirements, the ability to enter the home and use the bathroom.

Chapter 6. Analysis of the Policy Portfolio Framework

This chapter explores the key themes that arose in how to establish, or modify existing registries to include information accessibility and adaptability features. Through the surveys it became clear that making a recommendation of the best system to create a registry or registries to list and track accessible and adaptable housing was premature. The knowledge on these types of housing, their uses, and suggestions for how best to move forward ranged widely. The diverse range of familiarity with this topic resulted in the need for a portfolio of how best to proceed. In this case it is too early to construct a policy matrix to provide a policy recommendation “winner” for how to create or improve a tracking and/or listing registry or registries. A policy portfolio allows for a range of recommendations for how best to proceed.

6.1. Find a Champion or Task Force of Champions

Defining Champions

A champion or taskforce of champions are needed to continue to encourage municipalities, organizations and regional/provincial bodies and to establish registries to list and track accessible housing (Evans, 2013, 4). In her research on environmental justice Deborah Rigling Gallagher (2010) defines champions and their role in furthering a cause. Champions work to encourage other groups to “support innovative products, methods or processes” (Gallagher, 2010, 907).⁸⁶ Champions have a personal interest in

⁸⁶ For this concept Gallagher references Anderson and Bateman 2000.

using advocacy and activism to encourage others to join their cause. Often champions go above and beyond their formal roles using their enthusiasm, conviction, and energy to raise awareness in order to achieve their goals (Gallagher, 2010, 907).⁸⁷ For establishing listing and tracking registries it may be beneficial to have multiple champions, some working to encourage tracking registries and some to encourage the creation of creating listing registries accessible and adaptable housing.

A Registry Task Force of Champions

Participants in this study who identified interest in recording accessible and adaptable housing data as listed in Table 5.1.2 could be potential champions or a taskforce of champions: City of Burnaby; City of Coquitlam; City of North Vancouver; Township of Langley; HAFI; Permut with REBGV; and, SCI BC.⁸⁸ Champions can be divided in the type of registry they work to establish. A combination of three champions, or a taskforce of champions may be needed for the three types of registries: 1) Rental housing listing registries, 2) Private market housing listing registries, and 3) Tracking registries at a municipal or regional/provincial level. Participants in this study who indicated interest in recording housing data (as seen in Table 5.5 “Groups Interested in Recording Data”) are potential champions. It is recommended to match champions for registries with their type of expertise. For example, a group or groups such as REBHV would be a good champion or champion taskforce to work towards establishing a private market listing registry; whereas a PWD organization, such as SCI BC, would be a good champion to work towards establishing a rental housing listing services. However, if a groups such as SCI BC, is in charge of recording data there is a danger this could alienate other PWD or seniors who do not identify with that particular (dis)ability (Full Survey McCain).

The size and scope of establishing listing and tracking registries in Metro Vancouver is a large task, thus it is recommended that a task force of champions form to

⁸⁷ For this concept Gallagher references Schon 1963; Howell et al. 2005.

⁸⁸ Mun1, Mun3, Mun4, Org1 and Org2 have all been excluded from this list, as they did not wish to be identified.

work toward establishing the three types of registries listed above. The Results Group defines a task force as “a small group, usually four to twelve people, that brings together a specific set of skills to accomplish a short-term task” (The Results Group, 2009, 1). While a task force is not always necessary, The Results Group recommends using them in cases where the project is complex, involves “thorny” issues, or when solutions will require organizational change. Two fundamental aspects necessary for a successful task force are: “how the team is established, and how the members work together.” To address how the task force is established already existing municipal or regional housing taskforces, or a convening body such as the Accessibility Secretariat in the Ministry of Health, or Metro Vancouver could facilitate and arrange meetings between the champions. The Results Group recommends the leaders of the task force create a Team Charter containing the purpose and objectives, roles and responsibilities, a timeline for the project and the available resources very early on in the project.

Champions or a task force of champions working to further listing and tracking registries need to be strategic about the other groups, organizations and actors they recruit to be involved (Gallagher, 2010, 905; The Results Group, 2009, 1).⁸⁹ The Results Group recommends that task forces draw from a varied pool of individuals with unique expertise. Similarly, Gallagher suggests that champions should include disadvantaged community members in their discussions, planning, and decision-making (Gallagher, 2010, 914). For defining the terms “accessible” and “adaptable”, and for a clarification of the most vital housing features to track the inclusion of PWD is recommended. Gallagher warns, however, about tokenism: the inclusion of individuals or groups in decision making processes, only to ignore, exclude, or disregard their input (Gallagher, 2010, 905).

⁸⁹ Gallagher’s (2010) comment regarding strategic involvement of key actors references Howell et al. 2005.

6.2. Listing vs. Tracking

All housing types need to be both recorded and listed. However, the most crucial need for people searching for accessible and adaptable housing is vacant and available units. As rental housing turns over at a fast rate implementing tracking features for the rental and private market will have immediate impact on all seeking to buy or rent accessible and adaptable homes. Thus, registries for listing housing are prioritized over registries for tracking housing. Champions or a taskforce of champions are encouraged to focus first on improving and/or creating listing registries.

6.3. Education and Awareness Campaigns

Education and awareness campaigns will be necessary in order to get tracking and listing registries established and may also be useful in locating champions for a Registry Taskforce. Education Campaigns include a series of efforts to educate or inform a group about a specific issue (H2O 5).⁹⁰ Similarly, awareness campaigns are designed to introduce a target audience to a new concept (Raven New Media and Marketing 2009). Raven Marketing identifies that awareness campaigns are “not the best method to convey complex messages, emotional appeals, branding messages, lists of services, building credibility or traffic” (2009). Thus, Education and Awareness campaigns may be necessary to conduct in stages starting with an awareness campaign to inform target groups about accessible and adaptable housing in a more general sense, followed by an education campaign that explores the topic in greater depth. Table 6.1 identifies factors to consider when designing awareness campaigns.

⁹⁰ While the design of education and awareness campaigns is outside the scope of this paper, it is recommended that champions or a Registry Taskforce review Home to Oceans “H2O Workbook” which explains how to create and develop Education campaigns

Table 6.1 Suggestions for Designing Awareness Campaigns

Clear goal for the campaign	Awareness in general or focused on specific topics
Defined target audience	Entire population or specific groups Demographics should influence choice of delivery method
Appropriate presentation and provision of information	Clear, understandable message Should be done frequently Use of variety of distribution channels
Follow-up evaluation to determine what works and what does not	Research and experience are helpful
Should be conducted at all appropriate levels	Regional, municipal, and organizations

Based on recommendations by Smith 2006

Municipalities, organizations and regional/provincial bodies already involved in accessible and adaptable housing may be the best individuals to conduct education and awareness campaigns as they are already familiar with the need to record these features. In essence, the first stages to get awareness campaigns underway are champions who will agree to take over target groups for the campaigns, and to specialize on listing and tracking registries.

6.3.1. *Focus of Education and Awareness Campaigns*

There are three foci for education and awareness campaigns: 1) Municipalities and regional/provincial bodies: How tracking housing now can lead to long-term housing strategies, especially in regards to the growing numbers of PWD and seniors anticipated

in the future; 2) Non-profits, strata and housing providers: the value of listing accessibility or adaptability features present in their buildings when creating advertisements to rent units; and, 3) Private market, realtors, landlords, and Real Estate Boards: the importance and benefits of listing if the unit is accessible and/or adaptable features.⁹¹

Table 6.2 below explains the rationale and framework for table 6.3 “Type of Registry, Champions and Target Groups”. The type of education and awareness campaign is divided into 3 groups: Type of Registry: “Listing – Market Rental (Available units); “Listing – Real Estate Market (Available Units); and, “Tracking (Total #s). Health authorities are recommended as champions for all types of registry as they were identified by participants as being important stakeholders in raising general awareness about the need for PWD to age in place. Also important to note: champions and target groups are somewhat interchangeable as target groups for education campaigns may in turn become champions. The order listed is a suggestion for getting started rather than a rigid linear pathway to getting groups and organizations on board.

Table 6.2 Education and Awareness Campaigns, Champions, and Target Groups Framework

Focus of Education and Awareness Campaign	Type of Champion	Target Groups for Education Campaigns
Type of registry (Listing or Tracking, Rental or Private Market) (Available units)	Recommendation for potential champions for the type of registry	List of potential groups to target for education and awareness campaigns

⁹¹ A fourth focus of educational campaigns is educating builders, developers, and Municipalities of the importance and benefits of building accessible and adaptable housing. While this is an important theme, it is beyond the scope of this paper.

“Listing – Market Rental (Available units)” applies to registries that are designed to offer information of currently available rental units available in the market at full market cost to rent. Champions recommended for this type of registry are groups invested in increasing information for PWD, such as PWD organizations and Health Authorities. PWD non-profit/organizations are included in the list of champions as some organizations are trying to raise awareness about all housing needs for PWD. Health Authorities are included in this list as 2 participants identified the need for Health Authorities to take a more active stance of promoting the need for housing options for PWD to allow them to age in place. While some PWD organizations may only be interested in focusing on affordable, or non-market rental units, some organizations may be interested in promoting PWD listing in market rentals. The Target Groups for this type of registry are websites and organizations that currently are used by market landlords, websites such as Craigslist, Kijiji, and Padmapper. As there are already a number of registries that track available market rental units, following up to encourage these sites to add First or Second Stage Housing Features (see table 6.3.) could be a simple step to increasing the information available to PWD seeking market rental housing.

“Listing – Real Estate Market (Available Units)” applies to registries designed to list available accessible and adaptable units for sale in the real estate market. Champions recommended for this type of education and awareness campaigns are real estate boards in BC including PWD and/or seniors focused organizations and Health Authorities. Target groups for education campaigns are individual realtors, REIBC, REBGV and other organizations involved in building, developing, and selling/buying real estate.

“Tracking (Total #s)” applies to registries designed to catalogue existing accessible and adaptable housing in a defined area. This type of data collection is best suited for making policy and long-term development strategies. The groups best suited to being a champion for this type of registry are governmental bodies at the municipal, regional or provincial level. Municipalities currently tracing this type of data, such as City of North Vancouver would be well suited to be champions, although other municipalities, governmental bodies and PWD and seniors organizations could also be champions.

Table 6.3 displays the breakdown of the focus of education and awareness campaigns, the types of champions recommended to head up these campaigns and groups for the champions to begin contacting regarding education and awareness campaigns.

Table 6.3 Education and Awareness Campaigns, Champions, and Target Groups

Focus of Education and Awareness Campaign	Type of Champion	Target Groups for Education Campaigns
Listing - Market Rental (Available units)	PWD and/or Seniors Organizations Health Authorities	Craigslist Kijiji Padmapper Landlord BC BC Co-op Federations Other organizations that provide housing for PWD/Seniors Residential Tenancy Branch ROMS BC British Columbia Landlords BC Apartment Owners and Managers Association BC Landlords Association CMHC Surrey Landlords Vancouver Landlords Rent BC
Listing – Real Estate Market (Available units)	PWD and/or Seniors Organizations Health Authorities	REBGV REIBC CMHC BC Housing

Tracking (Total #s)	
Municipal or Regional Body Health Authorities PWD and/or Seniors Non- Profits/ Organizations	Other municipalities BC Government Ministry of Social Development and Social Innovation Accessibility Secretariat Minister Responsible for Housing

Table 6.3 is not an exhaustive list of champions or target audiences; rather, it is a starting point. It is also possible that as target groups become on board with the need to track and list accessible and adaptable housing they may become champions as well.

6.4. First and Second Stage Features to be Recorded

Table 6.4 identifies two stages for identifying accessible and adaptable housing features in a tracking or listing registry. The first stage is for those interested in recording the general terms “Accessible” and “Adaptable.” The First Stage Features are general terms to track regarding accessibility and adaptability. First Stage Features are recommended for organizations, governmental bodies and businesses concerned about the complexity and cost of implementing ways to identify if a unit is accessible and adaptable. While First Stage Features are less specific, and therefore less informative for PWD seeking to buy or rent units, it creates a starting point for them to look. First Stage Features are recommended as a starting point for listing and tracking registries.

Second Stage Features are recommended for organizations, governmental bodies and businesses interested in providing more specific information on accessible and adaptable units. The features included in Second Stage Features are the top ranking features mentioned by participants in both surveys and Evans’ (2013) study. These features are identified as basic living requirements including entrance and exit from the building and the ability to use the bathroom in the unit. While Second Stage

Features are recommended, those interested in implementing additional features should not be limited by the options provided. For more information on accessibility and adaptability features see section 5.1.1.2 “Recommendations for Features to Track.” It is also important to note that the features listed in section 5.1.1.2 came from municipalities, organizations specializing in PWD and/housing, and knowledgeable individuals. It may be worthwhile to conduct focus groups consisting solely of PWD with varying (dis)abilities to determine if the ranking of importance of the features in this list are similar or the same as those identified by a wider range of PWD.

Table 6.4 First and Second Stage Features to Track Framework

Label	Label Application	Place Checkmark if the Checklist Feature is Present	Checklist of Features	Definition of Label/Feature
First Stage Features: Use all Labels that Apply				
Label Name	If the Definition of Label applies to the unit			A working definition of the Label
Second Stage Features: Use all Labels that Apply				
Label Name	Number of features that must be present to apply the Label	Checkmark to be placed in section if feature is present	List of features that are included under the label i.e. “Ramped or Modified Entry”	Definition of the Feature (i.e. “There is a ramp flat, or with a slight lip, from the ground leading to the porch or front door.”)

In the First Stage Features section there are two features: “accessible” and “adaptable.” These categories do not include specific unit features. To determine if the label “accessible” or “adaptable” should be applied there is a definition of the label in the “Definition of Label/Feature.” The unit is not limited to either “accessible” or adaptable.” Both labels can be applied to the unit if it meets both definitions.

For Second Stage Features the Label is the term that should be included in the registry only if the unit meets the correct number of features as listed in the Checklist of

Features. Those applying the Label will need to identify which features are present in the unit. The Definition of Feature section is provided as a guide for determining if the feature is present.

The top ranking housing features that should be tracked as gleaned from the Surveys and the Secondary Data Analysis of Evans' (2013) interviews:

- Entrance/exit and movement throughout the building (8)
- If there is a chairlift or elevator (5)
- Bathroom Features:
 - Bathtub and Shower type (5)
 - Grab Bars (3)

Table 6.5 First and Second Stage Features to Track

Label	Label application	Place Checkmark if the Checklist Feature is present	Checklist of features	Definition of feature
First Stage Features				
Accessible	Definition of feature must apply.			A person with (dis)abilities is, without assistance, able to approach, enter, pass to and from, and make use of an area and/or its facilities (BCBC 2007).
Adaptable	Definition of feature must apply			The housing unit built to facilitate inclusive adaptations at a later date.

Second Stage Features				
Accessible Exit/ Entrance	Must have 2 of the Checklist Features to apply Label	<input type="checkbox"/>	No step entry to the front door.	The door and/or porch is even to the ground in front of the unit
		<input type="checkbox"/>	Ramped or modified entry	There is a ramp flat, or with a slight lip, from the ground leading to the porch or front door.
		<input type="checkbox"/>	Porch lift	There is a lift attached to the porch for those who cannot climb steps. Usually implemented if the porch is too high to accommodate a ramp
		<input type="checkbox"/>	Wider Doorways	Front doors and doors throughout the unit in the open position provide a clear passage of 800 mm, which allows persons in wheelchairs to safely pass through (SCI BC n.d.)
Elevator/ Chairlift	Must have one of the Checklist Features to apply Label	<input type="checkbox"/>	Elevator	There is an Elevator in the unit or building
		<input type="checkbox"/>	Chairlift	There is a chairlift in the unit or building
Accessible Bathroom	Must have one Checklist Feature to apply Label	<input type="checkbox"/>	Grab bars	There at least one grab bar in the bathroom 1) A wall mounted grab bar to help with stepping in and out of the bathtub 2) This a bar or bars mounted inside the shower or walls in the bathtub (CAOT, n.d.)
		<input type="checkbox"/>	Bathtub/ Shower type	There is a wheelchair accessible shower; There is a seat in the shower; There is a walk-in bathtub
Adaptable	Definition of feature must apply			The housing unit that is built to facilitate inclusive adaptations at a later date.

It is recommended that hosts of the registry use the same definitions in all tracking and listing systems to address the suggestion, “Consistency and Standardization” (5.1.4.1). Having consistent use of terms will facilitate the process of recording data and the use of both tracking and listing registries.

Groups the Registry Task Force Should Target

In the Full Survey and Technical Survey participants were asked to identify groups they felt should be involved in building registries in Metro Vancouver. There was a lack of consensus on which groups a champion or taskforce of champions should focus on bringing in to work on building a registry or registries to track accessible and adaptable housing. All suggestions for which groups need to be involved had a maximum of 3 participants who identified this group. This indicates that there is no one group, or even a couple of groups that need to be involved. Rather, there are many stakeholders and creating a registry needs to be done in through consultation with multiple groups (i.e. builders, developers, municipalities, PWD groups, etc.).

6.5. Addressing Top Challenges and Concerns

The two main themes that arose regarding concerns and challenges are: Burden and Data Fatigue⁹² and Buy-in.⁹³ The recommended primary focus on Listing Registries results in addressing the two concerns. For private market rental and real estate registries, data is user-entered, and much of it, if not all is optional. If Buy-In with these organizations can be achieved, apart from initial burden of updating fields to include checkboxes or information fields, which will likely be substantial, there will be little to no burden of data entry, or data entry fatigue for the organizations. This also addresses the

⁹² Including the sub-themes: Burden of reporting and Entering Data [4], Accessing Data and Scope [5], Data Fatigue and data entry [3], Follow-up on Accuracy [4], Keeping up-to-date [8]

⁹³ Including the sub-themes: Relationship Between the Number of Units and Tracking Them [2], and Private Market Participation [7]

concerns of data and scope, and keeping up to date. Allowing user updated information also addresses the concerns of privacy, as including information is voluntary. It also removes the need to create by-laws or regulations by providing the incentive that the units will be more desirable to buyers and renters with (dis)abilities (See 5.1.4.3 Incentives, By-laws, and Regulations). To get existing Listing Registries to include First or Second Stage Features champions need to focus on explaining the market benefit to providing this data to the large, currently underserved segment of the population: PWD and seniors. Trends in PWD indicate that (dis)ability is on the rise. Thus, this already large portion of the population will continue to increase. There is also significant data supporting the trend of an aging population. As seniors continue to age there will likely be turnover as some sell homes and begin to rent, or downsize their units. If existing listing registries come to understand the benefits to providing accessible and adaptable housing data they are likely to be in support of including these features in their registries. Some listing services, such as Rental Vacation By Owner (RVBO) already include accessibility specifications for available units. RVBO is user-updated website with listing all over the world. Individuals interested in listing their homes or housing units as available to rent upload unit details on the website. Under the “Search” tab, RVBO has a list of filters that can be applied. Under the heading “Suitability” there is an option to filter for “Handicap Access” (RVBO). The inclusion of this feature indicates that the listing market is already beginning to see the value to including this type of information.

While self-entry does not address the sub-theme of the need to follow up to ensure accuracy, there was disagreement on whether there is a need to offer this service. It is not in the best interest of those listing units to misrepresent accessibility and adaptability features. While adaptable features are less immediately obvious, modifications to the home that would require adaptable units are less likely to occur in the rental market. For the realty market, there are generally extensive assessments of units prior to purchase. While there is a possibility adaptable features could be incorrectly identified it is more likely that a false listing of an adaptable unit would be identified in the assessment prior to purchase. For the rental market misrepresented accessibility features are immediately apparent. For example, if a unit lists that it has a walk-in bathtub, and it does not this will be immediately obvious. While misrepresented accessible and adaptable units in the realty and rental market is a possibility, and may

require some follow up causing frustration, it is believed that the majority of people listing units will not misrepresent their units. Having clear and standardized terminology will help reduce accidental misrepresentation.

Tracking accessible and adaptable housing is more of a challenge, as there are inconsistent building codes, by-laws and zoning throughout Metro Vancouver.⁹⁴ While a tracking registry for the region would be a useful advocacy, policy, and planning tool it may be more feasible to begin tracking accessible and adaptable housing at a municipal level. Each municipality determines its own by-laws, policies and Official Community Plans. Thus, a municipality can opt to begin recording accessible and adaptable housing features more feasibly than a regional body. It is possible that there could be a relationship between listing and tracking registries. As all information provided on Internet, a publically available source accessible and adaptable housing tracking websites could begin recording the numbers of units that are being listed in the listing registries. A clear goal and objective for tracking housing will need to be determined by champions.

⁹⁴ See Appendix J Additional Themes for the sub-theme Inconsistent By-laws and Regulations

Chapter 7. Limitations, Next Steps and Conclusions

7.1. Limitations of Study

7.1.1. *Survey Participation*

While all municipalities in Metro Vancouver were invited to be a part of this study, not all chose to be involved. Thus, the municipalities present in this study may not be representative of all the municipalities in Metro Vancouver. There is a wide variation in the size of the different municipalities in Metro Vancouver. In 2011, the largest municipality, The City of Vancouver had a population of 603,502, and accounted for 26% of the region's total population (Metro Vancouver, 2011¹, 1). Conversely, Belcarra, the smallest municipality in Metro Vancouver, has a population of 644, less than 1% of the regional population (Metro Vancouver, 2011¹, 2). The difference in the size of municipalities in Metro Vancouver results in different levels of resources and may have influenced a municipality's willingness to be part of the study.

7.1.2. *Using Internet Surveys*

A main limitation of using surveys was the inability to ask participants to expand upon or clarify their comments. Similarly, if a participant was confused about a question in the survey they were more likely to skip it altogether rather than seek clarification. Both of these factors detracted from the information that could have been gained using alternate forms gathering of data. Another limitation to the surveys was consistent formatting and participant expertise with various word processors. For some, opening the survey and entering data in fields was a challenge. While some overcame difficulties with their word processors, other identified challenges with survey formatting. Word processing inconsistencies also lead to a reduction in the quality and amount of information provided in responses.

7.1.3. Secondary Data Analysis

Regarding Secondary Data Analysis the slightly different focus on Evans' (2013) and the current study resulted in the lack of data in certain themes being consistently addressed. Some themes ended up being limited to the Full Survey, the Technical Survey, the Secondary Data Analysis, or unique combinations of data sources. While valuable themes still arose through all the data sources, having the same questions addressed by all data sources would have created more in depth responses, themes, and recommendations.

7.1.4. Lack of Involvement of PWD

A serious limitation of this study was the lack of involvement of PWD, this is especially relevant regarding the recommendation of First and Second Stage Features to be Tracked. It is recommended that champions or a taskforce of champions conduct interviews, surveys, and/or group discussions with PWD to determine the most crucial features to be tracked.

Citizen engagement is becoming an increasingly focus of all levels of government (Abelson and Gauvin, 2004, 3; Quick and Feldman, 2011, 275). Citizen engagement in public health requires involvement of a great number of individuals with different “backgrounds, interests and values to listen, understand, potentially persuade and ultimately come to more reasoned, informed and public-spirited decisions” (Abelson and Gauvin, 2004, 8). Abelson and Gauvin (2004) identify that citizen engagement processes need to have “strong relationships built upon trust, openness and responsiveness between citizens and government or public institutions... Answerability in the form of transparency, clear objectives and means for involving citizens and linking their input back into the decision process”(vi). In their study “Engaging Citizens: One Route to Health Care Accountability” Abelson and Gauvin (2004) identify that: close to 80% of Canadians believe it is very important for citizens to be involved in major decisions affecting the health care system in Canada and that a rising proportion of Canadians (from 80% in 1998 to 84% in 2000) would feel better about government decision-making if [they] knew that government regularly sought informed input from average citizens” (Abelson and Gauvin, 2004, 4).

According to Abelson and Gauvin (2004), government commissions, public institutions and elected representatives are increasingly seeking citizen engagement in health systems and programs (vi). Quick and Feldman (2011) argue that citizen participation and inclusion are two different dimension of public engagement (274). For Quick and Feldman participation seeks to improve or increase the amount of citizen participation (Quick and Feldman, 2011, 274). Alternatively, inclusion refers to both including a diverse group of citizens (e.g. age, socioeconomic status, location) as well as providing avenues for citizens to engage with multiple levels of government, sectors or groups involved in planning and policy (Quick and Feldman, 2011, 275).

One way to encourage citizen engagement is to form advisory groups, or taskforces who have a legislated mandate to provide citizen input (Abelson and Gauvin, 2004, 26). Citizens are also being invited to help create better public policy through the provision of specialized and unique knowledge about issues that directly affect them (Anderson and Findlay, 2010, 433). Individuals and communities have vitally useful information on the types of services and supports that they need, and can play an important role in determining their health, essentially being a resource themselves (Servaes and Malikhao, 2010, 42; Quick and Feldman, 2011, 273). To clarify what needs to be included in listing and tracking accessible and adaptable housing registries all types of PWD need to be encouraged to participate in discussions about their housing needs.

7.2. Next Steps

As a way to being to spread information and encourage groups to consider becoming champions this research will be provided to all individuals, groups and organizations involved in this study. It is recommended that those interested in being champions get in touch with one another and consider becoming champions or part of a Registry Task Force. The following are recommendations for the next steps that individuals, municipalities, regional and provincial bodies and organizations can take to work towards creating listing and tracking registries in Metro Vancouver.

7.2.1. Get Started

The most important next step is to ensure that there are continued discussions about becoming champions, or tracking and/or listing accessible and adaptable housing. Groups interested in working to create registries to list and track accessible and adaptable housing are encouraged to get in touch with one another and begin to plan and organize.

7.2.2. Standardize Terms

All champions should focus on: 1) Creating a working definition of “accessible” and “adaptable,” and 2) Creating a list of features that belong to each category. These definitions should be provided and explained to all parties involved in tracking or listing housing features.

7.2.3. Contact Groups Interested in Creating Registries

Champions should contact the municipalities and organizations that stated in this research that they are interested in tracking, sharing, convening or being a resource to help create registries.

7.2.4. Steps to Establish Listing Registries

As finding housing is a more immediate need than tracking the total number of units in an area, establishing a way to create a listing registry is the first priority. The themes “Buy-In: Private Market Participation” (5.1.3.3), “Start Simple” (5.1.4.5), and “Registry Features: Website” (5.1.9.6) all apply to achieving the goal of creating accessible and adaptable housing listing services. In order to Start Simple, champions should focus on getting current rental and private market registries to include First or Second Stage Features mentioned in Table 6.5. Groups to begin contacting are included in the Education and Awareness Campaigns Table 6.3.

7.2.5. Steps to Establishing Tracking Registries

Tracking housing has long-term policy and planning implications. Lack of data on accessible and adaptable housing makes it difficult to know if there is need for more units, or if there are enough units to meet future goals (See 5.1.2.2 Relationship Between the Number of Units and Tracking Them). The highest ranking response regarding which groups should track data, Section 5.1.8.2, is that municipalities should each record the numbers of their accessible and adaptable housing and pass this information on to a regional body. This response indicates that tracking registries need to be implemented at the municipal and regional or provincial level. Under section 5.1.5.2 the sub-sub-theme that tracking and sharing data is good for everyone. While this applies to sharing of total accessible and adaptable units, it also applies to Data Tracking Systems, section 5.1.9 and 5.1.4.1 Consistency and Standardization. Standardizing the way that accessible and adaptable housing is tracked will facilitate recording the data at a regional or provincial level. Champions, or a Champion Task Force should begin contacting municipalities in Metro Vancouver and Regional/ Provincial bodies to determine interest.

7.2.6. Other Avenues of Research

The features included in Second Stage Features came from both surveys and the Secondary Data Analysis of Evans' (2013) interviews. While there are participants and interviewees who are familiar with PWD it is recommended that Champions hold focus groups for PWD and seniors to self-identify the most important features. A similar method of determining the most importance features could be used, but it would be worthwhile to follow up and ensure that the most relevant features are being made available if a registry wishes to provide information on Second Stage Features.

Determining the number was felt to be a necessary step to making the case for more accessible and adaptable housing, therefore focusing on building more accessible and adaptable housing in Metro Vancouver was outside the scope of this research. However, it is likely that there is a lack of accessible and adaptable housing stock in the region. Champions or a Registry Task Force could also create and conduct education and awareness campaigns focusing on building accessible and adaptable housing.

Table 7.1 highlights potential Champions and Target groups for Building and development campaigns.

Table 7.1 First and Second Stage Features to Track

Focus of Education and Awareness Campaign	Type of Champion	Target Groups for Education Campaigns
Tracking Accessible and Adaptable Homes (Total #s)	Municipal or Regional Body	Other municipalities BC Government Ministry of Social Development and Social Innovation Accessibility Secretariat Minister Responsible for Housing

7.3. Conclusion

While working to create Listing and Tracking registries is a substantial task, it is also a timely one. Many municipalities and organizations in this study have already established, or are working towards either tracking or listing accessible and adaptable housing. Tracking and listing affordable housing is vitally important to begin connecting PWD and seniors to available units, and to inform the current accessible and adaptable housing situation. While it was beyond the scope of this paper to explore strategies to encourage the creation of new accessible and adaptable housing this is another avenue that could and should be explored.

References

- Alberta Spinal Cord Injury Initiative. (2012). Supportive Living Models for Younger Adults with Physical Disabilities: A Review and Proposed Best Practice Models.
- Ansari, Zahid, Norman J. Carson, Michael J. Ackland, Loretta Vaughn, Adrian Serraglio. (2003). A Public Health Model of the Social Determinants of Health. *International Journal of Public Health*. Volume 48, Issue 4, pp 242-251. DOI: 10.1007/s00038-003-2052-4
- American Psychological Association (APA). (2010). *Publication manual of the American Psychological Association*. Washington, DC: Author.
- Architectural Institute of British Columbia (AIBC). (2013). New Vancouver Building Bylaw.
- British Columbia Building Code (BCBC). (2007). Building Access Handbook. Office of Housing and Construction Standards.
- BC Housing. (2007). Join The Housing Registry.
- BC Housing. (2010¹). Subsidized Housing.
- BC Housing. (2010²). The Housing Registry.
- BC Housing. (2010³). Glossary.
- BC Housing (2014). Affordable Housing.
- BC Land Title and Survey (LTSA). (2014¹). Glossary.
- BC Land Title and Survey (LTSA). (2014²). Types of Records.
- BC Ministry of Health. (2007). Model Core Program Paper: Prevention of Unintentional Injury.
- BC Stats. (2006). Labour Market Outcomes of Persons with Disabilities in British Columbia.
- BC Stats. (2009). Labour Market Outcomes of Persons with Disabilities in British Columbia.

- Blaser, Arthur W. (2008). Younger Individuals with Disabilities: Compatibility of Long-term Care and Independent Living. Handbook of Long-term Care Administration and Policy. Ed. Cynthia Massie Mara and Laura Olsen. Taylor and Francis Group: Boca Raton: FL.
- Braun, Virginia and Victoria Clarke. (2006) Using Thematic Analysis in Psychology. Qualitative Research in Psychology, 3 (2). pp. 77-101. ISSN 1478-0887
- Canadian Association of Occupational Therapists (CAOT). (n.d.). Tools for Living Well.
- Canadian Mortgage and Housing Corporation (CMHC). (2000). Flex Housing™ Building Adaptable Housing.
- Canadian Mortgage and Housing Corporation (CMHC). (2012¹). Rental Market Report: Vancouver and Abbotsford CMAs.
- Canadian Mortgage and Housing Corporation (CMHC). (2012²). Canada's Rental Vacancy Rate Decreases.
- Canadian Mortgage and Housing Corporation (CMHC). (2014). Universal Design and Adaptable Housing Models.
- Carroll, Barbara Wake, and Ruth J. E. Jones. (2000). The Road from Innovation, Convergence or Inertia: Devolution in Housing Policy in Canada. Canadian Public Policy/ Analyse de Politiques, Vol. 26 (3): pp 277-293.
- City of Edmonton. (2010). Making the Case for Lifelong Housing: Accessible Housing for Seniors.
- City of Nanaimo. (2013). "Accessibility" Requirements for Persons with Disabilities.
- City of Vancouver. (2011). Vancouver's Housing and Homelessness Strategy 2012-2021: A Home for Everyone.
- City of Vancouver. (2013). City of Vancouver Seniors Dialogues: Summary Report.
- City of Vancouver. (2013²). Vancouver Building Bylaw 9419.
- Considine, Mark. (2010). Governance and Competition: The Role of Non-profit Organisations in the Delivery of Public Services. Australian Journal of Political Science, Vol. 38 (1): pp. 63-77. DOI: 10.1080/1036114032000056251
- CSDC Enterprise Solutions. AMANDA Public Portal. 2014.
- Curran, Deborah and Tim Wake. Creating Market and Non-Market Affordable Housing: A Smart Growth Toolkit for BC Municipalities. (2008). Smart Growth BC.
- "Data: Breadth & Depth". (2013). CoreLogic.

- Disability Without Poverty Network. (2012). Overdue: The Case for Increasing the Persons With Disabilities Benefit.
- Dombrowski, Kirk, Bilal Khan, Joshua Moses, Emily Channell, and Evan Misshula. (2013). Advances in Anthropology Vol. 3(1).
- Drummond, William J. and Steven P. French. (2008). Converging Technologies and Diverging Interests. *Journal of the American Planning Association*, 74:2, 161-174, DOI: 10.1080/01944360801982146
- Egg, Jackie. (2008). What Factors Contribute to Quality of Life for Young Disabled Adults Who Live in Long Term Care?. SEARCH Canada
- Ellehoj, Erik. (n.d.). GIS Tools for Community Planning. First Nations (Alberta) Technical Services Advisory Group.
- Episodic Disabilities Network (EDN). (2012). What are Episodic Disabilities?.
- Evans, Heather. (2012¹, November 13). Personal Interview.
- Evans, Heather. (2012², November 20). Personal Interview.
- Evans, Heather. (2012³, November 20). Personal Interview.
- Evans (2012⁴, 30 November). Personal Interview.
- Evans, Heather. (2013). Research Study on Scoping a Registry for Accessible and Adaptable Homes in British Columbia.
- Fallis, George. Progressive Housing Policy in the 21st Century: A contrarian View. *Journal of Sociology and Social Welfare*, Vol 37 (4).
- Federation of Canadian Municipalities. (2012). No Vacancy: Trends in Rental Housing in Canada.
- Forrester, John. Planning in the Face of Power. University of California Press: 1989.
- Frankish, C. James, Stephan W. Hwang, and Darryl Quantz. (2009). The Relationship Between Homelessness and Health: An Overview of Research in Canada. *Canadian Journal of Public Health*, 96, S23-9.
- Gaetz, Stephan. (2012). The Real Cost of Homelessness: Can We Save Money by Doing the Right Things? Canadian Homelessness Research Network (2012).
- Gallagher, Deborah Rigling. (2010). Advocates for Environment Justice: The Role of the Champion in Public Participation Implementation. *Local Environment: The International Journal of Justice and Sustainability*, Vol. 14 (10). DOI: 10.1080/135498309032244417
- Government of British Columbia. Assistive Devices and Disability Support. n.d.

- Grant, Jill. (2006). "Planning Canadian Cities: Content, Continuity, and Change" in *Planning the Good Community: New Urbanism in Theory and Practice*. Routledge.
- Hanson, Jennifer. (2010). *People 35: 2036 BC*. BC Stats.
- Herman, Matt, Elaine Gallagher, and Victoria Scott. (2006). *The Evolution of Seniors' Falls Prevention in British Columbia*. Ministry of Health. ISBN 0-7726-5491-3.
- Home to Ocean (H2O). (n.d.). H2O Workbook.
- Hulchanski, David J. (2007). *Canada's Dual Housing Policy: Assisting Owners, Neglecting Renters*. Centre for Urban Community Studies. Research Bulletin #38.
- Human Resources and Skills Development Canada. (n.d.). *Indicators of Well-Being: Canadians in Context – Aging Population*. Accessed 21 Oct 2013.
- Human Resources and Skills Development Canada. 2008. *Aging with Disabilities: Discussion Paper in Preparation for the Inter-Provincial Forum*.
- Human Resources and Skills Development Canada. *The Disability Reference Guide: Its Purpose and Function*. (2013).
- Hwang, Eunju, Linda Cummings, Andrew Sixsmith and Judith Sixsmith. (2011). *Journal of Housing For the Elderly* Vol/Issue: 25 (3), Date: Jul 1, 2011, Pages: 246-257. DOI 10.1080/02763893.2011.595611
- Inclusion BC. (n.d.) *Aging in Place Policy*.
- Inclusion BC. (2012) *Province makes changes to PWD benefits, BCACL calls for an increase in rates*. Web. Accessed October 12, 2013.
- Ip, Frank and Werner Grundlingh. *Overview of the BC and Regional Population Projections 2013 – 2036*. BC Stats. 12 Sept. 2013.
- Ipsos Reid. (2009). *Canadian Seniors' Use and Views of Assistive Devices for Mobility*.
- Irwin, Sarah. (2013). *Qualitative Secondary Data Analysis: Ethics, Epistemology and Context*. Preogress in Development Studies, Vol. 13.
- Jacobs, Keith and Tony Manzi. (2000). *Evaluating the Social Constructionist Paradigm in Housing Research*. *Housing, Theory and Society* Vol. 17 (1): pp. 35-42. DOI: 10.1080/140360900750044764
- Jacobucci, Christa. 2005. *A Central Housing Registry – Recommendations for Winnipeg*. Masters thesis for University of Manitoba, Faculty of Architecture, School of Planning.

- Jongbloed, Lyn, Tim Staintin, Donna Drtnan and Patricia Johnston. (2013). Equipment and Assistive Technology Initiative (EATI) Evaluation. Vancouver, BC: Centre for Inclusion and Citizenship
- Jorgenson, Diane, David R. Thomas, and Matthew Parsons. (2009). Older People with Complex Health Needs Desire for Change: A Qualitative Study. *The Qualitative Report*. Vol. 14 (4): pp 735-746
- Kay, Barbara and Johnson, Thomas J. (1999). Research Methodology: Taming the Cyber Frontier. Techniques for improving online surveys. *Social Science Computer Review* 17(3): 323–337.
- Lee, Jeff. (2013). Vancouver has banned the doorknob. Is the rest of Canada next?
- Lee, Jeff and Brian Morton. (2013). “Vancouver to make access for seniors, disabled a priority in new house construction: City consider new standards for single-family, townhouse homes.” *Vancouver Sun*, 20 September 2013.
- Mah, Julie and Jason Hackworth. (2011). Local Politics and Inclusionary Housing in Three Large Canadian Cities *Canadian Journal of Urban Research* 20.1: 57-80.
- Mahamoud, Aziza, Brenda Roche, Bob Gardner, and Michael Shapcott. (2012). *Housing and Health: Examining the Links*. Wellesley Institute.
- Matter, Rebecca, Susan Kline, Karon F. Cook and Dagmar Amtmann. (2009). Measuring Pain in the Context of Homelessness. *Quality of Life Research*, Vol. 18, No. 7, pp. 863-872. DOI 10.1007/s1136-009-9507-x
- McBride, Chris. (2013). Letter to City Council in Support of Accessible & Adaptable Housing Bylaw Changes (23 Sept 2013).
- McWhorter, Ladelle. (2010). “Forward”. *Foucault and the Government of Disability*. Ann Arbor, MA: University of Michigan Press, (2010): pp xiii-xvii.
- Metro Vancouver. (2011¹) 2011 Census Bulletin #1: Population and Dwelling Counts.
- Metro Vancouver. (2011²). Census Demographic Bulletins and Maps. Retrieved from <http://www.metrovancouver.org/about/statistics/Pages/CensusBulletins.aspx>
- Metro Vancouver. (2011³). Metro Vancouver Local Government Boundaries.
- Metro Vancouver. Who is Metro Vancouver? (2011⁴). Retrieved from <http://www.metrovancouver.org/about/Pages/default.aspx> Office of Housing and Construction Standards. (2009). Summary – New Adaptable Housing Standards in the BC Building Code. Ministry of Energy, Mines and Natural Gas.
- Newell, Alan F. (2011). Design and Digital Divide: Insights from 40 years in Computer Support for Older and Disabled People. DOI: 10.2200/S00369ED1V01Y201106ARH001

- Office of Housing and Construction Standards. (2009). Summary – New Adaptable Housing Standards in the BC Building Code. Ministry of Energy, Mines and Natural Gas.
- Our Healthy Minds. Concurrent Disorder. (2010). OurHealthMinds.com.
- Patterson, Michelle, Julian Somers, Karen McIntosh, Alan Sheill and James Frankish. (2008). Housing and Support for Adults with Severe Addictions and/or Mental Illness in British Columbia. Vancouver, BC: Centre For applied Research in Mental Health and addiction and Simon Fraser University.
- Ploeg, Jenny, Lynda Hayward, Cristal Woodward and Riley Johnston. (2008). A Case Study of a Canadian Homeless Intervention Programme for Elderly People. DOI: 10.1111/j.1365-2524.2008.00783.x
- Prime Minister's Strategy Unit. (2005). Improving the Life Chances of Disabled People. In partnership with the Department of Work and Pensions, Department of Health, Department of Education Skills, Office of the Deputy Prime Minister.
- Pynoos, Jon, Rachel Caraviello and Caroline Cicero. Lifelong Housing: The Anchor in Aging-Friendly Communities. (2009). Generation 33 (2) pp 26-32.
- Pynoos, Jon, Lena Perelman, and Christy Nishita. (2001). Case Studies of Successful Home Modification Programs. The National Resource Center on Supportive Housing and Home Modification, University of Southern California, CA.
- Quick, Kathryn and Martha S. Feldman. (2011). Distinguishing Participation and Inclusion. Journal of Planning Education and Research Vol. 31. DOI: 10.1177/0739456X11410979
- Raven New Media and Marketing. (2009). What Elements are Necessary to Implement a Successful Awareness Campaign.
- Real Estate Institute of BC (REIBC). (2013). Chapters.
- Real Estate Board of Greater Vancouver (REBGV). (2013¹) Steady trends continue in the Vancouver housing market.
- Saugeres, Lise. (2011). (Un)accommodating Disabilities: Housing, marginalization and dependency in Australia. Journal of Housing & the Built Environment. Vol. 26 Issue 1, p1-15. 15p.
- Scott, Vicky, Lori Wagar and Sarah Elliott. (2010). Falls & Related Injuries among Older Canadians: Fall- related Hospitalizations & Intervention Initiatives. Prepared on behalf of the Public Health Agency of Canada, Division of Aging and Seniors. Victoria BC: Victoria Scott Consulting.

- Scotts, Margie, Kay Saville-Smith, and Bev James. (2007). International Trends in Accessible Housing for People With Disabilities: A Selected review of policies and programmes in Europe, North America, United Kingdom, Japan, and Australia.
- Seitanidi, Maria May and Adam Lindgreen. (2011). Editorial: Cross-Sector Social Interactions. *Journal of Business Ethics*, Vol 94. DOI 10.1007/s10551-011-0799-8
- Sheehan, Kim. B. and Sally. J. McMillan. (1999). Response variation in e-mail surveys: An exploration. *Journal of Advertising Research* 39(4): 45–54.
- Sixsmith, Andrew and Judith Sixsmith. (2008). Aging in Place in the United Kingdom. *Aging International*. Vol. 32 (3). Pp 219-235. DOI 10.1007/s12126-008-9019-y
- Smith, Barbara. (2006). Financial Education: What Makes a Successful Public Awareness Campaign. Prepared for OECD and PFRDA International Conference on Financial Education.
- Social Planning and Research Council of BC (SPARC BC). Regional Homelessness Plan for Greater Vancouver. November 2003.
- Spinal Cord Injury BC (SPI BC). (2013). Accessible Housing BC.
- Spinal Cord Injury BC (SPI BC). (n.d.). Is Your Accommodation Accessible?.
- Stack, Heather. (2014). Notes taken at the public meeting of BC Housing and the Real Estate Institute of BC on Scoping an Adaptable and Accessible Housing Registry. Formal release of final transcript (ID no, 19 July 2013). Vancouver, B.C: Reporter/ Heather Stack.
- Stark, Susan. (2004). Removing Environmental Barriers in the Homes of Older Adults With Disabilities Improves Occupational Performance. *OTJR: Occupation, Participation, and Health*. Vol. 24 (1).
- Statistics Canada. (2006). Participation and Activity Limitation Survey 2006: A Profile of Assistive Technology for People with Disabilities.
- Statistics Canada. (2007). Participation and Activity Limitation Survey 2006: Methodological Report.
- Statistics Canada.(2010). Survey of Household Spending (SHS), Canada, British Columbia, and Vancouver.
- Statistics Canada. (2013¹). Canadian Survey on Disability. Catalogue no. 89-654-X- .001 ISBN 978-1-22946-1.
- Statistics Canada. (2013²). Disability in Canada: Initial findings from the Canadian Survey on Disability. Social and Aboriginal Statistics Division. Catalogue no. 89-654-X-No.002 ISBN 978-1-100-22833-4.

- Taleperos, George, David Craig, Mark Brown, Cath McNamara and Sarah Forbes. (2013). *Housing and Support for Younger People with Disabilities Transitioning to Independent Living: Elements for Success in the Design and Implementation of Disability Care Australia, a National Disability Insurance Scheme*. ISBN: 978-1-875261-08-6
- Tang, Fengyan and Yeonjung Lee. (2011). Support Networks and Expectations for Aging in Place and Moving. *Research on Aging* 33 (4) pp. 444-464. DOI: 10.1177/0164027511400631.
- Tempest Development Group. (n.d.). *Permits and Applications*.
- The Results Group. (2009). *Start Your Task Force on the High Performance Track*.
- Thomas, William H. and Janice M. Blanchard. (2009). Moving Beyond Place: Aging in Community. *Generations* Vol. 33 (2): pp 12-17.
- Universal Design. (2014). *What is Universal Design?*
- Unwin Brian, Andrews, Christopher M., Andrews Patrick M., and Janice L. Hanson. (2009). Therapeutic Home Adaptations for Older Adults with Disabilities. *American Family Physician* [serial online]. Vol 80(9): 963. Available from: MEDLINE with Full Text, Ipswich, MA.
- Van Selm, Martine and Nicholas W. Jankowski (2006). Conducting Online Surveys. *Quality and Quantity*. 40: pp 435- 456. DOI 10.1007/s11135-005-8081-8.
- Vacation Rental By Owner (RVBO). (n.d.). RVBO.com
- Weintraub, Elizabeth. (2013). *MLS – What is MLS?*. About.com.
- Wilson, Elizabeth. (2014). *Greater Vancouver Real Estate Market: May 2014*. REW.ca. Retrieved 26 June 2014.
- Windle, Pamela E. (2010). Secondary Data Analysis: Is it Useful and Valid?. *Journal of PeriAnesthesia Nursing*, Vol 25 (5): pp 322-324.
- “Word Processor”. (2013). TechTerms.com
- World Health Organization. (1997). *WHOQOL: Measuring Quality of Life*.
- Wright, Kevin B. (2005). Researching Internet-Based Populations: Advantages and Disadvantages of Online Survey Research, Online Questionnaire Authoring Software Packages, and Web Survey Services. *Journal of Computer-Mediated Communication*. (2005). Volume 10 (3), page 00. DOI: 10.1111/j.1083-6101.2005.tb00259.x
- Yu, Fen and Charles Teddie. (2007). Mixed Methods Sampling. *Journal of Mixed Methods Research* Vol 1 (1).

Zlotnick, Cheryl, Suzanne Zerger and Phyllis B. Wolfe. (2013). Health Care for the Homeless: What We Have Learned in the Past 30 Years and What's Next. American Journal of Public Health: December 2013. Vol. 103 (S2): S199-S205.

Appendix A. Existing Registries

Spinal Cord Injury BC (SCI BC)'s Accessible Housing BC

Prior to establishing the Accessible Housing BC registry, Spinal Cord Injury British Columbia (SCI BC) offered a phone and email Housing List of Vacancies. People who had accessible units to rent, sell or trade would contact SCI BC and provide information on the unit. SCI BC would then send out a monthly “blast” passing along all information on currently available units to those on the Housing List of Vacancies contact list (Stack, 2013, 6). The majority of people on the list are people with spinal cord injury, family or friends of people with spinal cord injury, health and community service providers (Stack, 2013, 5). In 2013, SCI BC asked those using their Housing List of Vacancies service to identify if a registry was needed. The overwhelming response was to keep the list as it was useful and one of the only sources for accessible housing (Stack, 2013, 6). The creation of “Accessible Housing BC,” SCI BC’s accessible and adaptable housing registry, came out of feedback they received indicating the need for information about available accessible and adaptable units.

Target Audiences

Although the services that SCI BC offers are anonymous, most callers identify where they are calling from, as they are looking for information for their area. After tracking their calls for a period of one year SCI BC determined that the majority of callers were from Vancouver Coastal Health, and secondarily from Vancouver Island Coastal Health. These organizations were calling on behalf of clients with (dis)abilities who were looking for affordable accessible and adaptable housing (Stack, 2013, 5).

Size

The SCI BC webpage is available online and has links to 800 sources that deal with housing, transportation, equipment and funding options (Stack, 2013, 5). The Housing List of Vacancies mailing list has over 135 people they contact through “email blasts” when they become informed about a listing that becomes available (Stack, 2013, 6). In 2013 SCI BC identified that in the first 9 months that they had been operating the Accessible Housing BC registry there was 2,000 visits. SCI BC notes the importance of

having a call in service component to both the online registry and the Housing List of Vacancies, as not all people looking for accessible housing are computer savvy. There is an average of 30 calls per month regarding housing. Thus, having a phone call option provides service to individuals who may not be able to access information otherwise.

Operations

The Housing List of Vacancies and the Accessible Housing BC registry are hosted on the SCI BC website in addition to links to other services and information. There are two full-time staff that operate the registry and the housing listing (Stack, 2013, 5). There is also a call-in service available for people with no access, or little knowledge of using the Internet. The registry is intended for those looking to buy, sell, rent or trade accessible housing (SCI BC, 2014, n.p.). There is no cost to listing housing or making requests for housing on the registry. Registering is not necessary in order to view listings, but one must register in order to post units (SCI BC, 2014, n.p.). The housing listing service is still operating in addition to the Accessible Housing BC registry.

Challenges for PWD

SCI BC's registry has only a few units that are available across BC at a time. Thus, SPI BC's registry can only be used as a supplementary data source in searching for units for sale. This site is used primarily for those posting available units, rather than those seeking them. Those posting on SPC IBC's registry seeking accessible and adaptable homes do not always experience responses to these posts (Stack, 2013, 11). SCI BC's has concerns about the registry. They identify that there are not enough postings for areas outside of Metro Vancouver, the waiting list is too large and that units are not available long enough to be posted on their registry (Stack, 2013, 6). In addition SCI BC does not have the funding to keep the site robust and up-to-date.

Real Estate Board of Greater Vancouver's Multiple Listing Service

Target Audiences

The Real Estate Board of Greater Vancouver (REBGV) has a Multiple Listing Service (MLS) that provides information for members on available market units. The MLS was established by four real estate boards, including: Fraser Valley, Calgary and

Edmonton, and the largest, Vancouver (Stack, 2013, 7) and is only accessible by members of these organizations

Size

The MLS is an extensive site that lists all housing for sale in Metro Vancouver. It includes every home for sale listed by real estate agents as well as some listings that are “For Sale by Owner” (Weintraub, 2013, n.p.). In November 2013 there was almost 14,000 units for sale on the MLS for Greater Vancouver (REGBV, 2013¹, n.d.).

Operations

Managing and maintaining the MLS is very expensive and time consuming (Stack, 2013, 7). The REGBV has 15 staff members who enter data, update information, and upload and change photos of units. When they first established the MLS there was 25-30 staff working full-time (Stack, 2013, 7). The REGBV was able to downsize their staff by using a service which allows brokers to enter and update their own information free of charge, rather than relying on MLS staff and paying the \$35 fee (Stack, 2013, 7).

Challenges for PWD

The MLS used widely used by realtors primarily for clients seeking to buy homes and is only accessible to members (Stack, 2013, 7). While the MLS provides valuable information, there could be improvement on the level of detail available for accessible and adaptable units (Stack, 2013, 13). The only (dis)ability related field that is currently available is a search option for “wheelchair accessible,” a function that has been criticized by users of the MLS failing to provide sufficient information (Stack, 2013, 7). As the site is primarily designed for able-bodied clients some features listed do not apply to PWD. For example, while there is a search option available for amenities surrounding a unit, the definition of accessible amenities does not necessarily apply for a person with mobility issues. The lack of data on the accessibility features available in the MLS results in the need for extensive research on the unit, multiple visits and, at times, multiple meetings with Strata to determine if they will permit certain accommodations to be installed in the building or unit (Stack, 2013, 13).

BC Housing's Housing Registry

BC Housing's Housing Registry was developed in partnership with the BC Non-Profit Housing Association, the Co-operative Housing Federation of BC, and a number of non-profit housing providers, housing co-ops, municipalities, referral groups and other service providers and community based organizations (BC Housing, 2010², n.d.).

Target Audiences

BC Housing's "Housing Registry" is a centralized registry for anyone searching for affordable rental units. Housing providers can access the registry to fill available units, and people searching for housing can use it to apply to all housing providers in the system. The Housing Registry is designed for non-profit and co-operative housing providers with rent-geared-to-income⁹⁵ housing.

Size

The Housing Registry has been running for over a decade (Stack, 2013, 8) and as of 2013 involved 116 housing providers, with approximately 24,000 units of subsidized units across BC (Stack, 2013, 9). Of these 24,000 units across 91 communities, 700 units are classified as accessible and 500 are classified as adaptable (Stack, 2013, 9). There is over 14,000 applicants in the registry, 550 of which are identified as being in a wheelchair, the only (dis)ability specific category available. Using the Housing Registry 2,500 applicants were placed between January 2012 and December 2012 (Stack, 2013, 9). BC Housing has identified that out of a pressing need to find housing, PWD are taking units that may not be the best fit for them, resulting in difficulty for providers in filling more appropriate units once they become available (Stack, 2013, 9). This indicates that there is a disconnection between available accessible and adaptable units and PWD searching for them.

⁹⁵ Rent-geared-to-income is a form of subsidized housing for low-to-moderate income earners. Rent is calculated as 30% of the gross income of the household (BC Housing, 2010¹, n.p.).

Operations

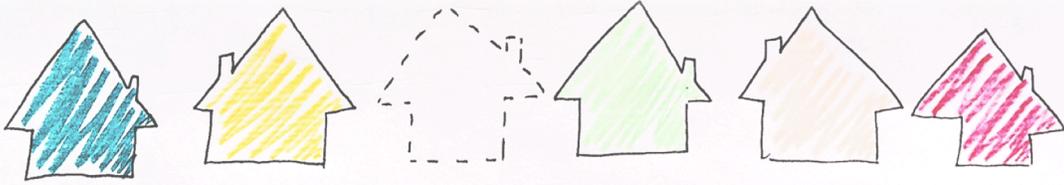
The Housing Registry has a standardized application form that all groups associated with the Housing Registry can access (BC Housing, 2010, n.p.). Having a standardized form reduces time and effort expended by both applicants and housing providers. If an applicant's information changes, as is common with people seeking affordable housing, they only need to make changes in the registry, rather than contacting every non-profit with whom they have applied (Stack, 2013, 8). Housing providers can all access the same pool of people seeking housing, reducing the need for each organization to process and update applications. Housing providers have the option of choosing their own applicants, and contacting these applicants for additional, or organization specific information (BC Housing, 2007, 2). The Housing Registry seeks to link applicants with available units as quickly as possible by having a single point of entry (Stack 8).

The Housing Registry is managed by the Housing Registry Council comprised of housing providers, community associations BC Non-Profit Housing Association, the Co-operative Housing Federation of BC, and BC Housing (BC Housing, 2007, 1). The website is hosted, maintained and updated by BC Housing (BC Housing, 2007, 1). BC Housing is working to encourage housing providers to join the Housing Registry (BC Housing, 2007, 1). As new members join the resource becomes more useful. When a new housing provider opts-in to the registry, BC Housing works with the housing provider to enter all applicants into their existing registry. BC Housing identifies that they are experiencing a 30% duplication rate in applicants already in their system that have applied with other organizations in their registry (Stack, 2013, 9).

Challenges for PWD

The Housing Registry is an extensive registry, however, as accessible and adaptable units are mixed in with other units they can be difficult to locate. Currently the Housing Registry does not list a unit's accommodation features, making it difficult for PWD to identify if a unit will meet their needs (Stack, 2013, 11). Having a tool that enables users to search solely for accessible and adaptable units would save PWD time and energy wading through units that do not fit their needs on the registry, or travelling to see units that ultimately are not appropriate for their needs.

Appendix B. Full Survey



Survey for “Hidden Homes: Building Accessible and Adaptable Housing Registries in Metro Vancouver”

Thank you for agreeing to complete this survey for this research project on building an accessible and adaptable housing registry. For more information on this study please refer to the Information Sheet attached with the email containing this questionnaire.

Please fill out the following survey in a Word document and attach it in an email to: xxx

Part 1: Reference Questions

Please check the box next to the option you prefer. Double-clicking on the box allows you to choose to check the box.

How would you like your responses to be referenced in the final report?

- You may quote my comments, and you may identify me by my name and/or professional title.

My name and/or professional title:

- You may quote my comments and identify my local authority/organization.

My local authority/organization:

- You may quote my comments, but you may not identify me, or my local authority/ organization by name or title.

- You may not quote my comments, or identify me, but you may use the material I provide in a general sense without identifying me, or my local authority/organization, by my name or title.

Part 2: Survey Questions

Your Current Tracking Situation

1. Does your local authority (i.e. Municipality, District, etc.) or organization currently keep track of housing units/features? If so, please explain how you keep track of this information.

2. What are your most significant challenges and obstacles to tracking housing information? How have you surmounted them (or tried to)?

3. A) Does your local authority/organization keep track of accessibility or adaptability features?

- Yes → If Yes, please see question 3B below.
 No

3. B) If you checked “Yes,” for the question above (3A) which standards, definitions, features, and metrics have you used? What led you to that choice?

Registry Details

4. Is your municipality/organization interested in tracking accessible or adaptable housing in a registry?

Yes

No → If “No,” please explain your answer below.

5. A) What groups, if any, would your local authority/organization be interested in making information about accessible and adaptable housing in your area available to? (Please check all that apply).

A regional registry

People with Disabilities

Other local authorities in the Metro Vancouver region

Metro Vancouver (The organization)

Housing Providers

The general public

Other

None of the above

5. B) Please explain why you have chosen the groups in your answer to 5A).

6. What data do you think you would be able to provide and track in a registry?

7. Would your local authority require external funding in order to implement a registry?

- Yes
- No

8. Would your local authority/organization require external funding to operate and keep the registry up-to-date?

- Yes
- No

9. Is an adaptable and housing registry consistent with your local authority/organization's goals?

- Yes
- No

10. Please explain any concerns your local authority/organization has regarding building a registry for tracking accessible or adaptable homes.

The "How-To" Section

11. How would you recommend tracking data on accessible and adaptable housing and/or housing features at a municipal level?

12. How would you recommend tracking data on accessible and adaptable housing, and/or housing features at a regional level?

Additional Thoughts

13. Are there any organizations you feel should be involved in this research project? Why?

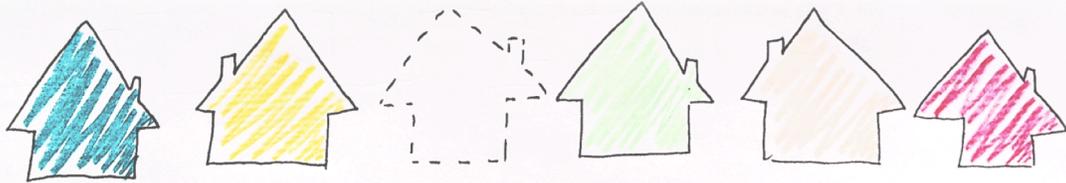
14. Do you have any additional ideas, thoughts, advice, and/or concerns you could share regarding this project?

Would you be interested in receiving a copy of the executive summary of the final research report?

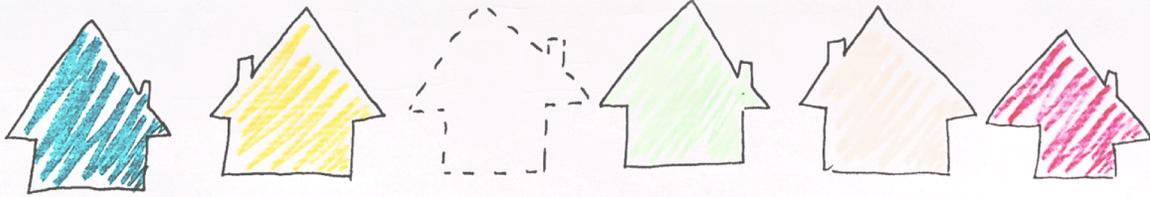
Yes

No

Thank you for taking the time to complete this survey. Your participation in this study is very appreciated.



Appendix C. Technical Survey



Survey for “Hidden Homes: Building Accessible and Adaptable Housing Registries in Metro Vancouver”

For more information on this study and to provide your consent for Heather Stack, the Principal Investigator to use your responses please refer to the Consent Form attached with the email containing this survey.

Please sign the Consent Form and fill out this Survey in a Word document. Please attach both documents in an email to: xxx

*** For the use of the Principal Researcher ONLY *** Please fill out the following:

Your Name: _____

The municipality or organization you represent: _____

Part 1: Reference Questions

Please check the box next to the option you prefer. Double-clicking on the box allows you to choose to check the box. Please **choose one option**.

1. Quotations:

- You may directly quote my comments.
- You may not directly quote my comments but you may use the material I provide in a general sense.

2. Reference: Please choose either A or B. If you choose B you may choose i and/or ii.

- A:** You may not identify me or my municipality/organization.
- B:** You may identify me by one or both of the following:

i: My name and/or professional title.

→ Please enter fill in your name and/or professional title as you would like it to appear in the final report:

ii: My municipality/organization.

→ Please enter fill in your municipality/organization as you would like it to appear in the final report:

Part 2: Survey Questions

Your answers to the following questions will be used to inform recommendations for how to build an accessible and adaptable housing registry in the Metro Vancouver region.

The Background Information Section

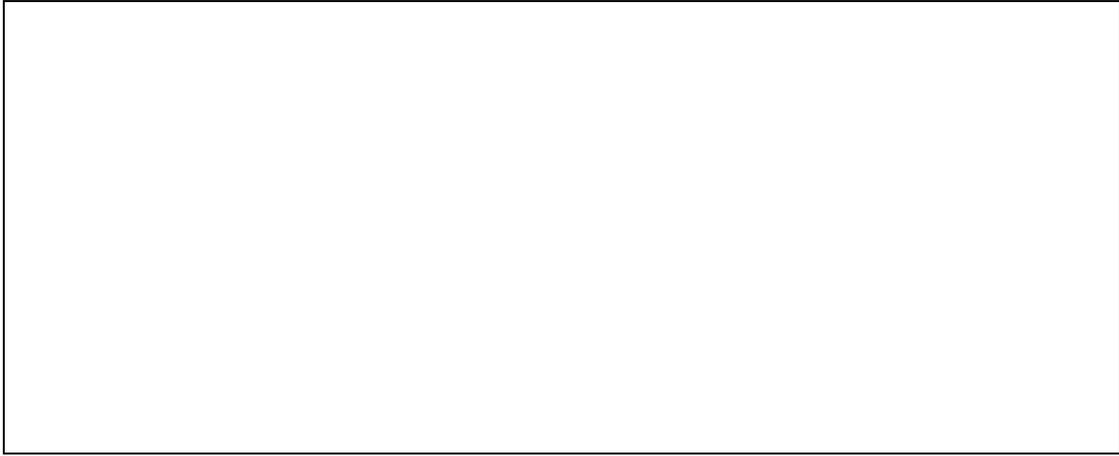
1. Does your municipality/organization currently keep track of housing units/features?

Yes → If “Yes,” Please explain below how you keep track of this information.

No → If “No,” Please **skip to Question #3.**

(Click on top left side of the text box. Once blue line appears start typing).

2. What are your most significant challenges and obstacles to tracking housing information? How have you surmounted them (or tried to)?



3. Please indicate what data/features would ideally be included in an accessible and adaptable housing registry.

Types of data can range from in-unit features such as fire alarms with flashing lights for the hearing impaired or special allowance for PWD with assistance animals; or features surrounding the unit such as special lightweight fire doors in the building, or access to transit.



The “How-To” Section

4. How would you recommend tracking data on accessible and adaptable housing and/or housing features at a municipal level?

The Additional Thoughts Section

5. How would recommend tracking data on accessible and adaptable housing, and/or housing features at a regional level?

6. Do you have any additional ideas, thoughts, advice, and/or concerns you could share regarding this project?

The Final Section

7. Would you be interested in receiving a copy of the executive summary of the final research report?

Yes

No

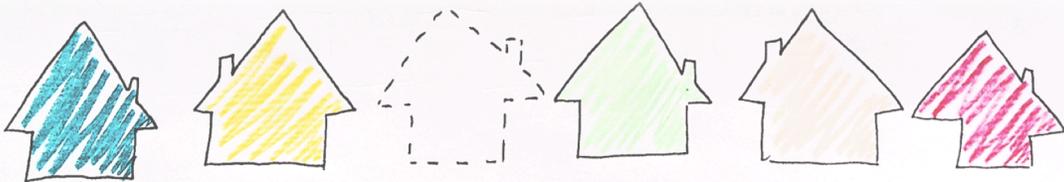
8. Please remember to:

Sign the Consent Form attached with the email containing this survey; and,

Email both completed documents (the Survey and Consent Form) to Heather Stack, the Principal Investigator at: xxx

Thank you for taking the time to complete this survey.

Your participation in this study is very appreciated.



Appendix D. Consent Form



SIMON FRASER UNIVERSITY
ENGAGING THE WORLD

Consent Form

Research Project

Hidden Homes: Building Accessible and Adaptable Housing Registries in Metro Vancouver

The purpose of this study is twofold: to gain a deeper understanding of the current accessible and adaptable housing situation in the Metro Vancouver region, and to make recommendations for how to implement an accessible and adaptable housing registry for Metro Vancouver. Information from the attached survey will be used to inform my Masters thesis entitled: "Hidden Homes: Building Accessible and Adaptable Housing Registries in Metro Vancouver." The principal researcher will use the information you provide to inform her graduating thesis. Your responses in the survey will be used to develop policy options for implementing a registry to track newly built and renovated accessible and adaptable homes.

Study Team

Principal investigator:

Heather Stack
Master of Public Policy Candidate 2014
School of Public Policy, Simon Fraser University
Contact: xxx

Confidentiality and Risk

Attached with consent form is a survey on how to build an accessible and adaptable housing registry in the Metro Vancouver region. The filled out survey will be for the principal researcher, Heather Stack's, private use only. As email is not a secure form of communication she cannot guarantee that your information will be completely confidential or anonymous. However, she will not identify you personally, or the local authority or organization for whom you work in her research report unless you give her permission to do so. If you do not wish for yourself, or your organization to be identified your information will be coded and any identifying information will be deleted. It is possible that you may be contacted regarding your responses in the survey for some follow up details within 10 months. After this point there will be no further contact for this project.

Benefits and Risks

There are no foreseeable risks to you from participating in this research. There is no direct benefit to you for being involved in this research. There are also no costs to you, other than your time involved. Your participation in this research is voluntary.

Withdrawal

You are free to refuse to take part or to exit the study at any time by choosing not to return a completed survey. You can retract any statements or discontinue your participation at any time without any penalties. If you would like to withdraw participation, you can send the principal researcher, Heather Stack, an email and she will destroy all information associated with you. All data associated with you and this study will be stored in an encrypted USB for a period of 2 years, at which point it will be destroyed.

Research Results:

This research project will be completed by December 31, 2014. It is possible that this research may be used to inform future studies. Should you, your employer, or the organization that you represent wish to obtain the results of this research project, please contact Heather Stack by email. Copies of this project will also be deposited in the Simon Fraser University library.

Permissions:

The principle researcher has permission from the SFU Office of Research Ethics to conduct this interview. Please be advised that the principal researcher has not requested permission from your employer for your involvement in the research project. The final decision to participate in this study is yours.

Concerns:

If you have any concerns about your rights as a research participant and/or your experiences while participating in this study, you may contact:

Dr. Jeffrey Toward,
Director, Office of Research Ethics
Policy
Email: xxx
Phone: xxx

Dr. Judith Sixsmith
Supervisor, School of Public
Simon Fraser University
Email: xxx

Consent:

Signing your name below and returning this consent form to Heather Stack, the principal investigator, represents your consent to be involved in this research project.

Please **sign below** before returning this form.

Signature of Participant (type your name here)

Date

Thank you for your participation.

Sincerely,

Heather Stack

Appendix E. Internet Survey Invitation Script

Hello,

My name is Heather Stack. I am inviting you to participate in a survey regarding ways to build a housing registry to track new and renovated accessible and adaptable housing for People With Disabilities in Metro Vancouver.

There are two main purposes of this study:

- 1) To learn which municipalities and organizations are currently tracking accessible and adaptable homes in the Metro Vancouver region;
- 2) To make recommendations for the best way to build an accessible and adaptable housing registry within the municipalities in Metro Vancouver, as well as to build a regional registry for Metro Vancouver.

The second part of the survey is a brainstorming activity to try and identify ways to track this sort of data, so anyone who has ideas about ways to track data is welcome to participate!

I have attached the following documents with this email including:

- A Consent Form including the study details
- A Survey

If you know of someone who you think would be interested in being a part of this study please pass on this email and/or my contact information.

Thank you,

Heather Stack

Master of Public Policy
Simon Fraser University

Ph: xxx

Email: xxx

Appendix F. Participant List

Full Survey

- BC Housing
- City of Burnaby
- City of Coquitlam
- City of North Vancouver1
- City of North Vancouver2
- Mun1
- Mun2
- Mun3
- Mun4⁹⁶
- Township of Langley
- Heather McCain, Executive Director, Citizens for Accessible Neighborhoods
- Suzanne Klassen, Director of Information and Advocacy Services, North Shore Disability Resource Center
- Org1
- Org2⁹⁷
- Harriet Permut, Harriet, Manager of Government Relations, Real Estate Board of Greater Vancouver
- Spinal Cord Injury BC

Technical Survey

- Luke Stack, City Councillor, City of Kelowna
- Danielle Noble-Brandt, Department Manager of Policy & Planning, City of Kelowna
- Meganne Sholdice, Project Coordinator, Ministry of Health funded provincial provider
- Pam Moore, Environmental Health Officer, Interior Health HBE Team
- Mun5
- Kathryn French, Executive Director, Pacifica Housing

Interview Conducted by Heather Evans (2013)

- Spinal Cord Injury BC
- HAFI Program
- BC Housing
- MassAccess

⁹⁶ Mun1, Mun2, Mun3, and Mun4 did not wish to be identified.

⁹⁷ Org1 and Org 2 did not wish to be identified.

Appendix G. Housing Features Currently and Recommended to Record

Features Currently Tracked		
Municipal Level		
	Adaptable units	2
	Address	1
	Number of bedroom per unit	2
	Number of units in the building	1
	Unit by type	1
Organizations		
	Age of units	1
	Asbestos	1
	By-laws	1
	Heritage Home status	1
	If there was ever a grow-op in the building	1
	If the site allows upgrades	1
	List of PWD looking for housing	
	Location of units	1
	Nearby amenities	1
	Number of bedrooms	1
	Pets allowed	1
	Strata	1
	Total number of units in the area	1
	Units that have been modified	1
	Unit type	1
	"Wheelchair accessible"	3
Recommendations for Housing Features to Record		
Entrance/Exit/Movement		18
	General entrance and exit to building accessibility, including door width and ramps	9
	Chairlift or elevator	6
	Automatic doors	2
	Room to room access/hallways	3
	Barriers/Stairs	1
	Non-slip Flooring	1

	Visual alarms	1
Bathroom fixtures		13
	Bathtub or shower	5
	Grab bars or railings	3
	"Wheelchair accessible"	2
	Height of toilet	1
	Type of fixtures/radius	1
	Reinforced walls	1
Amenities		10
	Medical or support services	3
	Shopping/groceries	3
	Accessible parks	1
	Basic amenities (not defined)	2
	Library	2
Kitchen features		10
	Counter height	5
	Burners/oven roll under	2
	Cupboard height	2
	"Adapted kitchen"	1
External Features		8
	Parking stalls	5
	Canopies/balconies	2
	Lighting	1
	Wheelchair storage/charging	1
Address and Basic Information		7
	Address	2
	Square footage	2
	Basic geographic location	1
	Number of units in the building	1
	Layout	1
	View	1
Bedroom Features		6
	Number of bedrooms	3
	Bedroom mix	1
	Bedroom locations	1
	Caregiver bedroom	1
Transit and transportation		6
	Proximity to transit	6
	Wheelchair transportation provided	1
Type		6

	Market/affordable, etc.	3
	Physical type of property (Townhome, etc.)	3
Other		20
	Specific group	7
	All features should be tracked	6
	Specific physical features	2
	Ability to adapt units	2
	Building frame type	1
	Building surveillance	1
	Broader site conditions	1
	Ceiling rack lift	1
	Extra support available	1
	Pets allowed	1
	Smoking	1

Appendix H. Evans' (2013) Full List of Stakeholders

BC Housing

Municipalities

Non-profit housing providers

Housing cooperatives

BC Non-Profit Housing Association

Disability service and advocacy organizations

BC Association for Individualized Technology and Supports for People with Disabilities

BC Centre for Ability (and Foundation)

S.U.C.C.E.S.S.

Council of Senior Citizens Organizations of BC

Vancouver Cross Cultural Seniors Network

BC Seniors Living Association

Real Estate Board of Greater Vancouver (and other regional boards)

Canadian Home Builders' Association (various chapters in BC),

Real Estate Boards (suggestion to include the Boards of Directors)

Greater Vancouver Home Builders Association

Urban Development Institute

Real estate specialists with seniors' designation (Certified Aging in Place Specialist, Seniors Real Estate Specialist)

Health Authorities

Rental Owners and Managers' Association of BC

Appendix I. Participant Breakdown of Suggested Groups to Track Housing Features

Municipality or Non-Profit/Organization Passes Info to Regional Registry

City of Burnaby, City of Coquitlam, City of North Vancouver 2, Mun2, Mun3: Municipalities can provide data to a regional body who ultimately tracks housing. City of Kelowna a regional registry could record housing registry on which organizations have accessible and adaptable housing

Klassen: Smaller registries from organizations could feed into a larger regional one.

Regional Body

Indep1: Regional body could be a resource or support for municipalities tracking housing data.

Mun4: A regional registry managed by Metro Vancouver makes sense because they track info for the municipalities

Org2: Metro Vancouver could play a convening and resourcing role for whoever track accessible and adaptable housing data.

Municipalities

City of Kelowna: municipalities should not track accessible and adaptable housing unless they operate their own units.

Indep1: Municipalities should track accessible and adaptable housing in their own city. It should be voluntary.

Moore: Cities should incorporate tracking accessible and adaptable housing into their Official Community Plan (OCP).

Org2: Municipalities should track accessible and adaptable housing data.

Organizations

City of Kelowna: Organizations that provide housing are best suited to track accessible and adaptable housing.

SCI BC: housing providers can list their vacancies and housing seekers can view the listings. There are many housing providers at the municipal level.

Appendix J. Additional Themes

Access to Data⁹⁸

Participants in the Full Survey were prompted to identify the groups they would be interested in providing access to regarding information about accessible and adaptable housing. Participants were provided with the options: A regional registry, Other municipalities in the Metro Vancouver region, Housing providers; People with (Dis)abilities; The general public; None of the Above; or Other. Within the “Other” category participants were given the opportunity to identify “other” groups through an open-ended response prompt. Participants were instructed to choose all options that apply. The number beside the option is the number of participants who chose this option.

⁹⁸ 14 participants

Groups	Total Score
PWD	15
Other municipalities	14
The general public	13
Housing providers	13
A regional registry	13
None of the above	0
Other	
Anyone who needs it	2
Non-profits	2
Service providers	1
Developers and industry associations	1
(Dis)ability organizations	1

All participants, save one, identified that 3 or more groups should have access to information, indicating willingness to share data. Only one participant identified that only a regional registry should have access to data (Survey response Mun2).

Website⁹⁹

BC Housing¹⁰⁰, Klassen, Org1, SCI BC and Sholdice suggest websites as a way to provide data to the public. Sholdice and SCI BC both note that using online tools similar to the Bedbug registry or Craigslist could be ways to track available accessible and adaptable housing, and to link available units to those seeking them. BC Housing identifies posits that a central registry could be accessed through links on municipalities and housing provider websites.

⁹⁹ 3 participants

¹⁰⁰ Full Survey response

User-Updated¹⁰¹

MassAccess, SCI BC and Klassen all recommend users updating information, rather than having staff do so. Users can either be the landlord/seller or the renter/buyer, depending on the type of registry and for which group the registry is primarily designed. There are cases where both sides of the transaction are able to list, such as Craigslist in which landlords can post available units, and prospective renters can list what they are looking to find. SCI BC identifies that allowing users to update their own information allowed them to significantly reduce the number of staff designated to keeping their records up-to-date.

Affordability of Available Accessible Units¹⁰²

SCI BC identifies concerns about the difficulty facing PWD who are trying to find housing that is both affordable as well as accessible. Due to the limited incomes that many PWD have finding units that meet their needs as well as fit within their budgets is an area of concern. However, SCI BC also listed Accessible Employment BC as an available support for PWD.

Complexity of PWD¹⁰³

City of Kelowna identifies concern over the broad range of (dis)abilities, the different requirements needed by people with the same (dis)abilities, and the wide range of financial situations of PWD. He notes the complexity of tracking such a diverse set of housing needs, especially when individuals with the same type of (dis)ability may each need slightly different accommodations; especially if individuals have multiple (dis)abilities. According to City of Kelowna, it is difficult to even determine exactly what features need to be tracked.

¹⁰¹ 3 participants

¹⁰² 1 participant

¹⁰³ 1 participant

Inconsistent By-laws and Regulations¹⁰⁴

City of North Vancouver² identifies that there may be challenges to tracking housing features in a region, or across municipalities as each municipality has its own by-laws and policies on this topic. Differing interpretations of the BC Building Code (BCBC) may result in different definitions of accessible and adaptable units. Furthermore, a registry seeking to provide information across municipalities may run into difficulty getting all municipalities on board. Whereas one municipality may make listing or tracking accessible and adaptable housing a priority, others may not.

Filling Units¹⁰⁵

SCI BC and Permut warn that it may be difficult to fill accessible and adaptable units that come available, despite the need for these units. Due to the financial needs of landlord's, some end up renting units to individuals who do not require modified units. One of the challenges for PWD in finding accessible and adaptable units is the need to stay near to their, doctors, specialists, available transportation, and other support systems. Thus, if a unit in another municipality becomes available some PWD may not be able to relocate to take it (SCI BC). Permut identifies a lack of information on the whereabouts and features included in these units as a barrier. As PWD do not know these units exist, they are not applying for these units, and the units are rented out to people who do not need accessible and adaptable units. She notes that a registry designed to link PWD to available units could help improve the prospect of finding, and place PWD in accessible and adaptable units.

¹⁰⁴ 1 participant

¹⁰⁵ 2 participants

Unrealistic Expectations¹⁰⁶

Both BC Housing and French caution against creating unrealistic expectations when discussing, promoting or using a registry. BC Housing recounts how some people interpret being on a “waitlist” for housing as meaning they were guaranteed to get a unit, resulting in a false hope of being placed in an available and appropriate unit. Furthermore, some misunderstand that the registry is not exhaustive, including all units in an area. Thus, after applying to be placed on the registry, some applicants do not continue their search for housing through other avenues. This places PWD at a disadvantage, as units may not immediately become available through the registry. BC Housing recommends that it be made clear to applicants exactly what the registry is designed for and capable of doing. Furthermore, having a separate accessible/adaptable housing registry could complicate the process of finding housing for some, as they may be unsure if they should apply to other, non-specific accessible and adaptable housing registries.

Interactive Features¹⁰⁷

MassAccess and SCI BC¹⁰⁸ identify the importance of making information in a registry or registry interactive. From the Secondary Data Analysis, MassAccess identifies that their site is designed to be accessible to those with vision and hearing impairments. Similarly in the Full Survey, and the Secondary Data Analysis of Evans’ interview with SCI BC the importance of making information accessible for PWD was stressed. In Evans’ interview with SCI BC they note that many PWD who use their services do not have access to Internet, and thus, they state they will continue to provide telephone and mail services to ensure all who need it are getting information on accessible and adaptable housing options.

¹⁰⁶ 2 participants

¹⁰⁷ 3 participants

¹⁰⁸ The Full Survey completed by SCI BC and the Secondary Data Analysis of Evans’ interview are counted as 2 participants.

Reviewing the Registry¹⁰⁹

The theme of following up to ensure the registry is accomplishing its goals arose in BC Housing’s Full Survey and the Secondary Data Analysis of Evans’ interview with MassAccess. BC Housing recommends that over time municipalities should audit their registries to ensure that it is current. An annual survey is issued by MassAccess to determine the level of success of their registry. The survey is issued to property owners, consumers, and advocacy organizations to assess the success of both the website and the services provided by MassAccess. All surveys are confidential and allow MassAccess to gage their successes and improve their services.

Retrofitting Old Accessible Units – Keeping Up-to-Date¹¹⁰

BC Housing¹¹¹ identifies that they have units that were considered “wheelchair accessible” under past definitions of the term. Thus, some of their “wheelchair accessible” units no longer meet the requirements. This impacts the theme “Keeping Up-to-Date” as they need to retrofit old units, and update their records to reflect which of their “wheelchair accessible” units meet the new standards.

Current Policies on Accessible and Adaptable Housing¹¹²

Data for this theme came from open-ended responses in the Full Survey. This theme was not prompted.

City of Burnaby: The Adaptable Housing Policy requires 20% of single-level units to be adaptable in multi-family developments. For purpose-built seniors housing 100% of single-level units must be adaptable.

¹⁰⁹ 1 participant

¹¹⁰ 1 participant

¹¹¹ Full Survey response

¹¹² 10 total participants in 5.1.6.

City of North Vancouver1: Has a zoning bylaw that requires they track the number of units in new developments that are adaptable.

Noble-Brandt (City of Kelowna): The city recently removed the zoning bylaw that required owned and rental housing to record agreements registered on title for the purpose and use of the unit. Density bonus zoning bylaws that relate to affordable housing requirements have also been removed. The City of Kelowna is currently not tracking accessible and adaptable housing features.

Moore (Interior Health): Moore identifies that all local governments have to identify their 5-10 year housing needs in their long range plans (Official Community Plans or Regional Growth Strategies).

Mun1: Is using a permit system to track total of units that are adaptable.

Mun3: As Mun3 is only tracking the number of accessible and adaptable housing units in a development; they do not know which unit specifically is adaptable (i.e. #101). Thus, these units get “lost”.

Mun4: Is currently using a development checklist that relates to their sustainability charter. The checklist has a number of features being tracked that relate to sustainability. The checklist includes check boxes for accessible and adaptable units. However, the process of actually accessing accessible and adaptable housing features is not efficient at this point.

Mun5: Identifies they currently have a list of the number of adaptable units by the building they are in, not the specific unit number (i.e. #101).

Org2: Identifies that within Metro Vancouver there is a the 2040 Regional Growth Strategy that lists housing diversity as a specific goal.

Township of Langley: has a Basic Adaptable Housing Policy that requires 5% of newly built single family homes and 10% of apartment buildings to be adaptable. This policy is included in their Official Community Plan (OCP).

Registry Software¹¹³

Of all of the data sources, the theme of the importance of having appropriate housing registry software came up in 6 of the Full Surveys. City of North Vancouver1, Mun1, Mun2, Mun4 and Township of Langley all identify that dedicated and appropriate

¹¹³ 6 participants

software, staff trained to use the software, and all using the same software are necessary prerequisites to tracking accessible and adaptable housing. Mun1 indicates that they are still trying to find the most appropriate way to track adaptable housing features. Mun4 further identifies that to being tracking accessible and adaptable housing data they would require adequate IT Staff and project managers to understand the software and program and to record the appropriate features.

Ways to Track Accessible and Adaptable Housing as Identified in Data Set

Permits¹¹⁴

Org 2 identifies that municipalities may have the ability to track housing features through permitting systems. Sholdice agrees that permits would be a good way to track housing features. Township of Langley noted that they currently do not require permits to renovate accommodations for those with blindness or deafness, only structural renovations go through their permitting process. Moore also notes that within the development permit the number of special care units is recorded. Mun1 states that while a development will identify if there are adaptable units, the total number of units, or unit location (i.e. #101) will not be recorded. Permut also notes that permits might be a way to begin tracking accessible and adaptable housing features, however, renovations and installations will only come through permits if they are large scale. Thus, permits may not be a good way to track smaller in-home accessibility features being implemented.

Graphic Information Systems¹¹⁵

Graphic Information Systems (GIS) are currently used by many municipalities to search for properties, find points of interest, locate street addresses, create maps and

¹¹⁴ 5 participants

¹¹⁵ 2 participants

perform various other geographic searches. Municipalities have increasingly been using GIS as it allows for spatial analysis and manipulation capabilities (Drummond and French, 2008, 161). For housing features, GIS can be used to keep up-to-date track of housing features such as new buildings being built and upgrades (Ellehoj, n.d., 5). GIS technology is rapidly changing, and more recent systems are converging with other forms of technology, which can facilitate municipal or regional planning (Drummond and French, 2008, 161). Many GIS features are now available on the web and can be supported by third parties (Drummond and French, 2008, 170). Making municipal data available online can make it accessible to the public easily (Drummond and French, 2008, 172). It is also possible to allow a feature for citizens to upload information directly into GIS (Drummond and French, 2008, 172). While citizen input of data should likely be monitored, having individuals entering data can reduce the workload on local authorities (Drummond and French, 2008, 172). If a municipality already has a GIS system in place to track housing features, it is possible an accessibility and adaptability features section could be added for relatively little cost. Mun5 notes that GIS would be a useful tool to help the municipality and real estate agents identify accessible and adaptable units. Noble-Brandt identifies that using GIS would be an ideal way to track accessible and adaptable housing units. However, she notes that GIS should be used in conjunction with other tracking systems that could be used to track housing features.

Prospero¹¹⁶

Township of Langley identifies that they use the Tempest Development Group's program Prospero to track housing. Prospero is a program designed to manage application processes across various departments within a local government (Tempest, 2014, n.p.). Within Prospero there are a multiple development and management models including Applications and Permits, Land tracking and management, Property Taxation, Utility Billing and Licensing. Prospero is designed to store, maintain and synchronize data and has features that allows for information such as property addresses, legal

¹¹⁶ 1 participant

descriptions, and other data to be stored and shared (Tempest, 2014, n.p.). All related documents are compiled and histories can be tracked. There is a feature to allow for permits to be kept on file and tied to a location or property. There is an online version of Prospero called MyCity that can be made available to both businesses and citizens (Tempest, 2014, n.p.). Township of Langley tracks housing in the Land Attribute section. This data is then transferred to a “geosource” map that locates units on a map. Township of Langley has an attribute called Adaptable Flex House that they are currently able to use.

AMANDA Public Portal¹¹⁷

Mun4 and City of Coquitlam identify they are currently using CSDC Enterprise Solutions’ AMANDA Public Portal to track housing data. Services provided through AMANDA include: General public inquiry; Permit and license application management; Real-time application tracking; Online complaint tracking and management; Online inspection scheduling; and, Online fees and payments (CSDC 2014). CSDC promotes AMANDA as a way for governments to provide a single point of access for businesses and citizens.

Tidemark Advantage¹¹⁸

City of North Vancouver¹¹⁹ notes that they use Tidemark Advantage to track housing features through permits (City of North Vancouver1, City of North Vancouver2). Plan checks are entered into Tidemark at the permitting stage. However, Tidemark Advantage is no longer an available system.

¹¹⁷ 2 participants

¹¹⁸ 1 participant

¹¹⁹ Both City of North Vancouver1 and City of North Vancouver2.

Registering Land Titles ¹²⁰

Land titles are able to hold information about the piece of land, the parcel of land. They hold information such as the fee simple owners, legal description of the land (parcel), land (parcel) identifier number (PIDs) and charges registered against the title (LTSA 2014¹). Every time there are transactions for a parcel of land such as change in owners, mortgages, registration, subdivision, or Crown land grants it is recorded on the title. Land titles are records of ownership of the parcel and features of ownership (LTSA 2014²). Indep1 recalls that he/she has heard of municipalities and organizations tracking housing features by registering features on land title, however she recounts that there have been issues with using this as a way to track housing. One challenge to registering land titles is that they can restrict what is done with the property, and therefor Land Title Offices tend to not support this form of tracking housing data (Survey response Indept1). Noble-Brandt expands on these concerns stating that enforceability of registered agreements and/or covenants on file is extremely challenging.

¹²⁰ 2 participants

Appendix K. Potential Criteria and Measures to Access Tracking Systems

To measure accessible and adaptable housing tracking systems the following criteria and measures table can be applied. This table has 4 criteria to measure the status quo and the policy alternatives. The categories explored are:

- Effectiveness
- Stakeholder acceptability
- Cost and Administrative feasibility
- Political feasibility
- Equity

The table below defines and identifies how each criterion was measured and evaluated.

Criteria and Measures for Evaluation of Registries

Criteria	Definition	Measures	Data Source	Score
Effectiveness				
Usefulness	1. At what scale do we track accessible and adaptable housing?	Is all of the necessary information able to be recorded? (Yes/No)	Literature review Surveys Secondary data analysis	Yes = Good No = Poor
	2. Extent to which the alternative provides useful information for PWD, any or all levels of government, and/or housing	How well does the option provide all relevant information for PWD seeking housing? High = The option provides	Internet survey Literature review Secondary data analysis	High = Good Medium = Medium Low = Poor

	providers.	<p>all relevant data</p> <p>Medium = The option provides some, but not all of the relevant information</p> <p>Low = The option has serious gaps in the information provided</p>		
		<p>How well does the option provide data for each of municipal, regional and provincial government?</p> <p>High = The option provides all relevant data</p> <p>Medium = The option provides some, but not all of the relevant information</p> <p>Low = The option has serious gaps in the information provided</p>		

		<p>How well does option provide data for housing providers?</p> <p>High = The option provides all relevant data</p> <p>Medium = The option provides some, but not all of the relevant information</p> <p>Low = The option has serious gaps in the information provided</p>		
Stakeholder Acceptability				
Willingness to Implement a Tracking System	Willingness for a municipality, regional body or organization to implement the tracking system	<p>Does the municipality, regional body or organization want to implement the tracking system?</p> <p>(Yes/No)</p>	Internet surveys	Yes = Good No = Poor
Interagency Collaboration	Willingness of a municipality, regional body or organization to share information	<p>Is the municipality, regional body or organization willing to share information?</p> <p>(Yes/No)</p>	Internet surveys	Yes = Good No = Poor
Cost and Administrative Feasibility				
Implementation	Extent to which	Cost (\$)	Literature	Yes = Poor

Costs	<p>the municipality, regional body or organization will require external funding to implement the option</p> <p>What about willingness to share costs?</p>	<p>Is there a need for external funding?</p> <p>(Yes/No)</p>	<p>review</p> <p>Internet surveys</p> <p>Secondary data analysis</p>	<p>No = Good</p>
Delivery	<p>Extent to which the municipality, regional body, or organization have the capacity to maintain the alternative.</p>	<p>Cost (\$)</p> <p>Can they afford keep the option up-to-date?</p> <p>(Yes/No)</p>	<p>Literature review</p> <p>Internet surveys</p>	<p>Yes = Good No = Poor</p>
Political Feasibility				
Consistency with Government Objectives	<p>1. Is the option consistent with municipal government objectives?</p> <p>2. Is the option consistent with regional government objectives?</p> <p>3. Is the option consistent with provincial government objectives?</p>	<p>Is the alternative consistent with municipal government objectives? (Yes/No)</p> <p>Is the alternative consistent with regional government objectives? (Yes/No)</p> <p>Is the option consistent with provincial government objectives? (Yes/No)</p>	<p>Internet surveys</p> <p>Literature Review</p>	<p>Yes = Good No = Poor</p>

Equity				
Horizontal Equity	Would people with different types of (dis)abilities be treated equally?	Does the alternative have benefits for PWD with physical and mental (dis)abilities? (Yes/No)	Literature reviews	Yes = Good No = Poor

Based on the measures for a criterion, a score of “Good,” “Medium” or “Poor” is applied. This is used to standardize measures that may not be the same for all criteria, such as (Yes/No), or (High/Medium/Low). The measures and the scores are informed from literature reviews, secondary data analysis, case studies and the Internet surveys. Scores range from least favourable option (“Poor”) to most favourable option (“Good”).

Effectiveness

Effectiveness measures the extent to which an option is able to track accessible and adaptable housing in Metro Vancouver. This section explores how if the option is able to record all the necessary data, and how useful this data is to those seeking to access it.

Usefulness

There are two definitions for Usefulness: 1) How well the option tracks data; 2) Extent to which the option provides useful data for PWD, housing providers and governments. The first measurement of how well the option tracks data will be determined if all of the necessary can be recorded in the option. Necessary information for the option will be determined using the Internet surveys, secondary data analysis and literature reviews. If the option makes it possible to record all of the relevant information it is measured as “Yes” and given a score of “Good”; if the option does not make it possible to record all of the necessary data it is measured as “No” and given a score of “Poor.”

The second definition of usefulness is how well the option tracks information for PWD, housing providers, and government are measures by how well the information provides relevant data. These measures are informed by the Internet surveys, secondary data analysis and literature reviews. Relevant data will be determined from the internet surveys. The option is considered “Good” if all or most data identified as relevant data is provided through the option, “Medium” if only some of the relevant data is provided, and “Low” if there are serious gaps in the data provided by the option.

Stakeholder Acceptability

Stakeholder acceptability looks at the how attractive the option is for municipalities in Metro Vancouver. Both measures of stakeholder acceptability will be informed from Internet surveys.

Willingness to Implement a Tracking System

The first stage to building a regional registry for accessible and adaptable housing is to track the units being built or renovated in each municipality. In the internet survey municipalities were asked to identify their willingness to track accessible and adaptable housing needs to be implemented (i.e. GIS/Prospero or registering covenants to title). If a municipality wishes to implement a tracking system they are measured as “Yes” and scored “Good,” if not, they are measured as “No” and scored “Poor.”

Interagency Collaboration

Interagency collaboration looks at how willing and able a municipality is to share the information they gather with other municipalities, organizations or with the general public. If a municipality is willing to share the information gathered in the tracking system they are measured as “Yes” and scored “Good,” if not, they are measured as “No” and scored “Poor.”

Cost and Administrative Feasibility

To assess the cost and administrative feasibility there are two measures: 1) Implementation Costs, and 2) Delivery. The scoring of both measures are informed from the Internet surveys.

Implementation Costs

Implementing an option, or modifying tracking systems currently in place will have associated costs. Costs may include, but are not limited to, purchasing the tracking system, implementing the system, training staff to use the registry. Regardless of willingness to implement or upgrade an affordable and accessible tracking system there may not be enough funding to do so. Implementation costs measures if there is available funding that can be allocated to the implementation of a system to track accessible and adaptable housing, or if a municipality will require external funding. If a municipality requires external funding to implement the option it are measured as “Yes” and scored “Poor,” if they do not need additional funding they are measured as “No” and scored “Good.”

Delivery

Once the system for tracking accessible and adaptable housing is implemented, there will be ongoing costs of system upkeep, upgrades to the system and keeping the information current. There will also need to be staff and IT to work with and on the registry. Municipalities will need to identify if they have the funding to update the system as necessary. If the municipality can afford to keep the option up-to-date they are measured as “Yes” and scored “Good,” if they cannot afford to keep the option up-to-date they are measured as “No” and scored “Poor.”

Political Feasibility

Consistency with Government Objectives

This criterion measures the compatibility of implementing an option with the governmental objectives. The levels of government assessed include Municipal, Regional, and Provincial levels. Consistency with government objectives at a regional or provincial level can help make the case for funding support for municipalities that may not be able to fund the implementation of the tracking system or upkeep of the registry. The measurement for this criterion is informed from the Internet surveys. If an option is consistent with the level of government being assessed it is given a measure of “Yes”

and scored as “Good,” if it is not consistent with government objectives it is measured as “No” and scored “Poor.”

Equity

Horizontal Equity

Not all PWD have equal needs, or challenges in locating appropriate housing. Equity will look at how the alternative will improve the lives of PWD, and assess if all PWD will benefit equally from the implementation of the accessible and adaptable housing registry. This criterion is measured using literature reviews. If an option treats certain PWD differently it is measured “Yes” and scored as “Poor”, if it does treat all PWD equally it is measured “Yes” and scored “Good.”