Moving Towards Coordinated Accessible Transportation for Older Adults: Identification of Barriers and Incentives to Implementation in the Capital Regional District, British Columbia

by

Corinne Christine Dibert
B.Sc., University of Victoria, 2002

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Abstract

Communities such as the Capital Regional District (CRD) of Vancouver Island (BC) currently struggle to meet the transportation needs of older adults and other vulnerable populations, particularly in terms of resources and funding. In the future, these challenges will continue given the current demographic shift and the existing structure of the transportation system. Since the provision of transportation is an important element for the quality of life of older adults, it is important to consider solutions that promote a more effective use of transportation opportunities to ensure health, self-sufficiency and community connectedness amongst this population.

This research study examines one solution to the issues surrounding the provision of transportation to older adults. A Coordinated Accessible Transportation (CAT) approach supports the pooling and sharing of existing transportation resources within a formalized framework, and aims to provide safe, efficient and affordable transportation options to older adults. This research focuses on the identification of barriers and incentives to the implementation of a CAT program.

This project used a qualitative, case study approach to reach its objectives. Twenty-three semi-structured interviews were conducted with stakeholders involved in the provision of transportation. A Program Logic Model (PLM) was used to organize and analyze the information gathered. In summary, although aware of the need for a new approach, transportation providers in the CRD are reluctant to change the current system without active governance being in place at all levels. The results of this research provide a 'blueprint' for the implementation of a CAT program and have relevance for other Canadian communities facing similar challenges.
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1.0 Introduction

More than three decades ago, Carp (1972:71) concluded that:

“At present, in this land of the automobile, many places are inaccessible without one. The car-less olds, particularly those who are not well, need the safety and convenience of door-to-door transportation which takes them to the places they need and want to go, when they are ready for the trips, and at a price they can pay—in psychic as well as financial currency.”

Today’s older adults are the fastest growing segment of the population in developed countries (Figure 1). Baby-boomers are now entering their senior years, bringing with them different demands and expectations than seniors from previous decades (Burkhardt 2000a; Rosenberg and Everitt 2001; Rosenbloom 2003). While the potential socio-economic impacts of this demographic shift are topics of continuous debate amongst academics and policy-makers alike, it is undeniable that a change of age structure in the population will necessitate adjustments to the way services to older adults are delivered in communities. Living longer and living healthier also affords the option of aging in place, i.e. in a familiar, home-like environment, with the support of services intended to enhance self sufficiency and independence. The provision of transportation is one of these services (Rosenberg and Everitt 2001; Banister and Bowling 2004).

Figure 1: Percent of total population aged 65+ in selected countries (Source: (BC Stats 2005:2))
1.1 Scope of this research

The availability of transportation options for all segments of the population is particularly important in countries like Canada, where the urban planning in previous decades often results in cities and suburbs that can be difficult to navigate for individuals without independent modes of transportation, or for individuals who have difficulty using the conventional transit system to access services necessary for their daily living. Issues resulting from this type of urban growth include poor walkability within cities, inefficient public transportation systems, and a lack of community life (Lindstrom and Bartling 2003). The provision of transportation is also critical in low density rural areas, where the population is left with fewer options to access essential services (Millar 1999; Burkhardt 2000a). Reliable and affordable transportation is often considered synonymous with mobility, access and social integration (Kostyniuk and Shope 2003; Newbold, Scott et al. 2005). For many, across all age groups, private vehicles equate to independence and this independence is often linked to being an autonomous and productive member of their community. The current demographic shift results in the majority of individuals entering their senior years as drivers enjoying the advantages of car ownership, for example self-sufficiency, freedom and mobility (Burkhardt 2000a; Rosenbloom 2001; Rosenbloom 2003). Once they are no longer able to safely operate their vehicles, seniors are often left with very few options to retain the level of mobility and independence they enjoyed as drivers.

This research project used a qualitative, case study approach to explore one solution to the challenge of providing efficient, affordable and safe transportation options to seniors and people with disabilities. This solution, coordinated accessible transportation (CAT), attempts to accommodate seniors' transportation needs with more effective use of existing resources. CAT emphasises the need for collaboration among transportation providers within a formalized framework, and this research project examined the potential opportunities and issues involved in such collaboration. This study is underlain by the belief that offering more transportation options to older adults will help them retain the mobility and independence necessary for healthy aging. It focused on the transportation issues of seniors in the Capital Regional District (CRD); however, aging is often associated with the onset of disabilities (Figure 2) and by extension, a CAT program is also of interest for people
with disabilities and any members of the community who are transportation challenged.

![Diagram showing overlapping circles representing different demographics.]

Figure 2: Canadian Seniors with Disabilities living in the community 2001 (Source: Human Resource and Social Development Canada (2005:11))

1.2 Definition of key terms

**Seniors or older adults** are used synonymously in this research project. As explained by Chappell, Gee et al. (2003:3), 65 years old is "the socially defined entry point of old age" that was set in the nineteenth century and has less value nowadays. In fact, there is a continuous debate surrounding the appropriate marker to old age. Different frontiers have been suggested; for example, scientists and academics are considering 70 or even 75 years old to be a more accurate reflection of the physical and cognitive conditions of older adults nowadays (Cheal 2002; Denton and Spencer 2002). It is also customary to further divide the 65+ age group into more categories, although these categories may vary. For example, young-old (65-69), middle-old (69-74), and old-old (75 and over) are often used (e.g. Moore and Rosenberg 1997; Rosenberg and Everitt 2001). Statistics provided in this research project use 65 years old as the standard demarcation for older age, but informants interviewed for this research project deal mostly with older adults who are transportation challenged regardless of their age group or specific age.

**Transportation challenged** (or transportation disadvantaged) is a key concept in this research project. Finlayson and Kaufer (2002) broadly describe it as the physical inability to drive. However, this research project follows the definition
put forth by Burkhardt (2000b:10), which states that a transportation disadvantaged individual is a person "who because of disability, age or income status are unable to transport themselves". Thus, individuals who are emotionally, cognitively, physically or financially unable to use the conventional transit system are included. For example, this comprises individuals who are afraid to take the public transit, or who cannot afford to use taxis and/or HandyDART. Hence, for the purpose of this research project, individuals who are transportation challenged are all individuals who cannot get to a chosen destination by their own means.

A community is "a group of people living in a particular area; or living near one another, with distinct social relationships; or a group of people sharing a common faith, culture, profession and lifestyle" (Clark 1998:83). In this instance, a community can also span across electoral boundaries and is also the representation of an individual's own spatial boundaries in terms of places he/she frequently travels to connect socially with other individuals as well as to access goods and services (Finlayson and Kaufert 2002). The World Health Organization Center for Health Development (2004a:16) adds that "members of a community gain their personal and social identity by sharing commons beliefs, value and norms, which have been developed by the community in the past and may be modified in the future".

Mobility is a multidimensional concept (Rush and Ouellet 1993) and encompasses various realms. For example, Rush and Ouellette (1993, p 486) characterize mobility as "primarily relating to the physical realm but also applied to the cognitive, emotional and social perspective". According to Scheiner and Kasper (2003, p 320), mobility can be "short term (travel) or long term (housing mobility, choice of location)". Mobility can be used to describe physical movements as well as social opportunity, and more recently also include media, i.e. virtual mobility (Kenyon, Rafferty et al. 2003). In the context of this research project, mobility describes the ability to travel without constraints to a chosen destination. Thus, in this study and unless otherwise stated, mobility is synonymous with transportation mobility.
1.3 Study rationale

Demographic projections raise concerns that include the costs of an older population, for example in terms of public pensions, the health care system and the shortage of necessary services (see Moore and Rosenberg 1997; Gee 2000; Evans, McGrail et al. 2001). The concerns and controversy surrounding the public policies to address a shift in the age structure of the Canadian population are out of the realm of this research project. This study rests on the belief that more individuals moving into older age groups will result in increased pressure on agencies providing services to older adults. The disability rates amongst seniors have decreased in the past years, and older adults are seeking an active lifestyle in their later life. Transportation, a crucial link between an active life and possible social and economic isolation (Rosenbloom 2003; Burkhardt 2003a), is also encompassed by social policy as described by Gee (2000:21):

"Social policy in an aging society should recognize the past and present contributions of older persons at both the societal and familial (i.e. intergenerational) levels and encourage them to contribute; be based on the primacy of human (and not market) values; recognize the value of care work; and understand that failing to provide adequate income for the aged can be more costly in the long run."

It is essential to recognize the importance of well-being and quality of life as having a preventive effect on the incidence of physical and cognitive illnesses associated with aging (see Ebersole and Hess 1994; Bourret, Bernick et al. 2002; Alsnih and Hensler 2003). Social policy as defined by Gee (2000) aims to provide older adults with the necessary means to have quality of life leading to healthy aging. Further, this definition acknowledges the necessity of facilitating the integration of older adults in the daily life of communities—this contribution being social, as well as economic—and to help them to live independently in their community, i.e. to age in place. In addition, Gee (2000) also emphasized the long term cost saving benefits of social policy supporting and enhancing the well-being of older adults.

For many individuals, convenient transportation options are indispensable for self-sufficiency and mobility as well as social integration. In fact, losing their independence is a foremost concern for seniors (Millar 1999; Feldman and Oberlink 2003). In their analysis of the interaction between integration/segregation and equity/efficiency in the planning of policies directed to older adults, Rosenberg and Everitt (2001) placed transportation at one apex of a triangle that includes housing
and health/social services (Figure 3). The relationships between these three key elements cannot be ignored while planning policies with the goal of supporting healthy aging and enhancing seniors’ independence. For example, the issues of housing options for seniors (how and where they live) cannot be separated from issues surrounding their income (how to pay for their daily living). Health care and service options (how healthy they are and what kinds of services are necessary to their well-being) impact their choice of residence and are also dependent upon income status. Transportation cannot be reduced to the physical travel from one location to another and cannot be thought of only in terms of traffic flows or parking infrastructures. Transportation has a social impact: it is crucial in access to and delivery of social and medical services. Its influence is felt in the choice of residence location for seniors, thus, by extension, on the integration or segregation of older adults in a community. In addition, transportation is especially important nowadays, when older adults are more likely to live in the suburbs or in rural areas (Myrtle and Wilber 1994; Burkhardt and McGavock 2002; Rosenbloom 2003).

Figure 3: Planning housing, health and social services, and transportation (Source: Rosenberg and Everitt 2001:142)

Age is not necessarily a reflection of the ability to drive a car, however, the probability of having to give up driving for physical and/or cognitive reasons becomes higher as the age of drivers increases (Rosenbloom 2003). Once driving is
no longer an option, older adults rely mostly on community transportation services to assist with the independence and mobility they previously associated with private transportation. Transportation systems in communities are increasingly pressured to respond to the wide range of needs of a growing seniors' population (Burkhardt and McGavock 2002; Rosenbloom 2003; Burkhardt 2003a).

Communities such as the CRD already have difficulties meeting present transportation needs, particularly in terms of resources and funding. In the future, they are likely to struggle to meet the needs of their growing seniors’ population with the existing structure of their transportation system. The current demographic shift will dictate the need for a community transportation system adapted to a population with different needs and expectations (Burkhardt 2000a; Burkhardt 2000b; Rosenberg and Everitt 2001; Burkhardt and McGavock 2002; Rosenbloom 2003; Burkhardt 2003a). Local governments and stakeholders in communities have the ability to influence how well older adults will age in place by providing them with essential services. Mobility is central to maintaining the autonomy and independence of people, and to allow older adults to retain an active community life. Hence, the availability of transportation options is an important factor in preserving seniors' quality of life and well-being, and the loss of mobility is often associated with decreased well-being in seniors (Metz 2000; Cvitkovich and Wister 2001; Feldman and Oberlink 2003; Banister and Bowling 2004). However, the mobility of seniors and other vulnerable populations can be enhanced with the implementation of a transportation system that takes into account not only the existing resources of a community, but also the needs of its population (Steranka, Moss et al. 2000; Burkhardt 2000b; Nelson, Antenucci et al. 2001; Burkhardt 2003a). A CAT approach is intended to maximize available resources and to encourage cooperation between transportation providers within an organized structure, to meet transportation needs in communities.

Although CAT systems are common in American communities where they are supported and mandated by a regulatory framework, this approach is still rarely explored in Canadian communities. A CAT approach to transportation raises logistic and legal implications that are of great interest. The information derived from this research will provide baseline information and knowledge to develop strategies to
facilitate the implementation of a CAT system in the CRD, as well as in other Canadian communities.

1.4 Study purpose and objectives

The purpose of this research is to identify key elements in the implementation of a CAT system at a local community level, and to achieve a more complete understanding of the interactions between these elements from the perspective of the different groups of stakeholders. This research focuses on the identification of barriers and incentives to implementation of CAT systems.

This research examines the interacting forces and relationships that influence the process of planning a CAT system in a community. Using the CRD as a case study, the objectives of this research are:

1) To develop a program logic model for a coordinated accessible transportation program in the Capital Regional District from the perspective of the stakeholders;

2) To use the developed program logic model to identify barriers to implementation specific to each stakeholder and to the community as whole;

3) To use the developed program logic model to identify incentives to implementation deemed necessary by stakeholders to support the implementation of a coordinated accessible transportation program in the Capital Regional District;

4) To discuss the implications associated with a safe, efficient and affordable transportation system for older adults and persons with disabilities in Canadian communities.

1.5 Organization of this study

The previous sections introduced the issues surrounding the aging of the population in communities such as the CRD, and the objectives of this study. Chapter Two presents a literature review of the themes informing this research. It explores the transportation patterns of older adults and the relationship between mobility and well-being. It also examines current policies as well as documentation existing on the
topic of coordinated accessible transportation. Chapter Three establishes the theoretical approach used to achieve the goals of this research. Specifically, it looks at the qualitative approach of this research project and at the utilization of a Program Logic Model (PLM) to organize and to analyze the data collected through semi-structured interviews. Results are presented in Chapter Four and Five. Chapter Four provides a background for a PLM by presenting transportation issues in the CRD as well as each stakeholder's position with regards to CAT. Chapter Five outlines the different elements that comprise the PLM for a CAT program in the CRD, and presents barriers and incentives to implementation. Finally, Chapter Seven concludes by discussing the implications of this research for a transportation system that meet the needs of a growing senior's population in Canada.
2.0 Literature Review

The intent of this chapter is to highlight the themes informing this research project. It addresses five main topics. First, the demographic shift which is the main catalysts for a new approach to the provision of transportation is briefly looked at in the British Columbian context. The transportation pattern of older adults is then reviewed, and the effects of driving cessation on their lifestyle and health are outlined. The next section investigates the regulatory framework surrounding the provision of transportation to older adults and persons with disabilities both in Canada and the United States. This review focuses on the United States because the approach first chosen by stakeholders in the CRD was patterned after the approach adopted by American communities (see Dibert, Allan et al. 2005). This chapter concludes by exploring coordination in transportation services and by summarizing the types of policy actions thought necessary by the authors reviewed in this section.

2.1 Demographic shift in British Columbia

A demographic shift refers to the process in which the proportion of older adults is progressively getting larger (Cheal 2002). In Canada, the percentage of 65+ in the population has grown steadily since 1951 (Moore and Pacey 2004). The distribution of Canadians seniors by age groups is detailed in Figure 4. It translates into the 65+ population counting for one in eight Canadians in 2001, and increasing to approximately one in four by the year 2040 (Health Canada 2002).

![Figure 4: Seniors by age groups, as % of the total population, Canada, 1921-2031 (Source Health Canada (2002:3))]
The population in British Columbia exhibits the same pattern as most of Canada: 13.8% of the population is 65 years old and over and by the year 2031, this population is projected to increase to about 25% (Figure 5). The median age of the population in British Columbia is projected to increase from 37.9 years to 46.2 years in the same time frame (BC Stats 2005). In the past three decades, the growth of the 65+ cohort has been more important than the growth of the rest of the population (i.e. 0-64) and the 80+ cohort is the fastest growing cohort (Figure 6). Within these cohorts, the number of women is proportionally higher, especially in the 85+ group (BC Stats 2005). Research generally attributes this increase in British Columbia to the increased longevity of the population, as well as to the migration of individuals in their later years. Seniors tend to migrate towards the same location, and this amenity-related migration is most common amongst healthy couples with a higher income (Moore and Rosenberg 1997; Rosenberg and Everitt 2001). Finally, the spatial distribution of the older population is uneven throughout the province, and patterns that are appearing nowadays are likely to accelerate in future. Most of the older population in BC will be clustered in the southern tip of Vancouver Island and in the Okanagan (Figure 7).

![Figure 5: British Columbia Population Pyramid -1971, 2001, 2031 (Source: BC Stats (2005:5))](image)

1 BC Stats and Statistics Canada projections usually place this growth between 23% to 28% depending on the document reviewed.
Figure 6: Population of British Columbia by Select Age Groups (Source: BC Stats (2005:4))

Figure 7: Proportion of seniors to total population by region (Source: BC Stats (2005:5))
2.2 Transportation patterns of older adults

Although the impact of a demographic shift is recognized by policy makers and researchers in Canada, its effect on the transportation system remains largely unexplored. Subsequently, the travel behaviour of older Canadians is not well documented. In fact, Alsnih and Henser (2003) remarked that most studies originate from the U.S., with more research now being conducted in the U.K. and the Netherlands. Very little research has focused on the Canadian context. However, in their study, Newbold, Scott et al. (2005) demonstrated that the travel patterns of older Canadians are similar to those of older adults in other industrialized countries, in particular to those in the United States. In terms of transportation, the main difference between today's older adults and cohorts of the past decades is their reliance on the private automobile as a primary mode of transportation (e.g. Burkhardt 2000a; Rosenbloom 2001; Buckhardt 2003; Collia, Sharp et al. 2003; Pochet 2003; Rosenbloom 2003; Banister and Bowling 2004; Newbold, Scott et al. 2005). Further, research has suggested that, although there are still more men driving than woman, an increasing number of older women drivers also contribute to the growing number of older adults driving private vehicles (e.g. Burkhardt 2000a; Collia, Sharp et al. 2003; Rosenbloom 2003; Banister and Bowling 2004). It is likely that their travelling patterns will resemble those of men within the next fifteen years (Banister and Bowling 2004). The interest in the rising number of seniors is spurred by multiple issues. The concern over safety, because age is usually associated with an increased risk for functional disabilities (e.g. Burkhardt 2000b; Kostyniuk and Shope 2003; Adler and Rottunda 2006), is compounded by environmental or structural concerns stemming from the number of vehicles on the road (e.g. Rosenbloom 2001; Alsnih and Henser 2003) or from the travelling patterns of older adults in terms of number of trips taken (e.g. Alsnih and Henser 2003; Newbold, Scott et al. 2005).

According to studies conducted in the United States and in Europe (e.g. Noble 2000; Pochet 2003; Rosenbloom 2003; Banister and Bowling 2004), individuals' travel behaviours change as they age. For example, seniors make fewer trips and travel shorter distances in their vehicle than younger cohorts (Collia, Sharp et al. 2003; Newbold, Scott et al. 2005), although Alsnih and Henser (2003) commented that seniors' travel patterns are becoming less and less different from those of younger cohorts. Transportation mobility differences between younger and older
seniors' cohorts are shown in Figure 8 and 9. Compared to seniors of previous decades, older adults are making more trips and spend more time driving than in the past (Noble 2000; Ritter, Straight et al. 2002; Rosenbloom 2003; Banister and Bowling 2004), but women are still more likely to be passengers (Collia, Sharp et al. 2003; Kostyniuk and Shope 2003).

Figure 8: Miles traveled per day, per person, 2001 (adapted from Pucher and Renne (2003))

Figure 9: Number of trips per day, per person, 2001 (adapted from Pucher and Renne (2003))

Sampling in Pucher and Renne (2003) was limited to urban areas and trips < 75 miles.
For most seniors, driving is the only means to retain the mobility they have enjoyed most of their life. Current alternative modes of transportation such as buses or volunteer drivers can rarely offer them the freedom that private transportation offers (Marottoli, Mendes de Leon et al. 2000; Collia, Sharp et al. 2003). Thus, senior drivers are more likely to travel than 'car-less' seniors (Burkhardt and McGavock 2002). As an individual ages, the number of work-related trips decreases while the number of trips made for social activities, shopping or health related appointments increases (Stakes 1994; Siren and Hakamies-Blomqvist 2004; Newbold, Scott et al. 2005). The purpose of seniors’ trips is depicted in Figure 10. Research also showed that seniors prefer to travel midday and tend to travel less on week-ends (Collia, Sharp et al. 2003).

![Figure 10: Canadian Seniors' use of their private vehicles by purpose and size of place, 1996 (Rosenberg and Everitt 2001:157)](image)

Individuals usually carry their preference in terms of mode of transportation into their later years (Alsnih and Henser 2003). Ritter, Straight et al. (1999) found that driving is the first choice for traveling for 80% of 50+ years old Americans. This is followed by ride sharing and lagging far behind (5%), by walking and public transportation. In Kostyniuk and Shope’s (2003) study, 87% of seniors (n=1,053) reported to have never taken the public transit. Seniors in this study also commented that most of their knowledge about conventional and public transit came from advertisements on vehicles and bus stops. Public transit is usually one of the last transportation options explored by seniors (Burkhardt and McGavock 2002; Kostyniuk and Shope 2003). In fact, the current lack of older adults’ interest in conventional public transit is of concern for providers who are planning new strategies (for example by switching from fixed routes transit to neighbourhood...
circulator services in some communities) to ‘capture’ this new cohort of bus riders by meeting their needs (Burkhardt and McGavock 2002). However, some authors such as Black (2001) believe that it is very unlikely that the level of bus ridership will ever grow back to past higher levels, mainly because of the current traveling behaviour developed by a large portion of the population. Seniors often believe that public transit does not meet their needs in terms of routing, scheduling, safety and convenience (Kostyniuk and Shope 2003; Adler and Rottunda 2006). Further, Rosenbloom (2003) observed that the use of alternative modes of transportation such as transit dropped in the U.S. by almost 50% between the years 1995 and 2001. However, Bauer and Rottunda (2003) reported that older women felt that public transit did help them regain some of their independence. Figure 8 illustrates seniors’ transportation choices as revealed by the 2001 National Household Travel survey in the United States. In Canada, Newbold, Scott et al. (2005) noted that alternative mode of transportation such as biking or walking had a higher trip count than public transit among the seniors’ population.

![Mode of Transportation](image)

**Figure 8: Percentage of trips by mode of transportation for the 65+ age group in the U.S. 2001 (adapted from Pucher and Renne (2003))**

### 2.3 Driving cessation

The percentage of drivers in the population decreases as age increases and drops substantially after the age of 85 (e.g. Marottoli, Mendes de Leon et al. 2000; Alsnih and Henser 2003; Rosenbloom 2003). Buckhardt (2000a) quantified this percentage in the U.S. at less than 50% while Millar (1999) placed it at 23% in
Canada. The percentage of Canadian seniors holding a driver’s license in 1990 is illustrated in Figure 9.

![Bar chart showing percentage of Canadian seniors holding a driver's license by age and sex.]

Figure 9: Percentage of Canadian seniors who held a valid driver’s license in 1990 by age and sex (Rosenberg and Everitt 2001:155)

Older adults tend to give up driving because of medical conditions, either self-reported or identified by a physician, but women are more likely to give up driving than men (e.g. Kumpfer, Shur et al. 1993; Millar 1999; Freund and Szinovacz 2002; Alsnih and Henser 2003; Buckhardt 2003; Collia, Sharp et al. 2003; Ragland, Satariano et al. 2004). Further, according to Alsnih and Henser (2003) and Bauer and Rottunda (2003), women tend to need more support in terms of mobility and transportation. In fact, Buckhardt (2000:103) characterized the most transportation challenged as those “in the upper-age brackets, female, lacking their own transportation resources, socially isolated, in poor health and in the lower income bracket”. Rosenbloom (2003) also added that there are more women than men in the 85+ cohort, and women are also more likely to live alone and be isolated. Seniors also cite both the cost of vehicle maintenance and unpleasant experiences on the road as reasons for driving cessation (e.g. Kostyniuk and Shope 2003; Newbold, Scott et al. 2005; Adler and Rottunda 2006).

From the seniors’ point of view, driving cessation is linked to a loss of independence and spontaneity (Bauer and Rottunda 2003; Adler and Rottunda 2006) and a decreased level of out-of-home activity levels (Marottoli, Mendes de Leon et al. 2000). Quitting driving can be described in terms of stages: first denial, followed by actual driving cessation and life adjustment, and lastly acceptance (Buckhardt 2003).
Some seniors choose to modify their driving patterns according to their health problems (Marottoli, Mendes de Leon et al. 2000). For example, some seniors no longer drive on highways and/or at night, before being obliged to cease driving altogether. On the other hand, other seniors choose to keep on driving because of a lack of transportation options in their community (Freund and Szinovacz 2002). Adler and Rottunda (2006) separated seniors about to cease driving into 2 groups: the "proactives", i.e. those who make the decision on their own and the "reluctant accepters", i.e. those who are forced to renounce their driving rights. Bauer and Rottunda (2003) noted that, in their study, the most successful transitions were made by older women who deliberately chose to quit driving, when this transition took place over a period of time, i.e. as they slowly replaced driving by using alternative mode of transportation when they realized the limitation of their driving capability. However, such an approach is only possible and is made easier by the availability of alternative modes of transportation in communities to begin with (Millar 1999). Most seniors comment that they dislike soliciting rides and that accepting rides from friends and neighbours can lead to feelings of dependency towards those drivers (Buckhardt 2000; Kostyniuk and Shope 2003; Adler and Rottunda 2006). In contrast, Bauer and Rottunda (2003) remarked that others enjoy shared rides because it offered the opportunity for social connection and interaction that seniors would not get otherwise.

Travelling requires a lot more planning from seniors once they quit driving, and if alternative options do not meet their needs, some seniors will simply renounce travelling (Burkhardt and McGavock 2002). Many seniors do no plan ahead for driving cessation, making this period of their life difficult (Bauer and Rottunda 2003). Alsnih and Hensher’s (2003) review of literature found that seniors who retain their mobility without driving have some of the following characteristics:

- they have someone in their family who can drive
- they can afford to pay for transportation
- they have strong ties with a religious community
- their community provide them with transportation options
- they are able to use the conventional transit system
- they adapt their level of activity to their level of mobility

2.4 Mobility, well-being and quality of life

The association of mobility with well-being and quality of life is widely recognized. According to Chappell, Gee et al. (2003:205) mental well-being is "a
subjective evaluation of the overall quality of life". O'Boyle (1997) differentiated between health related quality of life and quality of life as whole, including factors such as housing, education and transportation. This explains the difficulty in measuring the quality of life in older adults, particularly with respect to the heterogeneity of the senior population and the subjectivity of some of the factors involved. O'Boyle (1997:1875) defined quality of life as "the difference, at a particular period in time, between the hope and expectations of the individuals and their present experience". Wilhelmson, Andersson et al. (2005) found 8 factors that influence quality of life. In order of the most often cited, they are: social relationships, health, activities, functional activities, home ownership, finances, personal beliefs and attitudes. Tate, Lah et al. (2003) study of older men in Manitoba reported that a good quality of life included being physically, mentally and socially active and also emphasized the need for a supportive circle of family and friends.

The World Health Organization defined active aging as "the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age" (World Health Organization 2002:12). For Michael, Green et al. (in Press), active aging is also "the desire and ability of older adults to integrate physical activities into daily routine" and may include engagement in economic or socially productive activities. Successful aging theories are the backbone of these definitions. Depp and Jeste's (2006) meta analysis of definitions of successful aging identified predictors most often cited. Although predictors used in each reviewed study differ, some are consistently used, particularly good mental and physical health, as well as "subjective health and well-being, social functioning and personality characteristics" (Depp and Jeste 2006:16). Row and Kahn's (1987) seminal theory of successful aging is currently widely adopted by researchers (see Everard, Lach et al. 2000; Menec 2003; Tate, Lah et al. 2003; Jang, Mortimer et al. 2004; Bowling, See-Tai et al. 2005; Lang, Moore et al. 2005; Wallace 2005; Litwin and Shiovitz-Ezra 2006). Row and Kahn (1987) asserted that successful aging is determined by the combination of three behaviours or characteristics: a) avoidance of disease or disability, b) maintenance of cognitive and physical functioning capacity and c) an active engagement with life. This relationship is depicted in Figure 10 below. Integral to this is social support which is deemed an "essential ingredient"
They also noted that physical activities and social contacts are the best predictors of well-being.

Figure 10: A model of successful aging (Rowe and Kahn 1997:434)

Lang, Moore et al. (2005:25) defined healthy aging as "the development and maintenance of optimal physical, mental and social well-being and function in older adults". This maintenance and development is best achieved by a safe and supportive physical and community environment. Engagement with life includes social activities and social networking (Everard, Lach et al. 2000; Menec 2003; Litwin and Shiovitz-Ezra 2006) and should also be retained by people with disabilities (Jang, Mortimer et al. 2004). Further, the perceived quality of social contacts is more important than the actual number of social activities in which individuals are engaged (Cummings 2002; Adler and Rottunda 2006; Litwin and Shiovitz-Ezra 2006), and the influence of peers is significant in the maintenance of physical activity (DiPiero 2001:15). However, in their study of older adults in Sweden, Agahi and Parker (2005) found that seniors' participation in activities decreases with age. Interestingly, Strain (2001) found no consistency in the demographics and socio-economic characteristics of seniors attending senior centres' activities, although she noted that seniors living in rural areas are more likely to participate than seniors in urban areas. Stevens (2001) concluded from her research that loneliness in older women was reduced by participation in programs and the ensuing development of new friendships that resulted from participation in them. Finally, it is now established that aging does not have to be associated with a decreased mental or physical well-being (for example Rowe and Kahn 1997; Chappell, Gee et al. 2003; Lang, Moore et al. 2005) and "feeling younger than one's year" is a result of good physical and mental health (Bowling, See-Tai et al. 2005:494).
Mobility, i.e. both the capacity to travel and physiological mobility, is deemed an essential element to construct a social network and enhances a sense of independence (Metz 2000; Bourret, Bernick et al. 2002). In their study on mobility of institutionalized seniors, Bourret, Bernick et al. (2002:339) noted that patients looked at their loss of physical mobility as a “visual symbol for loss of normalcy” that affected their sense of self-esteem. Physical mobility is associated with “freedom within an environment” and “less reliance on others” (Bourret, Bernick et al. 2002:341). It is also an indicator of autonomy (Rush and Ouellet 1993). Social ties and activities are crucial to well-being; in fact, older adults themselves believe in the benefit of “going outdoors with others” (Fox and Gooding 1998:379). Further, social ties and activities support mental health and, by extension, the absence of social contacts is a predictor for symptoms of depression (Cummings 2002). Kenyon, Rafferty et al. (2003:321) defined the main role of transportation mobility as a mean to provide access to “educational and employment opportunities, health and social services, [and] family and friends...”. Transportation mobility in seniors is influenced by factors such as costs of travelling, or geographic transportation inequalities, specifically the difference of transportation infrastructures between urban and rural areas (Siren and Hakamies-Blomqvist 2004). The lack of mobility is likely to reduce the social interaction of older adults (Cvitkovich and Wister 2001) or their engagement in activities (DiPietro 2001). In Bourret, Bernick et al. (2002:341), informants listed transportation issue as one of the constraints to mobility, together with other factors such as “negative attitudes and environmental issues”. According to Siren and Hakamies-Blomqvist (2004), community mobility is a prerequisite for independent living. For Finlayson and Kaufert (2002:77), community mobility has two “dimensions”. The first dimension is associated with “instrumental activities of daily living” while the second relates to social network and activities. Further, they asserted that population can only attain community mobility through the means of an efficient transportation system within a community.

Mobility is also often associated with social exclusion, which, according to Kenyon, Rafferty et al. (2003), affects older adults, people with disabilities and low income individuals. Kenyon, Lyons et al. (2002:209) defined social exclusion as

“the unique interplay of a number of factors, whose consequence is the denial of access, to an individual or group, to the opportunity to participate in the social and political life of the community, resulting not only in diminished material and non material quality of life but also in tempered life chances, choices and reduced citizenship”
Kenyon, Rafferty et al. (2003:319) further linked social exclusion and mobility by adding that social exclusion is "due in whole or in part to insufficient mobility in a society and environment built around the assumptions of high mobility". Preston and Raje (2006) believed that social exclusion is caused by the lack of access to opportunities and not by the lack of opportunities. Similarly, participants in Kenyon, Lyons et al.'s (2002) study reported that they felt excluded not only because of the lack of transportation options offered to them but also because, as a direct consequence of this lack of mobility, they were excluded from activities that they would have pursued otherwise.

2.5 Accessible transportation regulatory framework

Andersen and Newman's (1973) seminal framework describing access to healthcare identified 3 categories of factors characterizing individuals accessing healthcare. They are: a) predisposing factors (i.e. existing characteristics in individuals, for example marital status), b) enabling factors (i.e. what factors allow an individual to access healthcare, for example income) and c) need factors (i.e. the reasons why people access healthcare, for example physical disabilities). Given its ability to promote access (Kenyon, Lyons et al. 2002), transportation is an enabling factor, that works alongside other elements such as availability of healthcare services in communities or health insurance. Access to care is only one of the aspects of the provision of transportation, but the effect of the lack of transportation on seniors' health is widely recognized and has been discussed in the sections above. Wallace (2005:6) remarked that seniors' health encompasses "social and psychological issues" and requires a proactive approach.

Raphael, Brown et al (2001), in their study on how government policy affects older adults, identified several non-medical health determinants put forth by Health Canada that are of relevance to seniors. These are income and social status, social support networks, physical and social environment, personal health practices and coping skills and health services (Raphael, Brown et al. 2001). The 2002 York University's conference³ focusing on social determinants of health in Canada identified 11 influential factors. They are as follows:

³ "Social determinants of health across the life span" York University (2002)
Transportation, identified earlier in this thesis as an essential link to most of the factors listed, is not so much overlooked as is likely just implied. Raphael, Brown et al. (2001:193) noted that there is a "disconnect" between these social determinants of health and the issues singled out by their informants. They questioned, for example, where precisely transportation should be classified, and if it should be "a part of the physical or social environments". As the same time, they noted that transportation, along with housing and seniors' participation in the planning of policies that affect them, was deemed essential for their informants. However, this is not always reflected in the development of public health policy (Raphael, Brown et al. 2001:193).

The sections below examine the standpoint, i.e. presence or absence, of current public policy in Canada and United States with regards to the provision of transportation to seniors and people with disabilities.

2.5.1 Transportation for seniors in Canada

The fact that transportation mobility remains caught in a vacuum policy is especially apparent when trying to identify the legislation, regulations and guidelines pertaining to the provision of transportation for seniors. There is no regulatory framework specifically directed at the provision of transportation for seniors. Instead, some provisions are made for accessible transportation, and older adults who are transportation challenged benefit from the same options as people with disabilities. These can be sourced to the Canadian Human Rights Act (Baker 2005), which states that any Canadian should have equal opportunities. However, at the federal level, Canada, unlike other countries such as the United States or Australia, does not have a "Canadians with Disabilities Act". Ontario is the only province in Canada to have enacted an Accessibility for Ontarians with Disabilities Act (2005). This act repealed
the Ontarians with Disabilities Act (2001). With regards to the 2001 act, Baker (2005:np) commented that "the ODA turned out to have no substantive effect on accessibility or other issue. It was at best a gentle reminder that barriers should be removed, without providing any of the means necessary to remove them". It is yet too early to gauge the effects of the new 2005 ODA act.

It is unclear who is responsible for the transportation for older adults. At the federal level, under the Canadian Transportation Act, the Canadian Transportation Agency (CTA) regulates accessible transportation and is legally responsible for the enforcement of regulations. With regards to accessibility, the CTA mandate is to resolve complaints on a case by case basis and to develop "regulations, codes of practice and standards concerning the level of accessibility in modes of transport under federal jurisdiction such as air, rail, marine" (Canadian Transportation Agency 2006:np). Since the 1990's, the CTA released voluntary Codes for transportation providers. For example, Baker (2005) cited Ferry Accessibility for People with Disabilities, or Conditions of Carriage by Rail for Persons with Disabilities. Although public transit falls under provincial jurisdiction, the federal government also released an Intercity Bus Code of Practices. This code is a "voluntary commitment by intercity bus service operators to serve people with disabilities in a safe and dignified manner" (Transport Canada 2006:np). At the provincial level, accessible transportation is governed by provincial government regulations. For example, in British Columbia, and under the British Columbia Transit Act, the Victoria Regional Transit Commission makes all decisions pertaining to the public passenger transit system in the CRD, including accessibility related decisions. BC Transit is a provincial Crown Corporation which serves as the main transportation provider in British Columbia, with the exception of the Greater Vancouver Regional District (served by Trans-link, the Greater Vancouver Transit Authority).

Acts, codes and regulations cited above all pertain to the provision of accessible transportation for all from a physical point of view, i.e. adhering strictly to the notion of access as providing the means of travelling from one location to another. Health-related and social implications of transportation provision are often suggested in the guidelines released by diverse
governmental bodies. For example, the National Advisory Council on Aging states that "seniors must be assured of ... universal access to health care, and the availability of a range of programs and services in all regions of Canada that support their autonomy" (National Advisory Council on Aging 2006:np). Similarly, the Public Health Agency of Canada, in its "Guide for the development of a comprehensive system of support to promote healthy aging" remarks that adequate support to healthy aging "would ensure [seniors] access to educational, cultural, spiritual, and recreational resources as well as to opportunities for paid and volunteer work" (Public Health Agency of Canada 2005:np). However, these guidelines do not indicate how to address the increased needs for transportation implied by these directives.

### 2.5.2 The American approach to accessible transportation

In contrast to Canada, the American approach to accessible transportation and, by extension, the provision of transportation to older adults, is clearly regulated in American legislation. The Americas with Disabilities Act (ADA), implemented in 1990, grants every American with the same rights in terms of access and transportation services, and aims to eliminate any discrimination against people with disabilities. Public and private transportation providers alike are regulated by ADA. In 1998, Transportation Equity Act for the 21st Century (TEA-21) was enacted and reinstated in 2003. According to Katz, Puentes et al. (2003:1), the TEA-21 "gave states and metropolitan areas the certainty in funding and the flexibility in program design necessary to attempt new transportation solutions". This translates into programs such as the Job Access and Reverse Commute (JARC) that make grants available to organizations providing transportation to low-income population to permit the access of employments and services (Sawicki and Moody 2000). These grants are dependent on the communities' ability to demonstrate the development of a coordinated approach to transportation provision at a regional level (Blumenberg 2002). Further, the Section 5310 program, under the Federal Transit Act, makes capital assistance available to states for the provision of transportation to seniors and people with disabilities through coordinated services in both rural and urban areas (Stommes and Brown 2005; Hardin, Bogren et al. 2003). TEA-21 also encourages public participation in the process of decision making with regards to community transportation planning and provides incentive grants to enhance accessibility and transportation mobility in urban areas (Katz, Puentes et al. 2003).
In addition, federal initiatives also support the coordination of public and private transportations providers to meet current and future transportation needs in communities. For example, the Federal Interagency Coordinating Council on Access and Mobility (CCAM) is the result of the collaboration of the Department of Health and Human Services and the Department of Transportation (Blumenberg 2002). The CCAM, among other programs, funds community initiatives that privileges coordinated human services, transportation planning and vehicle sharing (Federal Interagency Coordinating Council on Access and Mobility 2006:np). Although it is undeniable that TEA-21 opened up new prospects for transportation coordination in American communities, Blumenberg (2002) commented that the form that coordination should take is not specified in the regulatory framework, with the results that communities entering coordinated system often have different perspectives and expectations. The opportunities opened up by TEA-21 in American communities will be further explored below.

2.6 Coordinated Accessible Transportation System

Although there is an abundant academic literature on interorganizational coordination, little of it is focused specifically on coordination in the context of transportation provision. In fact, with the exceptions of authors such as Schlossberg (2003; 2004) or Burkhardt (2000a; 2000b; 2002; 2003a; 2003b; 2004) most of the documentation discussing CAT is made available by organizations, by governmental agencies or by communities, and consists mostly of ‘how-to’ manuals or descriptions of current CAT programs. In this section, the concept of coordination in the context of transportation resources is examined, and benefits, issues and implementation of a CAT are explored.

2.6.1 Coordination

Coordination can take different forms and meanings depending on the context in which it is used. For example, Blumenberg (2002:154) noted that although agencies call their relationship “coordination, collaboration, cooperation, consensus building, policy networks, partnerships, networking” there is often little difference with the actual type of interaction. Kernaghan and Kuper (1983) differentiated between the process of coordination, i.e. the interaction of organizations, and the state of coordination, which is the result of the process. Mulford and Rogers
broadly defined inter-organizational coordination as a process "whereby two or more organizations create and/or use existing decision rules that have been established to deal collectively with their shared task environment". Similarly, Alexander (1993:331) defined coordination in general as activities "undertaken by an organization or an inter-organizational system to concert the decisions and actions of their subunits or constituents organizations". The Ohio Department of Transportation (ODOT) (1997:2), focusing on coordination in the context of transportation asserted that "coordination occurs when a group of people work together to expand one or more transportation related activities through joint actions to realize increased benefits". Burkhardt, Koffman et al. (2003b:12) added that this sharing of transportation resources is "for the overall benefit of the community". Further, Burkhardt (2000b:3) drew attention to the fact that coordination is more precisely "the pooling of transportation resources and activities of several human services agencies with one another or with mass transit operations". Thus, coordination is a strategy used by organizations to reach objectives and to manage existing resources (Buckhardt, Nelson et al. 2004). Although Blumenberg (2002) commented that it is difficult to pinpoint the elements at work in thriving collaborations, her review of the coordination literature found five determinants of successful collaborations (Blumenberg 2002:155):

- "**Shared vision/common purpose**": stakeholders must be able to reach a consensus
- "**Broad stakeholders involvement**": a broad spectrum of stakeholders must be included, failure to do so may result in unbalance of power between stakeholders
- "**Interactive planning process**": insures participation in decision-making from all
- "**Political support and financial resources**": demonstrates the commitment to the partnership
- "**Skill of actors**": effective and consistent leadership is necessary to attain success

Coordination between organizations does not necessarily need a formal structure, in fact, much of the interaction that shapes coordination is difficult to track and record (Kernaghan and Kuper 1983). Alexander (1993:332) differentiated between informal (i.e. made of "informal channels of communication", such as phone calls) and formal coordination (i.e. between organizations which have entered a contractual agreement). He also noted that one does not necessarily lead to another
but informal interaction is indispensable to establish coordination between organizations. Partnerships need time to build and sustain, and are subject to unexpected changes, for example in the personnel or funding of the partnering organizations (Stommes and Brown 2005). For these reasons, coordination remains "a work in progress" that evolves over time. In fact, Antenucci at al. (2001) recommended keeping short-term goals as well as long-term objectives. Further, Mullett, Jung et al. (2002), in studying collaboration in non-profit organizations, concluded that the selected form of collaboration chosen has to fit with the mandate guiding these organizations if it is to be successful.

In the context of transportation services, there are many forms of coordination, each requiring different levels of commitment, resources and flexibility. ODOT identified 3 levels (1997:3)

- **Information and referral network (cooperation):** the interaction of agencies which mainly consist of information sharing. For example, one agency refers its clients to another organization to offer them alternative travelling options.

- **Joint use arrangements:** this typically involved the sharing of resources between all participants and can be either formal or informal. For example, an organization agrees to lend its vehicle to another organization on a regular basis for a set fee.

- **Consolidation:** this is the horizontal integration of transportation resources.

ODOT (1997) further distinguished two types of consolidation. In the first approach, one existing organization (a ‘lead organization’, also considered essential by Alexander (1993)) that already possesses the resources to manage such a system, coordinates the provision of transportation in its community. The second approach involves the creation of new umbrella organization that becomes the broker/coordinator of the newly formed transportation system. Burkhardt, Nelson et al. (2004) further commented that, although it is the most efficient approach, a consolidation approach often results in organizations being fearful to lose control of their resources.

### 2.6.2 Benefits and barriers

Positive collaboration stems from acknowledging the inability of one organization alone to meet the needs of their clients and from understanding the benefits of working together towards the same goals (Nelson, Antenucci et al. 2001; Mullett, Jung et al. 2002; van Eyk and Baum 2002). Providing transportation to older
adults often involves a multiplicity of agencies that deliver the same services. This results in duplication as well as gaps in the delivery of services, both of which could be limited by coordinating agencies activities (Blumenberg 2002; Schlossberg 2004). Other issues usually encountered by communities while providing transportation services are underused resources (especially vehicles), variation in the quality of services and geographical differences (e.g. urban/rural) in the service distribution (van Eyk and Baum 2002; Burkhardt 2003a; Schlossberg 2004).

Coordination has the potential to positively affect the provision of transportation in communities and to benefit both providers and users (US General Accounting Office 1999; Burkhardt 2000b). In their study, Burkhardt, Koffman et al. (2003b) listed an increase in efficiency, enhanced mobility, a larger service area and economic benefits as expected effects. Efficiency is especially important when resources are limited. Substantial improvements can be made to vehicle use (with regards to schedule) and vehicle capacity (i.e. the number of passengers transported per trips) when transportation services are coordinated and a good communication exists between stakeholders in the provision of transportation (Steranka, Moss et al. 2000; Burkhardt 2000b; Burkhardt, Nelson et al. 2004). The quality of service provided usually improved with coordination because of the necessity to set the same standards for all transportation providers (Ohio Department of Transportation 1997). Coordination can also be a tool to even out inequalities with regards to transportation services between and within communities by offering more transportation options (Steranka, Moss et al. 2000; Nelson, Antenucci et al. 2001).

In addition, from an economic perspective, the economy of scale realized lowers the unit cost and increases the service outputs (Agency Council of Coordinated Transportation 1999; Burkhardt, Nelson et al. 2004). Further, the organization of transportation providers into a system provide more leverage for funding (Agency Council of Coordinated Transportation 1999; Burkhardt 2000b; van Eyk and Baum 2002; Burkhardt, Koffman et al. 2003b). Finally, it is also necessary for communities to acknowledge that coordination will not necessarily the answer to all their transportation issues and that implementing and maintaining a CAT program maybe onerous and expensive in the short term (e.g. US General Accounting Office 1999; Steranka, Moss et al. 2000; Burkhardt 2000b; Burkhardt, Koffman et al. 2003b). Benefits associated with the implementation of a coordinated transportation system are further highlighted in Appendix 1.
The implementation of a CAT system is likely to encounter barriers. Issues such as inability to reach a consensus between stakeholders, conflicting mandates between organizations, or lack of communication between participants have been identified by organizations (Steranka, Moss et al. 2000; Burkhardt 2000b; Nelson, Antenucci et al. 2001; van Eyk and Baum 2002; Burkhardt, Koffman et al. 2003b). Professional possessiveness, i.e. ‘turfism’, is often a source of conflict and results in difficult partnerships (Steranka, Moss et al. 2000; Nelson, Antenucci et al. 2001; Burkhardt, Koffman et al. 2003b). Lack of resources is also often a challenge to coordination (van Eyk and Baum 2002). For example, funding and/or vehicles for transportation are often specific to certain clients and thus can restrict coordination (Schlossberg 2004). Lack of information on what coordination means and implies for communities and providers is also an obstacle to a successful relationship between providers (Burkhardt 2000b). Similarly, lack of understanding with regards to federal or local guidelines and regulations as well as funding eligibility, is often the source of confusion for organizations trying to achieve coordination (US General Accounting Office 1999; Nelson, Antenucci et al. 2001). However, Burkhardt, Nelson et al. (2004), noted that this barrier as well as all barriers cited above have been overcome by communities willing to find solutions to achieve their goals. Further, according to Steranka, Moss et al. (2000), some of these barriers are in fact smokescreens or perceived barriers often caused by concern or misinformation. Finally, with regards to the implementation of a CAT program in a community, leadership, whether by it is an organization or an individual, is necessary to give momentum to and sustain a new CAT program. This leadership is more effective when supported by an adequate regulatory framework (e.g. Burkhardt 2000b; Nelson, Antenucci et al. 2001; e.g. van Eyk and Baum 2002; Schlossberg 2003; Burkhardt, Nelson et al. 2004).

2.6.3 Examples of Transportation Coordination programs

It is difficult to locate records of Canadian communities’ attempts to formalize the coordination of their transportation resources at a larger scale, with the notable exception of the Community Transportation Action Program (CTAP) in Ontario. This coordination effort will be further addressed below. Although there are usually no available public records of cooperation at a small scale (i.e. informal partnership between a limited number of organizations), it is likely that this type of coordination is common in many Canadian communities. Available reports on accessible
transportation typically consist of needs assessments and vision strategies. In contrast, and as mentioned above, American examples of transportation coordination, both for seniors and people with disabilities and for individuals who are transportation challenged, can easily be found. The four examples below originate from both academic literature and specialized organizations’ documentation and examine different forms of coordination at different governmental levels in the Canadian and American context.

**The Community Transportation Action Program (Ontario)**

The CTAP (1996-1999) is a project launched by the Ontario Provincial Government to encourage and assist communities in coordinating their transportation resources to meet the increasing needs of their population. Funding was allocated to develop community-based transportation programs, but communities were also encouraged to look for external funding. The role of the CTAP was not only to channel funding, but also to support communities in attempting to remove barriers to implementation. This project was promoted by holding five public forums throughout Ontario. Communities were required to show proof of community partnerships (in different sectors such as profit, not-for-profit, and public), and to have a funding sponsor (who needed to already be a recipient of provincial funding). They were also expected to provide a comprehensive budget as well as to complete an evaluation form at the end of the program. The target population of this project included older adults, people with disabilities, low-income population and youths. A website was created for communities to share experiences and strategies (but was not as efficient as expected) and a bi-annual group letter (the CTAP Courier) was used to circulate information.

Barriers to this program were similar to barriers outlined in the sections above. It was found that these barriers were mostly due to misinformation. For example, Fuller and Herold (2000) reported that insurance costs for volunteer drivers were considered one of the main concerns but revealed itself to be a non-issue:

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4 All references from Fuller and Herold (2000)

5 This project is the result of the joint effort of the Ministry of Transportation, the Ministry of Education and Training, the Ministry of Citizenship, Culture and Recreation, the Ministry of Community and Social Services and the Ministry of Health (Fuller and Herold 2000)

6 Each of the 24 communities surveyed received approximately $30,000 for this project. In total, the budget of this project was about $2 million (Fuller and Herold 2000)
insurance rates do not increase if volunteers do not earn an income for this service. Figure 11 below shows the different types of barriers found and Appendix 1 provides details on these barriers. Fuller and Herold (2000) deemed this project a success. However, they also remarked that the work of the CTAP itself was never evaluated and the short time frame of this project was a potential obstacle to its success. The CTAP produced a “Best Practices” manual and a video to share the experience of the participating communities7. No follow-up was organized and no other report detailing the success and other issues of this program was found except for those outlined in Fuller and Herold (2000).

![Graph showing reported barriers to transportation coordination]

**Figure 11: Reported Barriers to Transportation Coordination (Source Fuller and Herold (2000:17))**

The authors reported three different model of coordination (Fuller and Herold 2000:23). The first model is an example of ‘urban-centralized high resources’, which describes the coordination model of an urban area surrounded by rural communities. The urban centre’s resources are used for the planning and provision of transportation in the rural areas. This model is notable for the involvement of private companies for the planning and funding of this project. The ‘rural-centralized low resources’ model has a rural area as a centre and fewer resources to draw from than the first model. It is also a model that needs more time to grow. Finally, the “rural dispersed” is a model which does not involve any organizational change but build upon existing resources by coordinating the transportation services of small towns or villages within the same area.

7 The researcher in this project was not able to obtain one of these manuals
Coordinated Transportation in the United States: Examples

Schlossberg (2004) was interested in three distinctive approaches towards coordination in American communities. Firstly, some states, such as Ohio are actively involved in the promotion and supervision of coordination in communities. This translates into funding at a state and local level and in return, counties have to develop transportation plans. This approach is successful mainly because of the requirement to hire a Transportation Coordinator to lead the coordination effort. Secondly, other states mandate coordination. For example, in Florida, consistency is created by a state-wide mandate but infers a high level of involvement and commitment from the government in terms of policies and funding. The success of this approach is also due to the hiring of a Transportation Coordinator. Finally, the third approach, in Michigan, is what Schlossberg (2004:139) calls "laissez-faire policies of coordination". There is no real involvement or guiding from the State, although there are forums to discuss requirements, funding opportunities and issues are lead by the Michigan Department of Transportation. According to Schlossberg (2004), this results in the inability for organizations and communities to expand their coordination activities.

Hardin, Bogren et al. (2003) examined the approach of the Seniors' Resources Center, in Denver, Colorado. Created in 1987, the centre serves seven different counties. Its primary purpose is to provide seniors in the area with an easy access to all services (for example volunteer services, in-home care and transportation). Thus, the Center became a "one-stop" centre by providing "centralized and coordinated services, information and education" (Hardin, Bogren et al. 2003:np). The transportation division of the Center has three roles: 1) transportation broker, 2) direct service and 3) program development. As transportation broker, the Centre deals with approximately ten different transportation providers. Organizations needing transportation services pool their own funding to allow the Centre to function. Their clients call the Centre and are directed to the most affordable and efficient transportation service. The Centre is responsible for trip booking and scheduling and is billed for each ride. As a direct service provider, the Centre runs two operations; both of them are 24 hours fully accessible transportation services that operate in urban areas (Community Wheels) or in rural areas (Mountain Wheels). These services are funded by federal grants,
donations and fees. Finally, the Centre is also active in encouraging and guiding
coordinated transportation activities in communities.

Burkhardt (2000b) looked at the evolution of coordination in Broward County,
Florida. This County had a multiplicity of transportation providers with little
collaboration between them, even with the presence of a Community Transportation
Coordinator. When ADA changed eligibility regulations, a resulting increase in
riderships made the implementation of a new system necessary. This system is the
Broward County's transportation Options (TOPS), which became the broker
transportation agency in the County. TOPS contracts seven transportation providers
that are booked, scheduled and billed through the same organization. Transportation
providers attend mandatory on going training as part of this program. The County
remains responsible for the functioning and funding of TOPS, through federal, state
and local funding. One important feature is the ability of users to change carriers
within the system if they are not satisfied. The biggest barrier mentioned by
Burkhart (2000b) is the senior population itself, who were fearful to see their
transportation system change. The positive result of this system demonstrates the
benefit of a coordinated approach. More trips are delivered and the service area is
larger. The quality of service also improved and the system is easier to use.
However, Burkhart (2000b) noted that TOPS has its downside: in the new system,
riders who necessitate specialized transportation have to plan their trips earlier and
part of the transportation challenged population fall outside of the new eligibility
regulations. Although there are still alternative transportation options for them, their
choices are more limited.

2.7 Supporting the provision of transportation to seniors

Academic literature and documentation was extensively reviewed to examine
the type of policy necessary to help seniors achieve healthy aging. On the subject of
the provision of transportation services, six main themes emerged:

**Improving the provision of alternative modes of transportation** (Millar
1999; Cvitkovich and Wister 2001; Alsnih and Henser 2003; Bauer and Rottunda
2003; Buckhardt 2003) which, in the view of Alsnih and Henser (2003:909) are not
offered because of "a lack of understanding of the needs of this sub-group of the
population”. It infers more quantitative and qualitative research to better understand the mobility of older adults in all age cohorts since the seniors population is heterogeneous in its needs (Metz 2000; Siren and Hakamies-Blomqvist 2004). In addition, alternative modes of transportation should offer the same advantages than private transportation (for example in terms of spontaneity and schedule) to appeal to seniors (Kostyniuk and Shope 2003).

**Creating more education programs** to inform seniors of available transportation options to facilitate driving cessation or to meet the need of those with a reduced ‘automobility’, e.g. for seniors unable to drive at night (Adler 2002; Alsnih and Henser 2003; Rosenbloom 2003; Adler and Rottunda 2006).

**Integrating transportation in planning policies** to ensure that neighbourhoods are seniors friendly, for example in decreasing distances between residence and shopping or medical centres (Rosenbloom 2003; Banister and Bowling 2004). This also includes the necessity of making communities more walkable as the lack of accessibility is often a disincentive to walk and thus increase isolation (Michael, Green et al. in Press). It is also important to recognize the importance of transportation in the life of seniors and those transportation disadvantaged (Kostyniuk and Shope 2003; Pucher and Renne 2003; Hull 2005). Planning policies should also be a tool for transportation providers to have an inter-communities vision of transportation (Blumenberg 2002).

**Improving the conventional public transit**, in terms of infrastructures, for example accessible buses, or improved routes (e.g. more feeder routes) and scheduling to meet the needs of older adults. This also includes different strategies to attract this ‘new’ population of older adults (Rosenberg and Everitt 2001; Rosenbloom 2001; Burkhardt and McGavock 2002; Alsnih and Henser 2003; Rosenbloom 2003; Burkhardt 2003a)

**Subsidizing community transportation** to meet the demand of seniors in communities (Cvitkovich and Wister 2001; Rosenbloom 2001; Alsnih and Henser 2003). Community transportation, because of its small scale, is often described as having many of the attributes of private automobiles, in particular being able to respond to spontaneous trips (Kostyniuk and Shope 2003). According to Hardin,
Bogren et al. (2003:np) community transportation is "innovative thinking" about transportation rather than a method of transportation. Thus, community transportation places customers' needs first instead of the needs of the system. Transportation options tailored to the specific needs of older adults are likely to result in them living independently in their homes longer (Cvitkovich and Wister 2001).

**Coordinating activities during the planning process:** It is essential to make coordination part of the mandate of services providers (US General Accounting Office 1999; Burkhardt 2000b; van Eyk and Baum 2002). Similarly, if more funding is to be given towards transportation, coordination should be made a requirement to obtain this funding (Burkhardt 2000b).

### 2.8 Conclusion

This literature review focused on providing a background to the issues surrounding the provision of transportation to older adults. Much of the literature reviewed here outlined the importance of providing safe, efficient and affordable transportation options to individuals, and the negative consequences that are experienced by individuals if transportation options are lacking. This review also intended to show the lack of attention given to older adults' transportation in Canada in face of the demographic shift underway. In fact, this lack of attention extends to all individuals who are transportation challenged. As noted by Newbold Scott et al. (2005), there is little research at this time conducted on the transportation behaviour and needs of older adults in Canada and thus, conclusions have to be drawn from countries with comparable demographics, mostly the United States or Europe. Similarly, the review focusing on the coordination of accessible transportation was largely drawn from the American context. Further, even in the United States, which offers a comprehensive approach to the provision of transportation to older adults in urban and rural communities, most information on coordinated accessible transportation is informal, as academic research on this topic is sparse. Finally, because of the paucity of information available in the Canadian context, an additional objective of this research project is also to speculate on understanding of the effect of the demographic shift on transportation systems in Canadian communities.
3.0 Methods

This chapter presents the methods used in conducting this research. The first section discusses the methodological considerations for this study, for example its use of an evaluation framework, and provides a theoretical background to this project. The next section outlines the chosen qualitative case study approach and is followed by a discussion of the use of a program logic model (PLM) as an organizational tool. In this research project, a PLM is developed to frame and organize the analysis of the data gathered. The study area of this project is introduced in the following section. Sampling techniques, interviews and semi-structured questionnaires developed for this study are then examined. Finally, this chapter outlines the strategy used for data analysis and concludes by discussing the limitations of this study.

3.1 Definitions and conceptual background

This research project focuses on the development of a rationale for coordinated accessible transportation (CAT) in the Capital Regional District (CRD). The perspectives of stakeholders are examined and interpreted in order to identify key factors in the implementation of a CAT. This study is empirical, based on stakeholders’ knowledge and experience in the matter of transportation and/or services for seniors. It is also inductive in nature, as it aims to describe the steps necessary to sustain the implementation of CAT programs in other Canadian communities. An inductive approach leads researchers to formulate an hypothesis according to the data gathered in the field (Levin-Rozalis and Beer-Sheva 2003). This research project uses a qualitative approach that gives emphasis to individual’s perceptions of a given social problem, and attempts to articulate their intricate picture and relationship within a case study technique (Creswell 1998; Stakes 2000; Patton 2002).

This research project examines the internal elements of a CAT program and the resulting identification of barriers and incentives to implementation. The first step towards this identification is to articulate this program from the stakeholders’ points of view. This is the rationale for building a PLM specific to the CRD. The premise of this approach is that those involved in the planning, implementation or
evaluation of a program need to have a clear notion of the purpose of the program’s actions as well as its method for the program to reach its objectives (Weiss 1998; Stinchcomb 2001). As a result, this study is also interested in process analysis, described by Hollister, Kemper et al (1979:140) as the analysis of “how the program works with emphasis on identifying ways of improving program operation and design”. Another benefit of focusing on process is to yield information on a program’s design and implementation (Yin 1993). The articulation of the program’s different elements helps in the identification of obstacles to its success and incentives to its implementation.

The methods used in this research are borrowed from program evaluation. Traditionally, program evaluation and research have been similar in their data gathering methods, for example by using interviews, questionnaire surveys or existing data (Levin-Rozalis and Beer-Sheva 2003), but differ in their objectives. Evaluation, broadly defined by Stufflebeam (2001:11) is “a study designed and conducted to assist some audience to assess an object’s merit and worth” or, defined by Weiss (1998:4), “the systematic assessment of the operation and/or the outcomes of a program policy, compared to a set of explicit standards, as a mean of contributing to the improvement of program and policy”. In contrast, research was characterized by Hedrick, Bickman et al. (1993:3) as “[striving] to improve our understanding of a specific problem, with the intent of contributing to the solution of that problem”. Further, according to Patton (2002:10), while evaluation relates a “program’s story” to assist decision-makers, research “generates or tests theory”. Although using a program evaluation tool, this study is not an evaluation of a CAT program in the CRD: it is a research project that seeks to identify solutions to issues that could be encountered during the implementation of a CAT program. The resulting PLM is a template of a CAT program but is primarily a tool to facilitate discussion and to address this study’s goals.

The achievement of this research project’s objectives is also dependent on the conceptualization of a context-dependent theory. According to Stufflebeam (2001), a theoretical framework in evaluation can be based on existing theories (for example the Health Belief model which was first developed to analyse individuals’ behaviour towards health prevention programs and later their response to illness’ symptoms (Rosentock 1990)), or can be based on theory developed by evaluators before
proceeding with their evaluation. Program theory, as defined by Weiss (1998:57) "refers to the mechanisms that mediate between the delivery (and receipt) of the program and the emergence of the outcomes of interest". It is composed of what Bickman (1987), Chen (1990, 2003), and Weiss (1998), among others, called the "change model" and the "action model". The "change model" refers to the identification of the cause of the problems and the activities that are going to induce change, while the "action model" isolates the target group(s) and articulates the delivery of treatments. Once the theory is developed, the intent of the evaluation is to consider its congruence with the program examined. Rogers, Petrosino et al. (2000) asserted that most evaluators using a program theory approach build the theory guiding their evaluation through a combination of methods including focus groups, interviews, participant observation, literature review and the assessment of similar programs. Additionally, Chen (2003) remarked that the theory thus-developed can also be used for program planning and development.

In the context of this research project, a program theory approach was chosen because of the need to develop guidelines, i.e. a 'blue print', for a CAT program and because of the lack of review of existing programs similar in nature. Thus, the theory developed is normative, or prescriptive, as it gives guidance to the development of a successful CAT program in the CRD by articulating what the program should look like. Chen (1990b) alleged that normative theory in evaluation often evolves from observations, assumptions and previous knowledge. In turn, assumptions frequently derive from constructs surrounding the program (Bickman 1987). The model outlined in this study is also stakeholders' driven as it is developed from stakeholders' individual values, expectations and concerns. This research is supported not only by primary interviews conducted with stakeholders, but also by information (i.e. grey literature) on CAT programs. Figure 12 situates this research in relation to different approaches taken by evaluators, following the arguments put forward by Chen (1990a).

### 3.2 A case study approach

This study applied an evaluation tool on a geographically bounded system (Creswell 1998) to reach its goals. Yin (1993) emphasized the utility of a case study for evaluation "to investigate the relationships between processes and outcomes"
and Stufflebeam (2001:34) characterized a case study approach as "a focused, in-depth description, analysis and synthesis of a particular program or other object". Understanding the key components of these relationships or more precisely the rationale beneath these relationships, is necessary to grasp issues related to the implementation of a CAT program. A case study approach helps in achieving the objectives of this study by providing support for observing the interaction between forces during the process of implementing a CAT system in a Canadian community.

**Figure 12: Research’s theoretical foundation (adapted from Chen (1990))**

Qualitative research examines social or human problems. A qualitative approach provides a detailed and extensive account of internal (Hollister, Kemper et al. 1979) and local processes (Miles and Huberman 1994). According to Stufflebeam (2001:34), a case study approach "illuminates", i.e. it does not seek to control the case but instead observes a case within its own context. It allows the use of multiple relevant methods, for example the use of focus groups, interviews and participant observations. It is in fact both the result of a qualitative process and the qualitative process itself, namely a way to collect and organize data (Stakes 1994; Patton 2002).
The CRD was selected as a case study to support this community’s awareness of the need for a new approach to seniors’ transportation (Allan and Mc Gee 2003; Dibert, Allan et al. 2005). Because it was chosen for the purpose of examining the key elements in the implementation of a CAT program, it is also a test case for knowledge development (Yin, 1993) and what Stakes (1994:237) calls an “instrumental” case study, that is a case “examined to provide insight into an issue or refinement of theory”. The objectives and the context of this study are best suited to a qualitative approach, a dialogue between researcher and informants to develop information necessary to the understanding of issues within the case examined (Lincoln and Guba 2000).

3.3 Program Logic Model

This section first looks at the theory behind PLM as an evaluation tool and then examines the use of a PLM in the context of this research project.

3.3.1 PLM and Program Theory

According to Chen (1990a), the first step towards evaluation necessitates an understanding of the program studied. If program theory, as defined by Bickman (1987:5) is the “construction of a plausible and sensible model of how a program is supposed to work”, then, a program logic model (PLMs) can be considered a tool used to build a model (Stufflebeam 2001). A PLM is a diagrammatic representation of a program’s rationale, which includes relationships and linkages between different components (Chen 1990a; Chen, Cato et al. 1999; Cooksy, Gill et al. 2001; Stinchcomb 2001).

PLMs are important in developing a theory because of their capacity to “make the implicit theory explicit” (Dwyer and Makin 1997:421). The building of a PLM identifies the embedded hypotheses existing in the process of all programs, as well as the resources needed to reach outlined objectives and the gaps between inputs and objectives (Carroll and McKenna 2001; Adler 2002; Renger and Titcomb 2002). Developed at the planning stage of a program, a PLM will ensure that it is implemented according to the model developed. However, if not carefully developed and updated regularly, a PLM can become a rigid vision of a program and interfere with the program’s ability to evolve and integrate new elements, particularly
unintended outcomes (Cooksy, Gill et al. 2001; Renger and Titcomb 2002). These outcomes are the unexpected positive and negative impacts of a program, unaccounted for during the planning stage.

PLMs help to foresee barriers to the implementation of a program. They provide focus and guidelines to assist in attaining expected outcomes, and by extension, are also useful for program evaluation and accountability (e.g. Hernandez 2000; Schalock and Bonham 2000; Stinchcomb 2001; Dickman, MacIntosh et al. 2003). PLMs are mainly used to measure outcomes and to increase the effectiveness of existing programs (e.g. Julian 1997; McLaughlin and Jordan 1999; Schalock and Bonham 2000). They are also used to plan new programs and coordinate systems within a program (e.g. Stinchcomb 2001; Dickman, MacIntosh et al. 2003). PLMs have proven useful as management tools, especially in clarifying program goals (Conrad, Tandolph et al. 1999), and facilitating consensus among stakeholders (Carroll and McKenna 2001). They are also ideal for depicting multi-dimensional strategies towards the achievement of specific objectives. For example Chen, Cato et al. (1999) used a PLM in the context of a program using various integrated activities to reach its goals. At the same time, PLMs are intended to stay straightforward and easy to understand so as not to lose touch of the underlying rationale in the complexity of a model (Conrad, Tandolph et al. 1999; Renger and Titcomb 2002).

PLMs can be adapted to various programs and are used in a number of settings to reach different objectives; because of this, the strength of a PLM approach is its flexibility (Dwyer and Makin 1997; Carroll and McKenna 2001). They are commonly used in education, health or in prevention programs (e.g. Cooksy, Gill et al. 2001; Renger and Titcomb 2002). Elements and formats of models thus vary with the context and objectives of each program. For example, Dwyer and Makin (1997), Dykeman, MacIntosh et al. (2003) or Hernandez (2000) develop a PLM that privileged performance measurements and included outcome indicators. Cooksy, Gill et al. (2001) used a PLM as an integrative framework for data collected through multiple methods. This approach allows for the contextual analysis of data and facilitates the identification of patterns. McLaughlin and Jordan (1999) also emphasized the importance of key contextual factors because of their influence on the activities of a program. Finally, PLMs are also useful to achieve consensus amongst a program's stakeholders (McLaughlin and Jordan 1999; Cox 2000) and can
be particularly important for the planning of a program, especially if this program involves coordination of services between different organizations (Julian 1997).

3.3.2 PLM in this research

A PLM approach is suited to the goals of this study because it is a method that emphasizes the rationale that underlies a program, while also serving as a framework for organizing and interpreting the gathered data.

In the context of this research, a PLM is an organizational tool that is used to articulate the stakeholders’ vision of a successful program, i.e. a program that will maximize available transportation resources to provide a level of transportation services sufficient to meet the need of older adults in the CRD. A PLM provides a structure to organize the data gathered, to identify themes and patterns and to visually depict the relationships between the components of the model for further analysis. The PLM itself conveys the sequence of changes (Carroll and McKenna 2001), from assumptions to goals, implicit in a CAT program. Thus, the developed PLM is also the format in which the results of this analysis are displayed and is a tool to communicate the findings of this study.

As an analytic framework, a PLM facilitates building the theory underlying a CAT program at a community level by articulating the stakeholders’ vision while identifying the links, or the lack thereof, between these components. The process of developing a rationale for a CAT program through the analysis of individual stakeholder’s interviews serves to highlight issues and concerns relevant to the development of a CAT program. It identifies barriers to implementation by highlighting activities and resources necessary to achieve stakeholders’ goals, building upon stakeholders’ perspectives. This approach is premised on giving stakeholders a voice to articulate their vision of a CAT program developed to meet their needs. This study aims to offer a “road-map” (Stinchcomb 2001:49) for CAT programs in Canadian communities.

3.4 Researcher Positionality

The majority of informants are individuals with whom the researcher had previously shared information and knowledge on issues pertaining to seniors’
transportation. Specifically, while doing research for another project, the researcher was also working for the main public transportation provider in the CRD, i.e. BC Transit®. As such, the researcher had contacts with many stakeholders and was privy to aspects of their opinions regarding CAT in the CRD. This was beneficial to the present study in many ways: for example, contacting informants was easier as relationships were already pre-established. On the other hand, this insider position could also impact positively or negatively on personal rapport during interviews and influence the objectivity of the analysis (Holstein 2002). Further, according to O’Connor (2004:169), it could cause the researcher to assume facts instead of “seeking clarification as an outsider would”.

The position of the interviewer from the perspective of the respondent is especially significant when informants and researcher have a previous knowledge of each other’s points of view on topics central to a study. Thus there is some risk of changing the interaction within an interview in a “we”, the conversation of two individuals sharing ideas, versus a more distant and unbiased “I-thou”, where the interviewer is an active listener (Seidman 1998:79). The researcher’s approach in this project was to position herself as an outsider at the beginning of each interview by clearly explaining to all informants her new position of independent researcher and the purpose of this research. Although it could be argued that this new position can only be artificial in the eyes of the stakeholders, boundaries were clearly expressed and past relationships did not overly interfere with the process of interviewing. The researcher deliberately chose to meet each informant in his/her office to keep the interview in a formal setting. During the interview, while the questionnaire was being applied, the interviewer carefully steered the conversation away from any requests for her opinions on the topics explored. In addition, the choice of a PLM as a framework for analysis allowed the researcher to retain maximum objectivity while analysing the data gathered; in this instance, semi-structured interviews were conducted not to “derive interpretations” (Warren 2002:83), but to gather facts and opinions on CAT.

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8 This research is conducted as a follow up of “Coordinated Accessible Transportation: a Vision for the CRD” (Dibert and Allan et al. 2005) where the researcher was involved as a project coordinator.
3.5 Study area: The Capital Regional District

This section introduces the area where this research project was conducted and provides information on its current transportation system.

3.5.1 Area Description and Demographics

The Capital Regional District (CRD) is situated on the Southern tip of Vancouver Island, British Columbia. It has an area of approximately 24,000 square kilometres and includes twelve Capital Regional Municipalities and 4 Unincorporated Areas. A map of the area can be found in Appendix 3. These municipalities can be broadly grouped in 4 different areas:

- **the Core**, which includes Esquimalt, Oak Bay, Saanich and Victoria

- **the Peninsula**, which includes Central Saanich, North Saanich, Sidney and the Native Reserves\(^9\)

- **the West Shore**, which includes Colwood, Highlands, Juan de Fuca E.A., Langford, Metchosin, Sooke District, View Royal, and the Indian Reserves

- **the Gulf Islands**, which include Salt Spring Island, and the Southern Gulf Islands

The rate of urbanization of these communities varies, from mostly rural communities, for example the West Shore, to urban areas such as the Core of the CRD. This diversity is shown in the transportation resources available in each community; while some urban communities for example Victoria, enjoy the full benefit of BC Transit services, some rural communities, such as East Sooke, rely mostly on volunteer transportation for the needs of those who are transportation challenged.

The Capital Regional District population was estimated at 349,638 for 2004 (Capital Regional District 2005) with a total population growth of 2.4% between 1996 and 2001. Population and population growth projection in the different municipalities are detailed in Table 1. Approximately 15% of the population is 65 years old or older and the current median age for the CRD is 41 years old. Saanich and Victoria currently have the highest concentration of senior’s population. The distribution of the 65+ population in the CRD is detailed in Table 2. Finally, the CRD

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\(^9\) Statistical data provided in this research project does not include Native reserves
website describes the main economic drivers of this region as government, tourism and the services industry.

<table>
<thead>
<tr>
<th>Areas</th>
<th>2001 pop. (census)</th>
<th>% growth 96-01</th>
<th>2004 pop. (estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core</td>
<td>211,704</td>
<td>1.3%</td>
<td>224,791</td>
</tr>
<tr>
<td>Peninsula</td>
<td>39,085</td>
<td>4.4%</td>
<td>41,893</td>
</tr>
<tr>
<td>West Shore</td>
<td>61,379</td>
<td>5.4%</td>
<td>67,764</td>
</tr>
<tr>
<td>Gulf Islands</td>
<td>13,586</td>
<td>1.3%</td>
<td>15,190</td>
</tr>
<tr>
<td>Total CRD</td>
<td>325,754</td>
<td>2.4%(^{10})</td>
<td>349,448</td>
</tr>
</tbody>
</table>

**Table 1: Estimate of the Population Growth, Capital Region (Source: Capital Regional District (2005:np))**

3.5.2 **Transportation for older adults in the Capital Regional District**

All municipalities in the CRD are signatory to the Regional Growth Strategy (RGS), the goal of which is to "promote a balanced and sustainable system that is reasonable and affordable" (Capital Regional District 2005:np). The RGS also acknowledges that any decisions made has cross boundary, inter-community impacts. The Travel Choices Strategy (TCS), dating from April 2005, also provides the region and its member municipalities with "a common vision for developing transportation policy in the future" (Capital Regional District 2005:np). Its goal is to "significantly increase the proportion of people walking, cycling, using transit, ride-sharing and using other alternatives to driving alone" (Capital Regional District 2005:np).

Although commenting on the need to enhance the mobility of communities' members, none of these reports specifically address the mobility concerns surrounding the growth of the senior population. Their focus is primarily on structural transportation issues, for example in terms of traffic flow or parking demand. However, some municipalities acknowledge older adults' needs in their Community Plan. For example, the Corporation of the Township of Esquimalt recognizes that "an active senior is happier healthier, less isolated and less dependent on the health care system" (Corporation of the Township of Esquimalt 2006:np). Further, the District of

\(^{10}\) 1996 to 2001 population change in British Columbia is 4.9% (Statistics Canada 2006)
Oak Bay states that one of its objectives is “to encourage the development of a range of housing and care alternative for seniors” (The Corporation of the District of Oak Bay 2006:np). Thus, while the need to cater to the needs of seniors is recognized, transportation -from a social and health care point of view- too often remains peripheral to discussion and planning in communities.

<table>
<thead>
<tr>
<th>Municipality</th>
<th>0-19</th>
<th>20-64</th>
<th>65-84</th>
<th>85+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esquimalt</td>
<td>3,395</td>
<td>10,235</td>
<td>2,155</td>
<td>345</td>
</tr>
<tr>
<td>Oak Bay</td>
<td>3,765</td>
<td>7,825</td>
<td>3,820</td>
<td>850</td>
</tr>
<tr>
<td>Saanich</td>
<td>23,830</td>
<td>61,705</td>
<td>15,945</td>
<td>2,175</td>
</tr>
<tr>
<td>Victoria</td>
<td>10,650</td>
<td>48,700</td>
<td>11,535</td>
<td>3,235</td>
</tr>
<tr>
<td><strong>Core</strong></td>
<td><strong>41,640</strong></td>
<td><strong>128,465</strong></td>
<td><strong>33,455</strong></td>
<td><strong>6,605</strong></td>
</tr>
<tr>
<td>Central Saanich</td>
<td>3,785</td>
<td>8,950</td>
<td>2,420</td>
<td>205</td>
</tr>
<tr>
<td>North Saanich</td>
<td>2,220</td>
<td>6,180</td>
<td>1,920</td>
<td>130</td>
</tr>
<tr>
<td>Sidney</td>
<td>1,980</td>
<td>5,385</td>
<td>2,955</td>
<td>605</td>
</tr>
<tr>
<td><strong>Peninsula</strong></td>
<td><strong>7,985</strong></td>
<td><strong>20,515</strong></td>
<td><strong>7,295</strong></td>
<td><strong>940</strong></td>
</tr>
<tr>
<td>Colwood</td>
<td>4,220</td>
<td>8,200</td>
<td>1,235</td>
<td>90</td>
</tr>
<tr>
<td>Highlands</td>
<td>450</td>
<td>1,125</td>
<td>90</td>
<td>0</td>
</tr>
<tr>
<td>Juan de Fuca E.A.</td>
<td>940</td>
<td>2,625</td>
<td>385</td>
<td>15</td>
</tr>
<tr>
<td>Langford</td>
<td>5,385</td>
<td>11,600</td>
<td>1,670</td>
<td>190</td>
</tr>
<tr>
<td>Metchosin</td>
<td>1,225</td>
<td>3,150</td>
<td>450</td>
<td>30</td>
</tr>
<tr>
<td>Sooke</td>
<td>2,445</td>
<td>5,180</td>
<td>1,020</td>
<td>90</td>
</tr>
<tr>
<td>View Royal</td>
<td>1,665</td>
<td>4,600</td>
<td>920</td>
<td>80</td>
</tr>
<tr>
<td><strong>West Shore</strong></td>
<td><strong>16,330</strong></td>
<td><strong>36,480</strong></td>
<td><strong>5,770</strong></td>
<td><strong>495</strong></td>
</tr>
<tr>
<td><strong>Gulf Islands</strong></td>
<td><strong>2,550</strong></td>
<td><strong>7,805</strong></td>
<td><strong>2,925</strong></td>
<td><strong>310</strong></td>
</tr>
<tr>
<td><strong>CRD total</strong></td>
<td><strong>68,505</strong></td>
<td><strong>193,265</strong></td>
<td><strong>49,445</strong></td>
<td><strong>8,350</strong></td>
</tr>
</tbody>
</table>

Table 2: CRD Population by Age Group -2001 Census- (Source: Capital Regional District (2005:np))

BC Transit’s fleets serve all areas in the CRD, with the exceptions of the Gulf Islands, East Sooke and Port Renfrew. Public transit buses are fully accessible, and BC Transit offers a Community Travel Training program to help familiarize people with the conventional transit system. BC Transit also proposes a custom, door to door transportation service for those not able to use the conventional transit system. This service is provided through Farwest HandyDART Service Inc (HandyDART), a BC Transit subsidiary company. Eligibility is granted in relation to criteria based on cognitive and physical disabilities. This eligibility can be for a short period of time or permanent, and the cost of this service is minimal: one way trips cost $1.75,
monthly passes cost $63 and attendants ride at no costs. In addition, the Taxi-Savers program—which requires a HandyDART pass—subsidizes 50% of the cost of taxi-rides up to $60 per month (BC Transit 2006)

In 2003, the CRD, Vancouver Island Health Authority (VIHA), BC Transit, the Centre on Aging (University of Victoria), volunteer service associations and community groups decided to investigate the state of transportation services for older adults in the CRD. Through users’ focus groups and a mailed questionnaire survey, “Accessible Transportation for All in the Capital Regional District: Where Are We Now, Where Should We Be Going?” (Allan and Mc Gee 2003), established the need for a new approach to accessible transportation in the CRD. In particular, this research reported the need to recognize the importance of accessible transportation in the life of older adults, the cross-organizational aspect of accessible transportation, the lack of information and education in the CRD communities and the differences of resources and needs between rural and urban areas in the CRD. To reach these conclusions, Allan and Mc Gee (2003) conducted an inventory of the existing transportation services in the CRD that included BC Transit and HandyDART, eight private transportation providers (including taxis and bus services), nineteen volunteer organizations and thirty-seven community organizations (including hospitals and seniors residences).

In 2005, in response to the findings of the first report, the same partners decided to investigate the possibility of a new approach in the CRD, namely, the opportunities existing in the coordination of activities of organizations providing accessible transportation services in the communities. “Coordinated Accessible Transportation: A Vision for the CRD” (Dibert, Allan et al. 2005) followed up by exploring the level of interest in the CRD amongst transportation providers for a new transportation system, with the goal of using the information gathered during the research to develop a CAT system tailored to the needs and resources of the CRD. sixty-six of the informants who participated in the 2003 project were sent a questionnaire survey. The low response rate did not support further action, but was not interpreted as an indication of a lack of interest, rather, it was speculated that organizations needed to know more about the consequences for a new program on their organizations before committing to participate (Dibert, Allan et al. 2005).
3.6 Data Collection

This section looks at the manner in which the data for this research project was gathered.

3.6.1 Sampling

Interviews with twenty-three stakeholders from different transportation providers' groups existing in the CRD were conducted during the summer of 2005\textsuperscript{11}. This research project involved a wide variety of individuals, at the management level, working across organizations and systems geared towards providing transportation to seniors and people with disabilities. Informants included community transportation providers from different constituencies: (1) provincial government, (2) local government (e.g. CRD), (3) public agencies (e.g. BC Transit), (4) not for profit organizations (i.e. government funded seniors housings or day programs organizations that rent or own vehicles for transportation), (5) private seniors housing (i.e. for profit organizations that rent or own vehicles for transportation), and (6) volunteer organizations (i.e. not-for-profit organizations that provide transportation through the services of volunteer drivers). In addition, four informants were interviewed in their capacity as 'experts' regarding issues surrounding the provision of transportation to seniors. These key-informants have a different perspective on the implementation of a CAT program in the CRD, and were beneficial for the 'outsider' views they brought to this study. All individuals contacted agreed to participate to this study, with two exceptions: one person declined to participate but was receptive to the idea of being contacted in the future if a CAT program were to be developed in the CRD, and another individual declined to participate for personal, undisclosed reasons.

The number of informants from each category of transportation providers is detailed in the Table 3. This is a somewhat arbitrary classification since some participants could belong to two or more groups; however, this classification was made for the purpose of the analysis conducted in this study and will be further detailed when the results of the interviews are discussed.

\textsuperscript{11} A Human Research Ethics Board Certificate of Approval can be found in Appendix 4
Table 3: Stakeholders interviewed

<table>
<thead>
<tr>
<th>Stakeholder Groups</th>
<th>Number Interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provincial Government</td>
<td>3</td>
</tr>
<tr>
<td>Local Government</td>
<td>2</td>
</tr>
<tr>
<td>Public</td>
<td>3</td>
</tr>
<tr>
<td>Not for Profit</td>
<td>5</td>
</tr>
<tr>
<td>For Profit</td>
<td>3</td>
</tr>
<tr>
<td>Volunteers</td>
<td>3</td>
</tr>
<tr>
<td>Experts</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total interviewed</strong></td>
<td><strong>23</strong></td>
</tr>
</tbody>
</table>

Although there are no simple rules for sample size in qualitative research, Patton (2002) recommends that this decision be reached by the researcher in the context of the quality of information gathered. In this case, the decision was made to stop contacting new informants when the researcher felt that enough information was gathered in terms of breadth, depth and variety of responses to develop a PLM representative of the stakeholders’ vision of CAT program in the CRD. Seidman (1998) lists two criteria: “sufficiency”, the sample size in regard to the population, and “saturation”, which describes the moments when the same information is consistently repeated. Both of these criteria were believed to be met by the twenty-three informants. Purposive and snowball sampling were used to achieve this total of twenty-three informants.

**Purposive sampling**

The intent of this type of sampling is to address the in-depth understanding of a specific topic (Patton 2002). Thus, the focus of the sampling is on individuals that can provide relevant information and who are pivotal to the research – the information rich cases noted by Patton (2002) and Creswell (1998). Stakeholders in the provision of seniors’ transportation in the CRD were identified through previous
studies (i.e. Allan and McGee 2003; Dibert, Allan et al. 2005). Informants in this thesis research project were first chosen and contacted on the basis of their participation in the 2005 studies. Thirteen informants formed the core participants of this research. This decision was made because these informants, having demonstrated their interest in furthering the work already done on accessible transportation in the CRD, were more likely to be receptive to the idea of participating in yet another research project. Further, they already had an established relationship with the researcher. However, because this study is aiming to include as many different constituencies as possible to achieve a throughout representation of a CAT program, other essential informants (for example in provincial and local governments) were contacted at the same time.

**Snowball sampling**

At the end of each interview, participants were asked to identify other individuals in their professional networks who were relevant to this study. When a name emerged more than once, the individual was contacted. The sampling process was stopped when no new names emerged during interviews. This approach facilitated selection and the development of relationships with new informants (O’Connor 2004) while ensuring that a broad range of transportation providers in the CRD was contacted.

### 3.6.2 Sampling bias

Participants in this study all come from a small population, i.e. stakeholders involved with the provision of seniors’ transportation in the CRD. With the exception of a few individuals, all participants know each other, are aware of each other’s viewpoints regarding CAT, and are engaged, directly or indirectly through their organization, in activities aiming to improve the transportation system in the CRD.

### 3.6.3 Interviews

The purpose of the interviewing process was to record informants’ “subjective understanding” (Schutz 1967; cited by Seidman 1998:5). In the context of this study, it consists of informants’ professional and personal experiences, as well as knowledge and interest in accessible transportation. A few days before their interview, each informant received an information sheet. This sheet consists of information on the purpose and background of this study, as well as basic
information on CAT (Appendix 5). Two possible models of CAT for the CRD, adapted from models developed by Dibert, Allan et al. (2005) were also presented. Both models were generated only for the purpose of discussion. During the interview, these models were re-introduced and explained by the researcher. The rationale behind this approach was to guarantee that each participant had the same basic understanding of CAT.

All interviews were conducted by the same researcher and lasted between 25 to 90 minutes. Each interview took place in the participants’ office. Interview guides were developed to ensure that the same series of questions were asked of each informant, while allowing the interviewer to have a free conversation with his/her interviewees (Patton, 2002). Before each interview, Informants were asked to review and to sign a 'Participant Consent Form' (Appendix 6). Semi-structured interviews were used in this study because they allowed for open-ended responses, and ensured that all topics were consistently covered during each interview (Wengraf 2001). Semi-structured interviews are described by Marshall and Gretchen (1995) as a flexible framework and as an efficient use of time; they are in fact an effective way to gather large amounts of information in a short period of time.

Although all topics in the guideline were included in each interview, the order of the questions was left to the discretion of the researcher. Interviews often ended with a few minutes of informal conversation. Each interview was taped and notes were taken. These notes had two purposes: firstly, to keep track of questions asked, and secondly, as a backup tool, to prevent data loss by mechanical accident, for example computer or tape recorder failure (Marshall and Gretchen 1995).

3.6.4 Interview guide

The work of the researcher is to provide the informant with a framework for expressing his/her ideas (Patton 2002). The semi-structured questionnaire that was developed serves as this framework. The use of open ended questionnaires allows the informant to decide what is “meaningful and salient” (Patton 2002:56). Questions were designed to support the development of a PLM and focused on building up knowledge in each thematic area (e.g. target population or initial conditions).
Informants were broadly divided into two categories and two types of questionnaire were used for the interviews.

**Questionnaire for administrators:** This category includes all stakeholders who did not directly provide transportation services in the CRD but who were generally considered experts in this topic area. Alternatively, they were managing an organization that provides transportation services on a large scale. Questions were oriented, for example, towards the identification of concerns and issues for the CRD as whole. This questionnaire can be found in Appendix 7.

**Questionnaire for providers:** This category includes all stakeholders directly providing transportation services to seniors in the CRD through their organization. Questions are focused for example, on their experience (or lack of), in coordinated transportation and their individual concerns and issues regarding the provision of transportation to seniors. This questionnaire can be found in Appendix 8.

### 3.7 Data analysis

The use of a PLM as a tool and framework necessitates a two-step process: (1) a PLM tailored to the objectives of this study is developed, and (2) data gathered during interviews is analyzed and integrated into the model.

#### 3.7.1 Development of a PLM for Coordinated Accessible Transportation in the Capital Regional District

Drawing on models used in other studies (e.g. McLaughlin and Jordan 1999; Carroll and McKenna 2001; Dickman, MacIntosh et al. 2003), some elements were borrowed and modified to accommodate the context of this case study and the objectives of this research. The model developed in this study is a macro-model because it illustrates the links and relationships imbedded in this CAT program. However, this CAT program itself is made up of components, i.e. smaller programs which are necessary to the functioning of a CAT program. In fact, a PLM could be developed separately for each of these programs/components. For example, stakeholders may deem the training of drivers necessary to ensure consistency in the quality of service across the different groups of transportation providers. Driver training is a component of the CAT program (the macro-program) but is also a program of its own (a micro-program) with its own assumptions and goals.
There are 7 elements in this model. Initial conditions and assumptions are the first components presented. They are the factors leading to the inputs and to the elements logically associated with them, target population and goals. These elements also provide a background for the barriers to implementation identified by stakeholders. Incentives to implementation are placed at the bottom because they do not yet exist, but are deemed necessary by stakeholders to ensure the successful implementation of a CAT program and/or to sustain CAT in the CRD.

Figure 13 below shows the PLM template developed for the analysis of the information gathered during interviews and show the relationships between the PLM components.

**Figure 13: Program Logic Model template for a CAT program in the CRD**

![Program Logic Model](image)

The 7 elements comprising this model are identified and explicated below:

- **Initial conditions**: provide background to the program. These contextual elements are described by Renger and Titcomb (2002:494) as "the root causes of the problem being targeted". They are also statements describing current needs or problems (Patton 1997), from the points of view of the different stakeholders participating in this study. Initial conditions can positively or negatively influence the outputs of a program (McLaughlin and Jordan 1999) and are also are useful to clarify the assumptions under which the program operates. For example, a lack of interest from the general public can be a factor that influences the provision of transportation to seniors and
people with disabilities, thus a CAT program may be useful in attracting public attention towards seniors' transportation issues.

- **Assumptions:** are expectations that each informant holds with regard to the implementation of a CAT in the CRD. This includes any implicit program theory that informants may have already formed on their own. For example, informants may believe that a wider range of options will encourage older adults to be more active members of their communities.

- **Target population:** represents the individuals or groups that are impacted by the program's activities. Porteous, Sheldrick et al. (2002) identify this population not only by sociodemographic attributes but also by social or health characteristics or even by categories of problems. For example, individuals who have difficulties using the conventional public transit system are amongst the target population of a CAT system.

- **Inputs:** are the processes or actions steps (McLaughlin and Jordan 1999) needed to influence causal factors, as well as the resources (e.g. human, structural, financial) that need to be put forward in response to an initial condition and that are necessary to reach goals. In this model, it also includes the services made available to the target population (McLaughlin and Jordan 1999). For example, developing a structure to enhance communication between stakeholders will ensure that they are aware of transportation resources available in the CRD.

- **Goals:** Dwyer and Makin's (1997) PLM model differentiates between goals (statements to provide a rationale for the program, or changes to the initial conditions) and objectives (quantifiable statements). For the purpose of this study, goals will be used to describe outcomes of inputs. In addition, short-term and long-term goals are defined. Short-term goals include the immediate result of activities (likely to happen between 6 months and one year after the input), and long-term goals are the social and economic consequences of inputs, likely to happen a few years after the short term goals. (Schalock and Bonham 2000; Porteous, Sheldrick et al. 2002).

In this model, two more elements are added specifically for the purpose of meeting the objectives of this research, i.e. identifying keys factors in the implementation of a CAT program in the CRD.

- **Barriers:** describe obstacles to successful partnerships between transportation providers. These obstacles can be, for example, financial, regulatory, or logistical. For example, an organization can be hesitant to drive another agency's clients because of insurance liabilities concerns.

- **Incentives:** are the conditions that need to be in place before a program is operational (Cooksy, Gill et al. 2001). In this model, it will include stakeholders' suggestions on facilitating the implementation of a CAT program in the CRD. For example, the conduction of an information session before the
implementation of a CAT program would help alleviate stakeholders' concerns regarding specific issues such as insurance liability.

### 3.7.2 Data integration

The second step of the analysis process involves the integration of the gathered data into a PLM. This process is inductive (Seidman 1998), moving from individual interviews to a macro model that articulates the vision of the stakeholders as a whole. Each interview was transcribed into written text to facilitate the analysis. However, only salient excerpts were transcribed verbatim; in most instances, detailed notes were taken. Taped interviews were preserved as a back-up, and to allow the researcher to return to original interviews to clarify specific topics if needed (Seidman 1998).

Only key elements were categorized to build a PLM (McLaughlin and Jordan 1999), and the researcher's knowledge on CAT was used to isolate information important to the development of a model. Data in the interviews were categorized using six different domains that are also components of the PLM guiding the questionnaire: initial conditions, assumptions, target population, inputs, goals, barriers, and implementation incentives. Within each of these domains, data were reduced to capture main ideas (Creswell 1998). This process was iterative: statements were categorized into domains and interviews were reviewed until all themes were exhausted. Anecdotal data, the "flotsam and jetsam of local events" (Miles and Huberman 1994:30) that arise as a result of the conversational approach of the interviews, were also analyzed and aggregated. These anecdotal data often give meanings to a sometimes seemingly disconnected logic in the interview data (Miles and Huberman 1994). In fact, anecdotal data often created the link between two elements of the PLM. The use of a PLM as a tool to organize data permitted the researcher to remain neutral, with an "open attitude" (Seidman 1998) while building the PLM model.

As the model was being built, its logic—the sequential order of its elements—was constantly re-assessed and links between each component were considered. "If-this-then-that" sequences were used to check the validity of the links between elements, especially between short and long term goals (McLaughlin and Jordan 1999; Stinchcomb 2001). For example, informants may state that, if there are more transportation options available for seniors to use, they will likely be able to access...
more services and activities in their communities. If their capacity for participating in their own community's life is enhanced, it is likely that their quality of life will improve as well. The development of a PLM in this context was neither a top down (from inputs to goals attained) nor a bottom-up approach (from articulated goals to needed inputs); rather, components of the model were developed together, following methods identified by Rowan (2000). The result of this montage (Denzin and Lincoln 2003) was a model simultaneously displaying all components of a CAT program in the CRD.

3.9 Limitations of this research

Although this study is focused on the steps necessary for the implementation of a CAT program, one of its objectives is, by extension, to examine and describe what the potential of this program could be. The Canadian experience with CAT programs is very limited and, as a result, the program described is theoretical; therefore it does not include issues that will inevitably arise during its implementation and that cannot be foreseen at this time. As such, implementation theory is hypothetical but describes how the program should ideally perform (Weiss 1998; Stinchcomb 2001).

Stakeholders in the CRD are currently trying to find a solution to seniors' transportation problems within their communities and have identified CAT as a possible solution (Allan and McGee 2003; Dibert, Allan et al. 2005). The recognized need to work towards a solution was the main catalyst for this research. However, geographic settings, demographics, economics and policies are factors that have localized impacts. This raises the dilemma of "typicality" and generalizability that is often cited by authors commenting on a single case study approach (for example Stakes 1994; Creswell 1998; Lincoln and Guba 2000). Following arguments made by Lincoln and Guba (2000), results of qualitative research do not lead to generalization but to "transferability", and depend on the level of similarity -"fittingness"- of two situations.

This study does not aim for generality; rather, its goal is to delineate the steps necessary for the implementation of CAT programs in a specific Canadian context, using the CRD as an example. However, the framework chosen, i.e. a PLM,
allows for future comparison and aggregation with other studies (Rowan 2000), both important for potential generalization (Schofield, 2000). According to Gomm, Hammersley et al. (2000:99), a case study is a “microcosm of some larger system”, and the study of the CRD, although bearing its own specificities, can still provide other communities in Canada and abroad with a ‘blueprint’ of the implementation of a coordinated accessible transportation program.
4.0 Descriptive Results: Providing Background for the Program Logic Model

This chapter focuses on outlining the findings from the individual perspectives of the twenty-three semi-structured interviews that were conducted. It acts as a background for the program logic model (PLM) of a CAT program in the CRD, presented in the next chapter. First, interviews are grouped by informants' affiliations (i.e. volunteers, provincial government, local government, not-for-profit, for profit, and experts). Current transportation resources as well as their past experiences, if any, with transportation partnerships are reviewed. Transportation resources, in this instance, encompass any resources, human or material (i.e. vehicles) that an organization uses to meet its transportation mandate. In addition, their transportation issues (i.e. difficulties with meeting their transportation needs) are presented. The last section of this chapter presents the discussion generated by the two models of CAT programs introduced during interviews.

4.1 Stakeholders in the Capital Regional District

This section looks at providers individually, in terms of transportation resources, issues and partnership's experience.

4.1.1 Volunteer Agencies

Transportation Resources
Three volunteer agencies were contacted for the purpose of this study. All of them provide only individual, one-on-one transportation services. Their drivers are all volunteers who use their own vehicles and who are recruited through local media (e.g. newspapers), posters in public locations, or simply by word of mouth. This type of transportation service is usually directed towards older adults or persons with disabilities. One informant described her agency as being "an outreach service, to assist people to stay independent in their own home". Another agency works on "[having] everyone go where they want to go" while the last informant explained that the mandate of her agency is "to get the people connected with the community".
Clients are usually referred to these agencies by doctors, social workers, agencies and programs. Users of this service are at the discretion of the agency contacted; however, set criteria do exist. For example, one agency lists "low income, those who cannot use public transportation, and those who need companions, thus seniors mostly". In terms of purpose, most agencies schedule medical appointments first, followed by other activities as a function of driver's availability.

**Transportation issues**

Across the board, volunteer agencies unanimously identified the lack of volunteers as being their biggest concern. According to informants, the demand for volunteer transportation is steadily increasing, while recruiting volunteers is becoming more difficult. One informant commented that her volunteer drivers are mostly males and that "the majority are semi-retired with some leeway in their time". Inferring that her/his drivers are mostly retired individuals, another informant added that it is especially hard to find drivers during the holidays, particularly during the winter holidays "because [many] volunteers are going to warmer climates".

Agencies have a small advertising budget, but one informant pointed out that "recruitment [i.e. advertising] is not the real issue...getting people to volunteer is the problem". Keeping volunteers is also a concern; another informant observed that "[we] almost need a training session for the clients to be nice to the drivers...the experience with the clients is going to make the drivers stay or go".

As mentioned above, most of the trips are for medical appointments, social activities (e.g. shopping) are made with the driver's agreement and his/her willingness to 'chain-trip', i.e. a single trip with multiple purposes and multiple stops. Most drivers prefer not to wait and would rather do 'straight' trips. As a result, the demand for multiple purpose trips or social trips is often left unmet. The complexity attached to the provision of transportation to older adults is also another factor that increases difficulties in meeting the demand for transportation. This type of transportation requires not only a specific vehicle's capacity (e.g. enough room to accommodate walkers) but also drivers with a level of comfort with regards to the physical and cognitive impairments of some of the users of this service.
The rising price of gas also has to be taken into account with the difficulty of recruiting volunteers. Currently, the rate of reimbursement is generally about 28 cents per kilometre but one agency mentioned “working on increasing [this] to 35 cents per kilometre”. However, this increase can happen only through fundraising since, according to informants, funding cannot be used directly for mileage reimbursement. As a result, the lack of funding to maintain services in light of the increasing demand for volunteer transportation is an issue for volunteer agencies.

**Partnership experiences**

All three volunteer agencies have entered into transportation partnerships, although at different levels and for short periods of time. One agency had a six month partnership with another not-for-profit organization. This partnership was initiated because of the need to get isolated people to and from a program. The role of the volunteer agency was to supply drivers and vehicles for the trip. Although this agency’s informant recognized the benefit of such a program, she described it as being “a coordination nightmare” and added that “[we] tried to do it without realizing how challenging it was going to be, we had no system”. The other two agencies had short, informal partnerships with, for example, recreation centres or community associations. These partnerships mainly consisted of supplying drivers for the partner organization.

### 4.1.2 Not-for-profit organizations

**Transportation resources**

There were five informants in this group. While they all managed a not-for-profit organization, they had various vested interests in transportation. Two managed agencies offering activities designed for older adults and people with disabilities (e.g. day program activities), while another two managed not-for-profit (i.e. government funded) housing for older adults. The last informant’s organization specializes in the provision of transportation exclusively for medical purposes, and uses family and volunteer services to meet its mandate. Accordingly, the transportation resources available to each are different. Not-for-profit housing usually has very limited transportation resources; residents rely mostly on HandyDART, taxis and volunteer drivers for personal trips. One organization has an in-house vehicle that is used for the social outings organized by the in-house
program coordinator. Day program activities have buses and/or vans used exclusively for the purpose of driving participants from their home to their respective activities and back.

**Partnership experiences**

Not for profit organizations’ experience with transportation partnership varies: one agency regularly lends its vehicle to other organizations while another prefers to use its vehicle for activities attended by its own users only. In general, agencies are reluctant to lend their vehicles: insurance liabilities and the cost of vehicle maintenance act as a deterrent to a durable transportation partnership. However, if they do lend their vehicle, one of the main problems seems to be the time and effort that has to be put into the planning/scheduling of the partnership.

**Transportation issues**

Transportation issues for these not-for-profit agencies are especially notable in two areas. First, not for profit housings that own a vehicle have difficulties with finding drivers. In the case of one informant, a van was purchased with fundraisers’ money, but this vehicle, although insured, has not been used for months because of the difficulty of finding volunteer drivers with a Class 4 license. In addition, these drivers often ask to be paid, which organizations cannot afford to do. A Class 4 commercial license is required when transporting more that 10 passengers or transporting passengers with special needs (Insurance Corporation of British Columbia 2006). Another agency also fundraised to buy its vehicle and still uses fundraising money for the vehicle’s maintenance.

Volunteer drivers are usually recruited through family or church connections, but the cost of a Class 4 license is often a hindrance to volunteering. Although a Class 4 license needs to be renewed only every 5 years, drivers who are 65 years old or older are required to pass a medical examination every year and are responsible for the cost of this examination (Insurance Corporation of British Columbia 2006). An informant recalled that her last volunteer driver got his Class 4 license only because his mother was a resident; he stopped volunteering when she passed away. Most organizations rely on volunteer agencies to provide them with drivers; however, volunteer agencies now have difficulties filling requests. Hence, the shortage of
volunteers makes planning ahead a necessity, and small social outings, especially spontaneous outings, are affected.

The second issue for these organizations is related to the size of the catchment areas of day programs. Organizations that pick up their users daily found that most of them sit in the vehicle for a long period of time before arriving at their destination because of the length of the trip. This makes the trip uncomfortable for some users. Those organizations who do not provide transportation services for their clients found that some of them have difficulties traveling to the day program’s location. They struggle with taking the traditional transit system, do not qualify for HandyDART services and find taxi services too expensive to be taken on a daily basis.

4.1.3 For-profit organizations

Transportation resources

Two of the three private, for-profit residences participating in this study own a vehicle. They are mainly used for social outings, and reserved exclusively for the use of the residence’s clients. One of these residences (although owning a van) also rents a larger bus once a month for outings that involve a larger group of residents (it usually consists of a drive and/or a picnic). For these outings, drivers are employees of the residence and driving the organization’s vehicle is part of their job description for which a Class 4 license is mandatory. The third organization does not own a vehicle and relies on HandyDART and taxis for social outings (typically twice a month).

In all three organizations, residents use the services of family members, HandyDART, taxis or the conventional public transit system for medical appointments or personal outings. One informant commented that providing transportation services is not part of her organization’s mandate and that “if [she] were to do it, [she] would spend the day doing it”. Residents rarely use volunteer drivers, but volunteer services do provide companions for the residents’ medical appointments, i.e. someone to accompany the resident from the vehicle to the door of a doctor’s office for example. A minority of residents still own a vehicle, although one informant remarked that “some of them have not moved for months, [residents] cannot let it [i.e. car ownership] go, half of them don’t drive”. Another one added that “they
should not be [driving], a ninety years old driving! It is a big adjustment when you cannot drive yourself anymore, and I watch them struggle with it”.

**Partnership experiences**

Only one of these organizations tried to take part in a short term transportation partnership. It consisted of picking-up and driving members of other organizations to common activities. This partnership ended because of the concern over “transporting people who do not belong to the organization”.

**Transportation issues**

The mandate of these for-profit organizations does not require them to provide their residents with any transportation services other than the occasional social outings. As a result, many informants are unable to comment on their residents’ problems with transportation, if any. An informant observed that “they [the residents] can afford to pay for taxis and so on” and that some prefer the taxi because of “the feeling of independence” it gives them. Residents of private organizations rarely use volunteer drivers. In fact, an informant pointed out that “[volunteer services] do not really want our business; people here can afford to pay, so they rather go to the needy [the less privileged]”. However, most residents are still on a fixed income and transportation services are frequently provided by family members, although one informant remarked that many residents do not have this option. They do not have family, or they have a family that is too busy to help them. The same informant remarked that “[many seniors] do not go anywhere because they are alone once they are there”. When residents have to rely on HandyDART for their daily outings, they are faced with the same issues as seniors in other types of residences and the planning involved in any trips seems to prohibit spontaneous outings.

**4.1.4 Public transportation agencies**

**Transportation resources**

All three informants from public transportation agencies who took part in this study were involved in the planning and/or management of the conventional public transportation system (BC Transit) as well as in the division of the public system
catering to people with cognitive and physical disabilities (HandyDART). Both organizations have been discussed in chapter Three.

**Transportation partnerships**

HandyDART regularly takes part in what could be considered preliminary steps towards CAT. For example, weekly shopping trips are organized at the initiative of one volunteer agency (who served as a link between senior residences and BC Transit/HandyDART). Residents of various organizations from the same catchment area are picked up once a week by a HandyDART vehicle at their respective residence, driven to a shopping mall, and driven back at an agreed upon time. This partnership is successful although the number of participants remains small; for example last year averaged 13 participants for a period of approximately four months.

**Transportation issues**

The increase in the demand for seniors’ transportation is also a cause for concern for the public agencies providing transportation services in the CRD. According to an informant, there are 150 to 200 new registrations per month. The same informant commented that “every time we increase services, there is an increase in demand” and that “there are no resources to provide more transportation services”. Under its current system, HandyDART has difficulties meeting the demand for trips. In 2005, about 700 requests for trips had to be put on a standby list on a monthly basis. However, if users arrive under the “1150 trips per weekday” limit (‘trip cap’), they are guaranteed a ride, anywhere in the CRD. Usually, problems stem from the fact that trips are booked individually and are difficult for HandyDART to group and coordinate for more efficient vehicle use. In addition, it is common for users to forget their booking since trips have to be booked two weeks ahead of time. Users also often fail to remember to cancel their trip, which adds to the complexity of daily scheduling. Further, there was no fiscal increase for HandyDART in the past 2 years and the number of vehicles (46) has remained the same\(^{12}\), thus as an informant explained, “requests and unmet trips increase but the trip cap does not.”

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\(^{12}\) In 2006, Handy DART started using a ‘Dispatch Scheduling Strategy System’ to maximise the use of its fleet. This new system includes a web based booking system, an interactive voice system recognition (which reminds users of their trips the night before and permits them to cancel if needed), and a computerized system that allows HandyDART to keep track of each vehicle and calls users 10 min before the vehicle arrives to destination.
4.1.5 Provincial government

Transportation resources

One of the three government employees contacted was directly involved in managing the transportation fleet. Transportation services are reserved only for people with medical care needs and for occasional social outings; they are not meant to transport people to and from daily facilities. This criterion is strictly observed and most users of day programs use the conventional transit system and HandyDART to travel to their location. Without being able to provide specific numbers, the informant commented that it is too difficult to keep track of the entire fleet at all times, the vehicles fleet is described as "large" and "including vehicles of all sizes". Theses vehicles are mostly used Monday to Friday between 9h to 5h and are commonly sent to different locations on Vancouver Island. Another informant's role was to provide "programs and community support". In this instance, there is no real mandate for transportation, but it remains an important issue since most programs require transportation to get to the location of programs and come back. The third informant worked on the planning of a program to provide access to medical services to people living in remote rural areas. This project was initiated by the provincial government, in an effort to "find ways to assist population (s) throughout B.C." and involved existing volunteer associations. It had fixed funding with "a mandate [about] how the money should be spent". The provincial government is responsible for the cost of gas and ferry if needed. The main criterion of this service is the obligation to have the medical appointment within a 75 km radius of the patient's house.

Transportation issues

Although provincial government agencies are not faced with the same type of transportation issues as other organizations, they will also have to address the issues raised by an increase in the older adults' population, especially with regards to increased participation to programs. For example, one informant pointed out that "about 30% more people are accessing more programs and require HandyDART [to drive them to the program]", thus adding more pressure on an already over-loaded system. Because of the nature of the transportation service offered, informants were not aware of governmental organizations entering into a transportation partnership with other organizations.
4.1.6 Local government

Two members of local and regional government respectively participated in this study. Municipalities are not directly involved in the provision of transportation to older adults; their mandate is to ensure that the population in their area is provided with adequate services, hence activities necessitating transportation. The informant participating in this research project worked in a municipality that can be characterized as urban, and benefits from BC Transit's transportation services. This municipality is described by the informant as a “safe, affordable, accessible community in which to live and work”. Seniors’ transportation issues are acknowledged as barriers for accessing programs. This municipality owns a bus and a van that have been used in the past to transport seniors to and from activities. The van will soon be decommissioned because of age and there are no plans to replace it.

At the regional level, transportation is only considered from a “coordination perspective”, i.e. by focusing on bringing together the different communities composing the CRD. As explained in Chapter Three, it is also part of the Regional Growth Strategy, which focuses on increasing transportation choices and accessibility for all groups. In the words of one informant, the role of the CRD is to “get agencies that deliver transportation services to take some initiatives”.

4.1.7 Experts

None of the four experts interviewed were directly involved with the provision of transportation services to older adults. However, through their professional occupations, they were familiar with the issues associated with the provision of transportation services to the community at large and/or of services to older adults and their family. Consequently, their interest in transportation spans issues related to economic, social, planning and service integration issues. For example, one informant stated that her organization’s goal is “to collect, research and disseminate” information for organizations that provides services to older adults. Another organization supports caregivers and this informant noted that members give very little feedback on transportation problems and “for the most part, seem satisfied”. However, this also could be traced to the fact that seniors in this instance are cared
for by members of the family who thus also become responsible for the provision of transportation.

4.2 Coordinated Accessible Transportation Programs for the Capital Regional District

Two models (see Figure 14 and 15 below) were presented to each informant and discussed during each interview to generate discussion on CAT. These models were originally created by Dibert, Allan et al. (2005) for the purpose of explaining the different structures that CAT programs can have. The majority of informants were not familiar with them.

4.2.1 Model One

![Diagram of Model One](image)

Figure 14: Model One - Information and referral network: Building on existing partnerships (adapted from Dibert, Allen et al., 2005)

According to most informants, this model is quite similar to the current system (described as an "informal transportation system"), and is the most likely to be implemented. One informant commented that "it is probably less productive [than Model Two, presented below] but is not mandatory, so more likely to be accepted [and] more likely to be implemented". Model One is also perceived to allow
transportation providers to retain control over their resources, and has the least organizational impact. However, some informants questioned the lack of “real sharing” between transportation providers, and commented that this model is still a “status quo” model that does not involve a lot of changes apart from the addition of a Transportation Coordinator (TC) to encourage communication between stakeholders.

On the other hand, because this model is similar to the present model, its implementation will just necessitate “incorporating, expanding and amending” the existing transportation model, thus preserving established routines and requiring minimal change. Some informants thought that Model One has too many layers, with the end result being that some users would still be “lost in the shuffle”. They were also concerned that it could just end up being more work for the providers who already “don’t have much time to collaborate”.

In contrast, other informants had a more positive outlook on this basic CAT system and believed that it is an “informative model”, focused on the sharing of information. They perceived that it could be a catalyst for “synergy in the community”, capable of providing momentum for a significant change with regards to the provision of transportation in the CRD.

4.2.2 Model Two

This model was perceived by those interviewed as being simpler and more beneficial because all transportation services are centralized. However, this benefit was also a weakness for some informants, especially in regards to the perceived lack of connection between agencies and users. Informants feared that they will not have direct contact anymore with their users or their drivers. In the words of one informant, “it has the potential to dehumanize the process, [and] seniors need a friendly environment”. In contrast, other informants recognized that an approach where the TC works as a booking centre and as a link between stakeholders would be beneficial. Coordinating transportation is usually a laborious task for organizations; agencies participating in a CAT program will have the ability to focus all their resources (human and financial) on their clients instead of scheduling transportation.
Direct access is recognized as the strength of this model; it is a model that privileges users in terms of simplicity, but transportation providers have to be "very comfortable" with the system in order to relinquish some control of their resources (human or material) to the transportation centre. Thus, according to the stakeholders, this "streamlined" model is easier for users, but will necessitate a lot of resources being implemented, and needs the participation and commitment of all transportation providers to be efficient.

Although all informants recognized that this simpler model, where "only one phone call is needed to book a trip", is advantageous; they also acknowledged that the changes necessary to implement such a model are the biggest stumbling block. These changes include not only modification in the structure of the current transportation system but also, and perhaps more importantly, a shift in the transportation providers’ culture and mind-set. Many of them commented that "people dislike change" and that such a drastic modification in approach to the provision of transportation may be difficult for both providers and users.
4.3 Conclusion

This chapter has revisited the experience of each informant and the issues their organizations have faced in trying to meet a growing demand for seniors’ transportation. Although each informant has their own perspective, these issues are ultimately similar in many ways: an increased demand for older adults’ transportation coupled with a lack of funding and resources make meeting the needs of seniors a daily struggle. Commonly cited problems include lack of volunteers, drivers and vehicles, a focus on medical transportation and little cooperation and communication between stakeholders. Partnerships are difficult to organize and liabilities and costs issues often seem to be insurmountable obstacles. The CAT model preferred by the informants is similar to the informal model currently in place, with the addition of a TC to support a continuous exchange of information and a sharing of transportation resources. However, although informants are aware of the need for a different approach to simplify the process of providing transportation, they also recognize that changing the current system can seem overwhelming.
5.0 Analytical Results: Building a Program Logic Model for a CAT program in the CRD

This chapter introduces a completed program logic model for coordinated accessible transportation in the CRD. This model is presented in Figure 16 below. In the next sections, each element of the PLM is further organized into statements that describe the stakeholders’ vision of a CAT program. First, the factors that resulted in the condition targeted, that is the difficulty in meeting the rising demand for older adults’ transportation in the CRD are established. These environmental factors are identified as initial conditions in the PLM. Assumptions are then presented. These statements articulate the theory under which the program will be operating, and the expectations that are the rationale for intervention. The next section identifies the population for whom the program is designed, i.e. the target populations. Inputs then articulate the actions necessary to reach the stated goals. These goals are broadly grouped into two categories: (a) short term goals, which are the direct results of inputs, and (b) long term goals, which relate to the long term consequences of the change produced by inputs. Finally, this model identifies two elements specific to this research project that are barriers to implementation (obstacles to partnerships) and incentives to implementation (actions that would support or promote the implementation of a CAT in the CRD).

5.1 Initial Conditions:

Stakeholders identified five main factors that results in the need for a new approach to seniors’ transportation:

1) Demographic shift and increase transportation demand

As expected, transportation issues in the CRD mostly reflect issues identified by stakeholders that are specific to their organizations. Stakeholders collectively acknowledged that the demand for transportation services for older adults is increasing and will continue to increase into the future, especially considering the CRD’s demographic trends. Some believed that the current system is already unable to meet the demand, that “[it] is getting overburdened with the rate of growth and demand” and that it is “disjointed”. Another informant added that “the system is
Figure 16: Program Logic Model for a Coordinated Accessible Transportation program in the Capital Regional District

- **Initial Conditions**
  - Demographic shift and increase in transportation demand
  - Lack of information and communication
  - Disparities in transportation resources between communities
  - Lack of transportation resources and funding
  - Insufficient numbers of volunteers and volunteer retention

- **Assumptions**
  - Enhanced mobility for seniors requires:
    - A wider range of accessible transportation options
    - Better use of existing transportation resources
    - More information on accessible transportation options

- **Target Population**
  - Seniors and people with disabilities
  - Anyone disabled and isolated because of the lack of transportation
  - Everybody in the CRD (including visitors)

- **Inputs**
  - Develop an efficient information/educational program for users
  - Develop a structure to facilitate the sharing of resources between stakeholders
  - Develop a plan of action to recruit and retain volunteer drivers
  - Integrate transportation in the planning of strategies and activities developed for seniors

- **Barriers**
  - Different levels of transportation needs in communities and organizations
  - Lack of willingness to share transportation resources
  - Lack of leadership and passivity
  - Fear of change from both stakeholders and users
  - Economic considerations
  - Systemic issues

- **Short-Term Goals**
  - Build or strengthen relationships between transportation providers
  - Increase transportation options in the CRD
  - Increase public and providers' knowledge about available transportation options in the CRD
  - Increase the accessibility to other services in communities

- **Incentives**
  - Stakeholders' involvement
  - Step by step approach
  - Policy framework

- **Long-Term Goals**
  - Facilitate mobility to support a healthy lifestyle for older adults

Source: Dibert and Cloutier-Fisher (2007)
plugged up right now ...there is a general awareness in the community that there is a tremendous need." Stakeholders also contended that this system gives priority to transportation for medical purposes, and that the demand for basic social outings, recreational, or spontaneous activities cannot be met. Informants commented that individuals who do not have the confidence, or the capability, to use the public transit system are at risk of becoming isolated. For example, if a trip to a recreation centre necessitates too many connections, or a lot of planning, older adults tend to get discouraged and to give up the trip altogether.

2) Lack of information and communication

Informants frequently observed that seniors are often not aware of available transportation options. In fact, an informant pointed out that it is difficult for older adults to know what transportation options are available to them, unless they are already involved in activities outside of their home or are living in senior’s housing. This also holds true for organizations; many are not aware of all the transportation options available in the CRD. Reflecting on the lack of communication between stakeholders, one informant commented that transportation providers are generally focused on their own activities, but are often not aware of other providers’ activities. Yet, other informants firmly believed that there are already “quite a few options available, with respect to travel training13, HandyDART, taxis savers [and] volunteer drivers”. Two informants suggested that they inevitably “hear only about the bad cases” since they only deal with people who are transportation challenged. Another noted that “complaints are about small incidents, not about systemic problems”. She added that “[the population in the CRD] is lucky here, better than most places”.

3) Disparities of transportation resources between communities

The size and composition of the CRD was identified as the root of many transportation problems. Disparities, in terms of transportation resources and needs, exist between rural and urban areas within the CRD, particularly within the traditional public transit system. This system was described as “not user friendly” because it is often challenging for older adults, “even if they are not disabled”.

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13 BC Transit offers a free Community Travel Training program to introduce seniors and people with disabilities to the conventional transit system.
Among these challenges, informants cited transit routes, bus schedules, limited bus service and the fact that the transit system is getting busier, "more big city like, focused on main streets". This alone could discourage older adults from participating in social activities. One informant explained that there is a need for more door to door services (similar to HandyDART) because of the lack of volunteers to serve as companions. The need for good walkability to get to the transit service was also emphasized, especially for rural areas where it is sometimes difficult for older adults to get to bus stops. Informants also noted a change in the location of services for seniors. They remarked that "services are moving out of the city core as the seniors are moving in". They also believed that the public transportation system has not yet adjusted to this new trend and that transportation services, especially bus routes, are still focused on getting to the city core. Similarly, the location of seniors’ housing or the schedule of seniors’ activities in recreation or day centres can be the source of transportation issues. For example, there is often no logical relationship between the location of residences and existing bus routes, or between senior activities and conventional transit system schedules. If these activities are scheduled during an already busy time of the day, it may be difficult to find a transportation option for the activity’s participants. Seniors may find it difficult to book a ride to go on an activity to a recreation centre, if this activity is scheduled at the end of the afternoon, which, according to informants is "rush-hour" for HandyDART. An informant commented that "[transportation providers] expect the public system to pick up the slack" and thus to remedy their lack of planning while simultaneously adding pressure on the public system (which includes BC Transit and HandyDART).

4) Lack of transportation resources and funding

The factors described above translate into a greater reliance on alternative transportation options especially on HandyDART services and volunteer agencies. Some informants felt that older adults and organizations are too reliant on HandyDART, when they could be using other options, such as sharing a vehicle or even using the conventional transit system. Further, informants alleged that some volunteer service users could be using the conventional public service but are not, for fear of having to face what they feel could be distressing situations, such as crowded buses or difficulties getting in and out of buses. Most informants admitted that the services provided by HandyDART are the best this organization can provide given its current resources. However, overall, these resources were identified as
being insufficient, especially with the limit on HandyDART's daily number of trips (the trip 'cap'). Without more funding, HandyDART's system cannot expand, hence the necessity for users to book ahead of time, taking away from spontaneous trips that are important for well-being. This necessity, and the perceived rigidity of HandyDART system, is often the cause of problems for users. However, informants also commented that the "bad experiences" of users could also be an indication that they do not understand how HandyDART works. For example, the need to have a ten minute pick-up window is often the source of complaints from users who do not want to have to be ready early and forced to wait. On the other hand, drivers need this window to take into account traffic delay or other users' lateness.

Informants offered conflicting information with regards to the transportation services provided by taxi services. One informant remarked that "the system grew a lot in the past 15 years, with companies developing positive attitudes, with drivers and equipment. Drivers are trained appropriately". In contrast, another informant alleged that "[taxi drivers] need to be trained to deal with the broad range of people we are dealing with". Although this could be due to users' different experiences with taxi drivers, most informants agreed that, even with the use of taxi saver coupons, it is still an expensive option for some users.

5) Insufficient number of volunteers and volunteer retention

It may be a function of the increase in the demand for volunteer services and the decrease in the interest in volunteer work, but the difficulty of recruiting volunteers in the CRD was also a concern raised by most stakeholders. This issue is reflected not only in a lack of drivers but also, for example, by a lack of companions to help seniors to go to their medical appointments.

5.2 Assumptions

Enhanced mobility for seniors requires a wider range of transportation options, better use of existing transportation resources and more information on accessible transportation options.

Stakeholders' interest in seeing the situation improve and in preparing for future needs was evident and clearly expressed by all informants during the interviews. A CAT system was mostly seen as a means to increase the range of
transportation options so that the only choice "[does] not always have to be BC Transit and HandyDART". How informants articulate their vision of a CAT program varied broadly according to their position in their organization, or with the type of organization they belonged to. For example, an informant from the provincial government described a CAT program, more specifically its coordinator, as "someone who would have access to the database of vehicles for all programs that provide services to the community and the population". Informants from for profit organizations were concerned with the economic incentives of a CAT program. For example, one commented that "there has to be some benefits [in the CAT program] for the owner [of the private housing]. It is a money making business". Informants belonging to volunteer and public organizations emphasized the potential benefits of a CAT system for their clients who will be "provided with more info on their options". They also expressed the hope that more transportation options will be another factor encouraging older adults to "get out".

A CAT program in the CRD was also seen as an information system where agents from the CAT program "would come and talk to the residents [about transportation options]", and where users and providers alike, would be able to speak with someone "capable of answering questions". In fact, many informants commented that one of the main problems a CAT program in the CRD will solve is the lack of information and communication between stakeholders. A busy schedule and lack of time were frequently blamed for this.

A CAT program is assumed to optimize existing resources. In fact, examples of unused resources were often cited during interviews and informants were aware that their own resources could be used more efficiently. For example, one informant alleged that, if a CAT system were implemented in the CRD, "[her] bus would not be going to too many areas; we could coordinate with other establishments to have our clients picked up." Another informant explained that, in the CRD, there are a "lot of vehicles available, but not enough money to put somebody behind the wheel - even when there is a real need for it. This is when coordination would be helpful." Informants expect a CAT program to allow communities to use existing resources in a way that would meet each stakeholder's needs. From the perspective of stakeholders, a CAT system would also support faster decision-making with regards
to the use of resources. They want a program that “provides a quicker response [and also] permits spontaneity”.

Finally, the primary providers of seniors’ transportation, such as HandyDART and volunteer agencies, are hoping that a CAT program will help shift some of the demand for transportation to other agencies, or will help organizations meet their transportation needs on their own.

5.3 Target population

Listed below are three main target groups identified by informants, and who, from their individual perspective, should be the beneficiaries of a CAT program in the CRD:

1) Seniors and people with disabilities
The nature of most informants’ work and the purpose of this study lead to seniors being the logical target population of a CAT system. In fact, some informants believed that such a program should be restricted to seniors because they felt that seniors currently have very little choice in terms of their transportation options. Others commented that the target population should be frail and vulnerable seniors because “everybody else has their own car or can take the bus”.

2) Anyone disabled and isolated because of the lack of transportation
Informants were aware of the importance of the choice of target population with regard to the potential social or economic benefits of such a program in a given community. For example, they not only identified seniors and people with disabilities as potential target populations, but some informants also emphasized that this program should be open to “anyone disabled or isolated due to the lack of transportation” in order to provide them with the mobility that is indispensable to healthy living. According to these informants, a CAT program should also be open to “anyone who cannot use the regular transportation system”, adding that “it would open a lot of opportunities to other groups that are transportation challenged.” Some informants felt that only users of participating organizations (i.e. organizations that pooled their transportation resources) should be entitled to use a CAT program.
These organizations were specifically described by one informant as the "types of programs that [are] need[ed] to get people out on day trips, for example, disabled people, seniors, and people with special needs."

3) Everybody in the CRD (including visitors)

Some informants also pointed out that improved access for all residents of a community is especially important in rural areas where transportation options are fewer. Another element brought up by an informant in favour of a CAT program for all, is that accessible transportation—and its issues—are still "a bit segregated". Opening it up to the public at large in the CRD will bring needed attention to the transportation problems faced by seniors, and will also familiarize individuals with accessible transportation before they are obligated to use it (for example, because of physical disabilities or driving cessation).

Informants in for-profit organizations emphasized that seniors in their facilities, also need transportation help "even though they seem to have more money." They would like to see a CAT program "available to every level of income." The economic advantages possibly brought up by a CAT program were obvious to most informants. For example, one wished a CAT program to be open to everybody, "visitors included". Although it is not the intended objective of a CAT program, informants rationalized that it would be a good marketing strategy for the region, "especially with the existing demography and the age group of most visitors" in need of a place with good accessible transportation options.

5.4 Inputs

Although not always able to describe what specific actions are necessary, stakeholders could identify the processes that would help their organizations meet the demand for transportation:

1) Develop an efficient information and educational program for users and stakeholders

The need for more information was at the forefront of stakeholders' concerns. For them, this included not only the sharing of information between stakeholders,
but also public education with regards to the different transportation options available. They acknowledged that seniors do not often know of existing options, and that a program should be created to “make [clients] aware of how good the system is, overcome [negative] perceptions and ease their fears”. In fact, despite existing programs (for example BC Transit’s community travel program), information sessions and up-to-date publications available to the public, some stakeholders admitted that they, also, did not know enough about existing transportation resources. They recognized that knowing more about available transportation options would enhance the services provided to their clients, which led one informant to remark that “[transportation providers] don’t know what is going on, and [they] should because it is important”.

2) Develop a structure to facilitate the sharing of resources between stakeholders

Informants felt that having an organization/individual to organize partnerships and resource sharing will give momentum to a CAT program. They were “waiting for some directions”, i.e. someone to tell them “how and when”. In fact, organizations with past transportation partnerships experience agreed that these partnerships were too time consuming and they were hesitant to commit spending anytime organizing more partnerships. Further, some informants wanted some “political action” to provide them with more support. Although not fully articulating the kind of political actions that would support accessible transportation, the most common argument is that a CAT would function better if supported by legislation “like in the States”, which refers to the fact that, in the United States, transportation providers are mandated to coordinate with other transportation agencies in their communities in order to receive most federal or local transportation grants.

3) Develop a plan of actions to recruit and retain volunteer drivers

The development of an incentive program to enroll and retain volunteer drivers was also a concern for stakeholders. Volunteer driving is pivotal in the provision of transportation to older adults and appears to be filling a gap between public transportation – BC transit or HandyDART – and private vehicles. Volunteer driving provides a customized door to door service, as well as a social contact that is sought after by many older adults. A higher rate of mileage reimbursement was the only incentive cited by informants; however, mileage reimbursement is highly
dependent on funding received, or on amounts fundraised by organizations. The need to make volunteering an attractive and enjoyable activity for community members was also brought up by informants. In fact, although never directly addressed by informants, the need to develop a stronger sense of community surfaced in many interviews. In particular, informants are keen to point out that a "healthy community" is also a community where every member participates in the community's life.

4) **Integrate transportation in the planning of strategies/activities developed for seniors**

The integration of transportation in the planning of senior’s activities, or in the location of seniors’ residences, was also a recurrent topic during interviews. Activities for seniors are often scheduled without regard for existing bus schedules or "rush hour" time for transportation providers. For example, according to informants, it is often enough to shift activities by half an hour to relieve the pressure on transportation providers and to allow them to meet the demand for their services. However, this planning necessitates constant and effective communication between all agencies as well as a comprehensive knowledge of the parameters involved (e.g. the number of vehicles necessary or the number of participants) in order to permit coordinated activities to function smoothly. In addition, stakeholders would also like to see the development of strategies specific to seniors’ needs in communities, i.e. strategies geared towards "finding new ways to do things for seniors". Informants cited the need to "spread the word out" in order to reach isolated seniors. This vulnerable population usually has limited access to transportation and has a high level of need for a CAT.

5.5 **Goals**

This section presents short term and long term goals for a CAT program in the CRD, identified by stakeholders in this research project.
5.5.1 Short-Term

1) Build or strengthen relationships between transportation providers

Establishing a solid relationship between stakeholders is the cornerstone of a CAT program. Open communication channels are pivotal to keep information current and to facilitate sharing transportation resources. It is also an essential step for the planning/development of activities and to ensure that a consensus can be reached with regards to the development of a CAT program in the CRD.

2) Increase transportation options in the CRD

This outcome is the immediate consequence of the coordination of transportation providers’ activities and of the optimization of existing transportation resources. In particular, informants hoped that vehicles that were not previously used will become accessible to organizations that need them. Further, seniors and people with disabilities are more than often restricted by lack of transportation and/or a schedule dictated by their mode of transportation. A wider range of transportation options will allow them to have more control of their mobility, so essential to their mental and physical well-being. More transportation options also mean more flexibility for stakeholders who will no longer be restricted by available transportation options in planning for activities offered to their users/clients. In addition, if organizations are not able to provide their clients with the needed transportation, they will have the ability to provide them with alternative options.

3) Increase public knowledge about available transportation options in the CRD

Accessible transportation is a topic that is generally not recognized until it is needed. A CAT program is also a means to familiarize the public with accessible transportation’s issues and benefits. Better knowledge of available transportation options can also be a tool to alleviate fears and preconceived ideas that some users hold with regards to accessible transportation. For example, according to informants, seniors often perceive some options as “safe”, such as volunteer driving and HandyDART. Other options, such as taxis or the conventional transit bus system, are perceived as being either too expensive or too challenging to use despite the efforts of these organizations to challenge these perceptions.
4) Increase the accessibility to other services in the CRD

Another immediate outcome of an efficient CAT program is better accessibility to community services for a wider range of individuals, allowing people to “get out and use more of the city’s facilities, from recreation centres to restaurants”. While informants felt that there is a priority in the transportation system towards medical trips, “especially when the capacity is restrained”, they also recognize the importance of other activities. For example, they remarked that “[recreation] is not a priority, although it should be as important as going to the doctor”. With a wider range of transportation options, there is an opportunity for seniors and organizations to choose the transportation option most capable of filling their needs and still allow for spontaneity, especially in recreational activities. Informants rated spontaneity, i.e. the ability to decide of an action on the spur of the moment without relying on someone else of having to plane ahead of time, as being an important factor in seniors’ quality of life. For them, spontaneity is generally associated with independence and autonomy.

5.5.2 Long-term goals

Facilitate a healthy lifestyle for older adults

Because mobility is recognized as a determinant of health (for example Metz 2000; Raphael, Brown et al. 2001; Rosenbloom 2003; Newbold, Scott et al. 2005), an efficient and affordable transportation system is crucial to facilitate a healthy lifestyle. In the words of one informant “the goal is to be healthy until you drop dead. Without mobility, you are dead”. Seniors with mobility issues are at risk of becoming isolated, without a support network indispensable for good quality of life. Informants often commented that isolation could often be remedied. One informant explained that if “[seniors] had an easy system to use, they would have a chance to go into the real world and interact with human beings”. Hence, a CAT can also be an opportunity to decrease social isolation and to enhance programs already in place. In fact, one informant observes that these programs are good opportunities to reach out to those at risk of being socially isolated. One suggestion is to reach out to isolated people “by providing companionship to people to initiate them into things they are not used to [doing]”. This is also what informants referred to as the “buddy system”. Once an older adult starts using a program, in this instance a CAT program, he/she is likely to introduce others friends to it.
During the transition period following driving cessation, the availability of convenient and affordable transportation options is critical. It is important that seniors be introduced to a range of transportation options before the loss of their driving license. One informant points out that “with aging, one minute you don’t need [accessible transportation], the [next] you do. If you are already familiar with [alternative transportation options], it is not as scary to call to ask for transportation [help]”. Informants were aware that driving cessation can be a traumatic event for older adults. One informant commented that “a lot of older drivers should not be on the road but taking their driving license away is like putting them in jail”. Providing transportation alternatives is a solution to issues related to the loss of independence and the consequent readjustment caused by the surrendering of their drivers’ license. By offering them reliable, convenient and affordable transportation options, a CAT program has the ability to keep them “connected [to the community]” and to support their ability to remain full members of the community in addition to helping them to accomplish daily tasks and activities.

A CAT system is also a chance to “increase health and [to create] a vibrant community”, especially by improving intergenerational contacts within the community. One informant deemed a CAT system a “shared concept of serving the community”. She/he further added that “communicating and sharing is part of being a community”. An element of a healthy lifestyle for older adults is also his/her acceptance as an active member of the community. In the words of one informant, “seniors usually feel isolated [and] shut off from the community. [They] feel like they have no purpose and [are] neglected”. Although the social benefits of a CAT program were often emphasized by informants, economic impacts were also identified by some stakeholders. The main argument for those informants was their belief that with an efficient CAT system, seniors will be able to stay in their homes longer. According to an informant, “[it is] a huge economic advantage...the longer they are independent, the longer they are going to be able to support themselves”. By extension, this will result in a decrease in the cost of health care financing in the long term. In her opinion, this is the strongest argument for obtaining funding for the implementation of a CAT program.
5.6 Barriers to implementation

In this research project, six different barriers have been identified that are elaborated below:

1) Different levels of transportation needs

As noted in Chapter Three, the CRD is composed of communities with different geographical, economic and demographic characteristics, which are reflected in their transportation needs. The Western Communities, i.e. Colwood, Highlands, Langford, Metchosin and View Royal, are often cited by informants as an example where there are gaps in transportation options for seniors. These communities vary from higher density, suburban neighbourhoods serviced regularly by public transit (e.g. Langford), to lower density rural areas with little transportation services (e.g. Metchosin). This diverse range of needs and resources results in an approach that must accommodate each community’s specificities while keeping a “shared vision”. One informant notes that there are “too many challenges from area to area” and the CRD is described as “too large, too massive”. Another informant cautions that “the bigger [the program], the more complicated”. Informants were weary of an approach that would amalgamate organizations and communities without respecting their individualities. Reaching a consensus, with regards to which CAT model and which activities are best suited to all communities was thought improbable by stakeholders. The diversity of transportation needs is more than geographic: eligibility criteria and organizational mandates vary between organizations and could impede coordination and sharing of resources. While some organizations have a broad set of criteria, e.g. “those with low income, those who cannot use public transportation, those who need accompaniment”, others have narrower criteria, especially with regards to participation in the organization’s program and/or with physical or cognitive disabilities.

2) Lack of willingness to share transportation resources

The reluctance to share resources is easily justified by stakeholders. First, informants from private, for profit organizations, saw no monetary benefit in sharing their resources. For example, one provider commented that “[senior’s residences] are a money making business” and another remarked that there is no real benefit for the residents of his/her organization, although he/she remarked that it is good PR for
the organization itself. Administrators in these organizations are investing money into resources that add to the value of services offered. Consequently, and understandably, they want to retain control of their resources. For example, they want to keep their vehicles available for their clients at all times, because, "people pay a lot of money to be here". In addition, organizations are responsible for the maintenance of their vehicles and drivers are generally employees of the organizations, i.e. driving is part of their job description. Although one informant suggested charging a fee to offset the cost of lending vehicles, private, for profit organizations remained reluctant to share because of their claim that, as far as they are concerned, "only the users [of other organizations] will benefit from it."

A second factor common to all groups of stakeholders, is the reluctance to relinquish control over their own fleet of vehicles/drivers. This is what the literature and other documentation identifies as 'turfism'. Informants were not able to clearly identify the reasons behind this reluctance. Instead, some pointed out that sharing resources has not been done in practice, and added that it could not be done because of issues such as insurance and liability. Others invoked internal policies, but none of the informants were able to provide an example of such a policy. Other informants attributed their lack of interest in sharing resources to limitations in their mandate, for example providing transportation for medical purposes only.

The last factor is specific to volunteer organizations. Volunteer drivers and passengers usually developed a 'one on one relationship' that does not exist in other forms of senior transportation, although this relationship exists to a certain degree with HandyDART (most users keep the same HandyDART schedule/drivers for long period of time). In fact, informants from volunteer organizations alleged that this relationship between drivers and passengers is the biggest difference between public and their transportation services. Moreover, according to informants, the relationship between drivers and agencies is crucial to recruit and retain drivers. For example, one informant pointed out that "by not being in touch [with the agencies] on a day to day basis, [volunteers] may not feel as connected to the community". Further, stakeholders asserted that volunteer drivers are a crucial link between community and frail seniors who have the potential to be isolated. Because they are in a direct contact with seniors, volunteer drivers are able to monitor their passengers for possible health or social issues. Informants from volunteer agencies felt that they will
lose this connection if their pool of drivers is available to other agencies. It is interesting to note that while all informants from volunteer agencies support the implementation of a CAT system in the CRD, they are doing so in the hope that it will divert the demand for transportation to other agencies and thus relieve the pressure on their own agencies.

3) Lack of leadership and passivity

Although informants agree that a different approach towards seniors’ transportation is necessary to meet present and future demand, the manner in which this change should be initiated remains uncertain. Previous efforts towards change (i.e. Allan and Mc Gee 2003; Dibert, Allan et al. 2005) showed the interest in a new approach amongst CRD communities, but did not result in tangible actions. One of the apparent reasons for this lack of initiative is the stakeholders’ apprehension about being the sole driving force behind a CAT system, and thus to have more work added to their already burdensome workload. Informants in this research project admitted to not wanting to initiate a change on their own, instead choosing to rely on the public system (including HandyDART) to provide them with transportation services. In fact, one informant commented that “that is the way we have always done it, [HandyDART] has always been providing us with transportation, why should we chip in and help?” Another informant described the planning process as “somebody ...be[ing] in charge and inform[ing] other agencies”. For some informants, HandyDART is the only agency with the tools necessary to run a CAT program. However HandyDART is a subsidiary of BC Transit, a crown corporation set-up to provide public transit. Their mandate does not include coordinating private transportation services. In the words of one informant, BC Transit is often “at the edge” by sometimes helping communities to coordinate their services but it “has to draw the line” to not step too far outside of its mandate and take on supplementary responsibilities. Thus, the informants in this research often wondered who was responsible for the issues associated with the provision of transportation for seniors. For them, this question is especially important with regards to the costs associated with the implementation of a CAT. Finally, many informants considered a legislative approach indispensable to the implementation of a CAT program, because from their perspective, “if it is not mandatory, what makes people play the game?”
4) Fear of change from both stakeholders and users

Informants often alluded to the fact that a CAT program will enhance community capacity building. For example, one informant commented that "publicly funded [vehicles], are usually purchased through funding and maybe it should be part of the spirit of sharing - a willingness to make it available to the community". However, it is often in conflict with other informants' statements. For example, while asserting that sharing information and resources is necessary to meet the transportation needs of seniors, and thus make communities in the CRD a better place to live, some informants also commented that while some organizations would find the change easy to adapt to, their own organization would have difficulty joining in because of the changes necessary to implement a CAT. This apprehension is apparent in the comments generated by the two models (Figure 1 and 2) presented during the interviews and introduced earlier in this chapter. While model 2 was considered more efficient, the perception was it was also "too big of a change", and model 1 was more likely to be implemented because "it does not involve a lot of changes".

Obviously, a change in the way accessible transportation is provided in the CRD will affect organizations as well as users. In fact, for some informants, this could also be a challenge. One informant commented that that older adults, especially the 80+ age groups, does not like change and "gets easily confused". Another person remarked that she/he is not sure how seniors would feel "sharing with strangers". An informant recalled that "[her/his organization] have many levels [of disability], they rub elbows. Sometimes they like it, sometimes they don't". Another stakeholder added that she is not sure how seniors will react if they have to share with someone that is "different", as well as "being a stranger". Overall, informants felt that users may be reluctant to use a new system. An informant, using the town of Qualicum Beach as an example, commented that "[seniors] want change but we have a hard time [trying] to make them use it". She/he explained that, while a new bus route was added because of the large senior population in this area, the buses were "mostly empty". Informants believed that people resist change. One informant commented that it is "difficult not to go with what you know and with what you are comfortable with, changes are difficult, people do not like to toss out the old if it is not totally broken."
From the stakeholders' point of view, transportation for seniors is much more than travelling from one place to another. It also provides older adults with "social contact" that they would not have otherwise. Informants were concerned that a CAT program would not offer the "friendly environment" they feel seniors need, especially in terms of individual, 'tailored' care. One informant remarked that the need for care increases with age groups and commented that "the older [seniors] just cannot be dropped on the sidewalk!" Informants thought that it is also the reason why older adults would rather use alternative modes of transportation such as volunteer services rather than public buses. Some older adults seek relationships and human contact as much as they need 'the ride' offered by the transportation provider. Thus, some informants believed that seniors are indifferent to their mode of transportation as long as their friends surround them.

This need for social contact while traveling is especially important for volunteer service agencies. Informants belonging to these agencies firmly believed that the unique relationship existing between drivers/drivees (some seniors ask for the same driver week after week) will disappear if agencies do not retain control of their drivers, particularly in terms of scheduling to match drivers and drivees. The concern is strong that both users and drivers will not have "as personal as a relationship" with agencies that are coordinated at a higher level.

5) Economic considerations

Funding was a topic that informants were reluctant to discuss in detail during interviews. They unanimously acknowledged that more funding is necessary—with or without a CAT program—because "more money provides more employees to drive more buses...more resources [and] more people." Most agencies named the Vancouver Island Health Authority as their main funding agency. With the obvious exception of BC Transit and HandyDART, the funding that agencies are receiving is not directly specified for the purpose of providing transportation. Instead, agencies themselves allocate a certain amount to transportation and have complete control of the modality of this allotment. In the words of one informant, "the government approach to transportation is to give a lump sum to one group...and then let them deal with it...figure out what you want to do with your money". This informant further remarked that this strategy, although permitting "a local approach" is not always beneficial to the users because a more "centralized" action, i.e. with one organization
in charge, could save money. A CAT system as described in this research is a local approach but also offers advantages that are attributed to centralized approaches where resources are maximized because they are coordinated by a central agency. However, many informants pointed out that, from their viewpoints, the implementation of a CAT is likely to result in a change in funding eligibility or distribution. Informants from not-for-profit organizations are generally fearful to participate in any program that could result in a funding decrease. Finally, informants are concerned about the costs of implementing and maintaining a CAT program, especially since lines of responsibility for such a program are not clearly established.

6) Systemic issues
The diversity discussed in the paragraphs above is also found in the differing requirements for organizations providing or needing help with transportation in the CRD. Sharing resources with other organizations brings up issues and concerns that some informants felt were insurmountable. For example, informants were concerned about the different “rules, regulations and procedures” surrounding the hiring of drivers. Informants frequently wondered what kind of “compromises” they will need to make in order to make a CAT program work. In volunteer agencies, these potential compromises include diminished connections between drivers and agencies, as well as the mandatory training that drivers go through before starting to drive older adults (this training often consists of a period of ‘observation’ of an experienced volunteer driver as well as an interview with the agency). Safety is even more problematic for informants. Working with many different ‘types’ of agencies also means working with different ‘types’ of users, whether this difference resides in their age groups or disabilities. This affects the type of vehicles that agencies can legally use to transport users and the quality of service that is provided to users while travelling.

Insurance liability was the major concern that all informants cited first when asked about the possibility of sharing vehicles. The problem with liability goes as far as private organizations being reluctant to recommend volunteer agencies for fear of being held liable in case of accidents. Liability concerns make the sharing and borrowing of a vehicle difficult. For example, an informant recalled that in order to borrow a vehicle from VIHA, her organization also had to find a volunteer driver who
was a VIHA employee (or a former VIHA employee "who was still in their system"). This informant added that VIHA has a large fleet of vehicles that cannot be used because of this system. This is a common problem amongst organizations. Agencies are reluctant to lend a vehicle when the driver is not one of their employees because of liability issues in case of accident. One informant who does lend his organization's vehicle commented that: "the reality is that in the case of an accident the premium goes up. The bottom line is that we don't want to have any claims". This organization has been lending its vehicle for the past 15 years and counted only 2 accidents that did not result in a premium increase (since it was not the drivers' fault).

Finally, some volunteer services agencies were not convinced that they would be able to fully participate in a CAT program, especially with regards to the information upkeep that a CAT necessitates to coordinate the sharing of resources. Ultimately, they feel that it would require too much time for them to fit in. They were also concerned by issues surrounding volunteer drivers' mileage costs. For example, one informant wondered how to reimburse his/her drivers if they are driving another agency's clients around

5.7 Incentives to Implementation

1) Stakeholders' involvement

The involvement of transportation providers is pivotal to the success of a CAT. Stakeholders emphasized that the implementation of a CAT program should be a "collaborative effort". Meeting on a regular basis and "being allowed inputs" are important steps for them. Informants advocate forums "for [establishing] buy in by people who feel threatened" and workshops, both with users and with stakeholders. The involvement of users was suggested "to figure out if it is going to make a difference" and "to find out their specific issues". All informants clearly articulated their need to see benefits for their organizations in a CAT program and to know all potential risks before starting the process of implementation, especially with regards to funding. For one informant, "people have to clearly see the benefits [in order] to make the effort worthwhile [because] organizations are self-centered". Informants

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Allan, D. and P. Mc Gee (2003) conducted focus groups with users to evaluate the state of accessible transportation in the CRD.
also expressed the desire to be provided “with options to discuss”, meaning that models have to be supplied for discussion as stakeholders want a direction for these discussions but also want to be assured that their efforts will yield results. They were quick to point out that these projects usually involve meetings and discussions that are time-consuming. In addition, most stakeholders were afraid to be left with the bulk of the work necessitated by the implementation of a CAT program. Because of this, the suggestion was repeatedly made to present stakeholders with a model and to ask transportation providers for suggestions and improvements, instead of relying on their suggestions for building up a model. For example, one informant declared that:

“You have to provide the model to the providers and tell them “Please, come and discuss this with me to make recommendations” rather than saying “We are going to have a community forum to discuss that”. Present [a model] and identify who would pay for it! People get quite cynical about meetings: another discussion!”

2) Scale and step by step approach

Disparities in availability of resources and inequality in service delivery between communities and/or rural and urban areas makes the scale of implementation a necessary component to consider for the success of a CAT program. For some informants implementation at a small scale, such as the city of Victoria, would facilitate the coordination of transportation activities and resources. Another informant was even more specific: this implementation has to remain at the community scale (for example James Bay, Fairfield or Fernwood) to be successful “because [communities] like to be distinguished from one another”. Thus, a CAT program has to take into account characteristics as well as specific issues existing in each community. At the same time, it needs “to go across the CRD”, i.e. to offer continuity of services between the different communities comprising the CRD that informants mentioned as being crucial to the success of a CAT program. However, for many informants, a larger scale is the only way to ensure this continuity while keeping costs down.

Ultimately, starting with a pilot project to test the potential of a CAT before a wider implementation seems to be the preferred approach. A pilot project was described as “something that is reasonably contained but big enough to really measure”. Some stakeholders suggested that the Western communities are a good
candidate, citing their lack of transportation resources and their semi-rural and urban status as qualifying criteria. A pilot project is also part of the "staggered", "step by step approach" often cited by informants as being more meaningful. This approach would permit moving progressively from a basic CAT program to a more inclusive and complex model. The first steps often cited were the building of a comprehensive inventory of all transportation resources and the hiring of a Transportation Coordinator (TC) to establish communication channels and support stakeholders' actions towards partnerships and cooperation. Informants want to assess the transportation resources available before deciding on a model. They characterized the ideal model as "providing a quicker response [that] would [foster] more spontaneity", a model that would "stay open to innovations and changes", a model that would continue to be flexible and responsive to communities and organizations, and a model that "minimizes the risks to make agencies comfortable". An inventory was already completed in 2003 by Allan and McGee for the purpose of their study but needs to be updated to reflect changes within the CRD since that time.

3) Policy framework

Informants were concerned that if not enough transportation providers and senior services agencies agree to participate in a CAT, the program will not likely be viable. They frequently commented on the need for "pressure to comply" and to participate in a CAT program. They identified an adequate policy framework as the best means to obtain full participation from all stakeholders, regardless of their needs and resources. They also believed that this legislation will support the recognition of a CAT by all organizations. Although these informants could not identify which policy would help to implement a CAT program, they recognized that the resistance brought about by a policy designed to enforce the implementation of a CAT and to change the present system would be "huge". Another informant added that larger public organizations need "the big stick", to encourage them to participate and to coordinate with smaller community organizations. In contrast, one informant commented that, with regards to the implementation and participation in a CAT program she/he "would like to see it built on positive thinking rather than by forcing anyone on it." For most informants, what is needed is a policy framework that is likely to give momentum and to sustain a CAT program in the CRD, especially with respect to accountability and access to more funding. At the same time, informants
pointed out that a policy framework will ensure that transportation providers will be supplied with the directions that they are seeking to instigate a change in the way transportation services for seniors are delivered in the CRD and in most Canadian communities.

5.8 Conclusion

In this chapter, the PLM was used to develop a vision of a CAT in the CRD and to convey the concerns and ideas of stakeholders. This analysis is not exhaustive; others may find elements that could fit into this model and some may argue for taking some elements away. However, it has been constructed on the basis of elements that participants of this study deemed important. This model was developed to give a voice to key-informants and this voice is reflected in each statement made. The model itself is a response to the targeted condition: the lack of affordable and efficient transportation options for the seniors’ population in the CRD. Inputs include better education for users, a supportive structure for the sharing of transportation resources and the integration of transportation issues in the planning of services and activities for seniors. Stakeholders aim to create and strengthen relationships between each other while increasing accessibility to transportation resources in communities. Ultimately, the goal of this program is in facilitating a healthy lifestyle for seniors in communities of the CRD. Barriers to achieving these goals and the inputs identified reside mainly in differences between needs and resources as well as in the lack of leadership and funding. To sum up, the implementation of a CAT program from the informants’ perspective will be facilitated by the involvement of stakeholders in the planning and implementation of the CAT program, a step by step approach to this implementation and the support of a policy framework that would provide them with resources (funding, personnel and vehicles) necessary to sustain a CAT program.
6.0 Discussion and Conclusion

This research project examined models for meeting the present and future transportation needs of seniors in Canadian communities. The proposed solution is a coordinated accessible transportation (CAT) system, which supports the pooling and sharing of community-based transportation resources within a formalized framework. Using a qualitative, case study approach, a program logic model (PLM) was developed to articulate the vision of stakeholders in the Capital Regional District (CRD). In this research, the PLM was used not only as an organizational tool to gather information for each element of the model, but also as an analytical tool to distinguish the relationships between each element. A PLM is ideal for depicting, in a graphic form, the rationale embedded in a program, and the resources needed to achieve its goals (Carroll and McKenna 2001; Adler 2002). Twenty-three semi-structured interviews were conducted in 2005 over a period of four months to build up the different elements of the PLM. Informants came from not-for-profit, for-profit, and public organizations as well as three expert informants from the transportation industry. The goals set out at the beginning were: (a) to develop a PLM specific to the CRD, (b) to identify barriers and incentives to implementation, and (c) to identify the implications associated with the provision of transportation to older adults.

The provision of transportation is an important element in promoting quality of life for older adults because it is a significant factor in their ability to remain self-sufficient and connected to their community (DiPietro 2001; Banister and Bowling 2004). Being able to access transportation is a preventive measure which promotes health, independence, and an active lifestyle. Thus, transportation is an enabling factor crucial to the ultimate health promotion goal of a CAT program as defined by stakeholders of this study. This link between the availability of transportation and healthy aging is often implied in current Canadian health guidelines and regulations but the initiatives needed to support the effective provision of transportation are not clearly or sufficiently addressed. Although examples of informal collaborations between transportation providers or short term coordination programs can be found in Canadian communities, it is important to keep in mind that a formalized, long term transportation program such as a CAT system is a novel approach in Canada. A CAT program can be seen as an ‘intuitive’ solution to seniors’ transportation issues. Indeed, if one organization does not have enough resources to meet the needs of its
clients, it is reasonable to speculate that the pooling of resources with other organizations will lead to a better or more efficient service delivery to users. However, this research project documented informants' difficulties in meeting the current and projected transportation needs of older adults, and identified potential resistance in changing the current system of transportation provision.

First, this final chapter discusses the results of this research project and then outlines their implications for a new approach to accessible transportation in Canadian communities. It concludes by looking retrospectively at the approach taken to reach the objectives of this research project.

6.1 From one perspective to another

Informants in this research project, although showing an interest in a new approach to the provision of transportation, were also clearly aware of the obstacles that need to be overcome before a program such as a CAT system can be implemented. These barriers, although linked, can be broadly separated into two groups. The first group includes concerns associated with the financial and logistical aspects of a CAT program, for example funding and standards of service, while the second group involves an organization's culture and mandate, for example, 'turfism' and eligibility concerns. The information provided by informants showed a dichotomy in their evaluation of the benefits and issues associated with a CAT program in the CRD. A CAT program is likely to have substantial impacts on the way organizations are running their transportation services as well as on the way transportation providers interact with each other. Further, the implications of a CAT system are different depending upon the types of agencies involved. Some organizations are the 'givers', for example public organizations with a large fleet of vehicles or private organizations with their own vehicles, and others are the 'takers', organizations without vehicles or drivers that are currently struggling to meet the transportation needs of users. The "landscape of services-rich and services-poor communities" described by Rosenberg and Everitt (2001:133) is common to many areas in Canada, and this distinction is also applicable to the provision of transportation within the CRD. Hence, a CAT system can be looked at from two angles: (1) from the perspective of 'transportation-poor' organizations, i.e. organizations who struggle to meet the transportation needs of their users, and (2) from the perspective of
'transportation-rich' organizations, i.e. organizations that are mostly successful in meeting the transportation needs of their users. The sections below explore these two aspects as well as the complexity embedded in the process of planning a CAT in the CRD.

6.1.1 'Transportation-poor' organizations

Transportation poor include organizations that have difficulties meeting the demand for transportation services, especially with regards to spontaneous activities. Indeed, as noted by Burkhardt and McGavock (2002), spontaneity can exist only if there is flexibility in transportation services. Booking ahead of time does not allow for trips to be decided on the ' spur of the moment', but it is a process made necessary by the current limited supply of transportation services. Informants associated the ability to be spontaneous in his/her travelling behaviour with empowerment, self-sufficiency and independence. 'Transportation-poor' organizations are mostly focused on the needs of their users, and their perspective on transportation is largely influenced by the repercussions for the health of older adults: transportation is necessary to maintain a decent quality of life and, for a vulnerable population, the lack of appropriate transportation options can result in decreased well-being and an increased sense of isolation.

Finding a transportation option that meets their particular needs has always been a struggle for these organizations and their users. As a result, a CAT system appears to them as an ideal opportunity to obtain the transportation services they need, i.e. efficient alternative modes of transportation at low cost for users. For some organizations, a CAT is also an opportunity to alleviate their burden and to divert the demand made on their organizations to other organizations. This is relevant for transportation services such as HandyDART, which remain the principal accessible transportation providers in the CRD, but it is especially true for volunteer organizations that are struggling to find the volunteers needed to carry out their mandate. The lack of volunteers is an issue that is peripheral to the focus of this thesis, however, the increasing difficulty in recruiting volunteer drivers is an obvious issue in providing necessary transportation services. Informants traced this difficulty mainly to economic factors: for example the price of gas, the cost of the class 4 license and the organizations' inability to reimburse them on par with their expenses. According to these informants, the majority of volunteers are young-old "semi-
retired" individuals. This is concurrent with research that showed the prevalence of the formal and informal voluntary support of young-old individuals to older cohorts, and the importance of volunteering as social activities for the volunteers themselves (e.g. Chappell 1999; Kloseck, Crilly et al. 2006). During the course of this research, volunteer agencies repeatedly mentioned their fear of losing the privileged relationship they have with their volunteers. A CAT program has the potential to 'de-humanize' the process of delivering transportation services to older adults, especially for smaller, non-profit organizations, such as volunteer agencies, which are in close contact to not only their users, but also their volunteers. Thus, participating in a CAT program also brings the understandable threat of being assimilated by a larger and 'foreign' system.

6.1.2 'Transportation-rich' organizations

Following the definition usually given in the context of transportation resources and used in this research project, (i.e. ODOT (1997) and Burkhart, Koffman et al (2003)), coordination maximizes the potential of resources to attain a common goal. Hence, the beneficiaries of this type of coordination program are the users themselves and ultimately the community as whole. It is not surprising that some organizations are not interested in participating in a CAT program if they feel that they -or their clients- do not need it. By extension, the challenge is to find the incentives that can convince 'transportation-rich' organizations to enter into transportation partnerships with other, less privileged, organizations in their community. One informant suggested that corporate social responsibility, i.e. the integration of social concerns in the business operation of organizations, could be the catalyst for the participation of for-profit organizations in a CAT program. However, although this approach has not yet been explored, it is unlikely that corporate social responsibility will, in the short term, play a big enough part in the implementation of a CAT program to convince for-profit organizations to be active members. Further, if coordination is an exchange of resources for perceived benefits as proposed by Alexander (1993), the benefits associated with the participation in a CAT program have to be defined for each organization, more specifically, economic as well as social benefits need to be highlighted if the expectation is for all types of organizations to buy into a CAT program.
Finally, internal policies or organizational mandate are often pointed out by informants in larger organizations as the reason for their hesitation to lend their resources or to participate in a CAT program together. Since CAT approaches have seldom been considered before, it is likely that this unwillingness is also linked to the lack of information or education of the informants on this topic. Typically, barriers such as insurance liability are invoked. However, this obstacle is usually the main barrier to sharing a vehicle, and simply necessitates a better knowledge of insurance policies in order for it to be overcome (Fuller and Herold 2000; Dibert, Allan et al. 2005). Further, rigidity within organizations can also be a significant barrier and it is sometime difficult to differentiate between 'smokescreen', i.e. turf protection and real concerns (Steranka, Moss et al. 2000).

6.1.3 The planning process

Being able to agree on one specific model and on the subsequent sequence of actions is a critical issue brought up by stakeholders. Contradictions in stakeholders’ points of view during this research project reflected the complexity involved in reaching an agreement with regards to the implementation of a CAT program. For example, while some informants felt strongly about being allowed inputs and demands during the planning and implementation process of the CAT program, others expressed their desire to be led, i.e. being “told what to do”. However, this could also be a reflection of their fear of being burdened by more responsibilities and work in the context of their limited resources. Contradiction is also found in their request to have the new system respecting communities and organizations’ identities, while at the same time wanting the same system to have a large, cross-community impact.

The coordination of transportation resources between organizations could also be a means to ensure better continuity and improved uniformity of transportation services between communities without further immediate investments in new resources. Moreover, the strength of a CAT program is also its maximization of all types of transportation resources already available (Burkhardt 2000b). Nevertheless, expectations of participating agencies need to be realistic; coordination is not the panacea of all transportation issues in a community. Even if it does improve the provision of transportation in communities, it remains a transportation program involving multiple agencies, and, however efficient, will always have constraints
(Agency Council of Coordinated Transportation 1999; US General Accounting Office 1999; Burkhardt 2000b). In fact, on informant commented that the problem may be that organizations expect "the same service that a private vehicle can offer, for the price of the public transportation service."

The extent of their participation in terms of sharing and handing over the control of their transportation resources continues to be a main concern of organizations, and will be a great obstacle to success if not sufficient. Some informants articulated their interest in a CAT program and their understanding of its benefits for the efficient provision of transportation, while expressing the idea that this approach would be more beneficial for "other organizations". Commenting on community capacity building, Chaskin (2001) noted that level of commitment of community organizations (or individuals) exists at two different levels, (1) organizations which acknowledge that they are stakeholders in their community and (2) these organizations' readiness to act on this commitment. Similarly, the success of a CAT program is highly dependent on the willingness of all transportation providers to recognize themselves as stakeholders and to participate in this program. This is especially critical when the participation of certain organizations will influence other organization access to transportation resources.

The lack of a policy framework to regulate and support the provision of alternative modes of transportation has evident impact on the planning of strategies to meet the demand for accessible transportation. For example, the eligibility specific to some transportation services has been pointed out as a barrier by some because it reflects the different mandates of organizations in the CRD, and the funding that organizations receive is often allocated in function of this mandate. However, for some organizations, it can also be a means to further regulate the use of their transportation services. This is particularly important for BC Transit and HandyDART, which, as Crown Corporations, have a mandate to accommodate the transportation needs of all British Columbians. The eligibility criteria used by BC Transit is focused on limiting the use (or abuse) of the current public accessible system (HandyDART). According to BC Transit, an individual is eligible for specialized transportation when unable to use the conventional transit system because of a physical and cognitive disability. This definition originates from provincial government guidelines and, according to an informant, has always been "interpreted loosely" by BC Transit.
Thus, if no solution is found to deal with the increase in demand, criteria for eligibility criteria could be tightened, especially with regards to a prioritization of trips, based on medical, work and school related needs. People with 'other' transportation needs, i.e. recreational or social activities, will need to find alternative modes of transportation.

6.2 Implications

The sections below examine implications identified by this research project.

6.2.1 Transportation and older adults

While it is likely that Canada is experiencing the same changes as other industrialized countries in terms of older adults' travelling behaviour and transportation needs, it is impossible to plan appropriate measures without throughout knowledge of all the factors involved. This knowledge can be attained only by research focused solely on transportation as component of healthy aging and also on better documentation of older Canadians' travelling habits. Thus, the first step towards an efficient accessible transportation system is the gathering of baseline information. For example, informants in this research project noted changes in the public transit riderships concurrent with the academic literature on this topic: seniors are less and less interested in taking public transit, even if they are physically capable. It is necessary to better understand this behaviour in the Canadian context as it has implications for it the provision and use of alternative modes of transportation but also the provision of public transit.

Further, commenting on the need to improve older adults' quality of life, the (World Health Organization 2004b:np) noted that

"If governments are to cope with a rapidly ageing population they need to have policy-driven initiatives based on a clear identification of personal, social, and cultural factors that contribute to healthy ageing. The question of ageing needs to be addressed through initiatives that encourage active ageing and not solely through increased service provision"

Offering transportation alternative does not necessarily mean that older adults will make use of them. Similarly, isolation does not end when transportation options are offered, and isolation is not prevented when an older adult lives in a residence. The issues surrounding healthy aging also depends upon the ability to
reach out to vulnerable adults. The need for companionship extends to engagement in activities that is promoted by friendships (Ragland, Satariano et al. 2004) and supported by transportation options. Thus, it is correspondingly important to find strategies to identify vulnerable older adults and promote the advantages and use of transportation options as a link to activities to reduce their isolation. This could be achieved for example in encouraging ‘buddy systems’, where an active senior acts as a leader to entice less-active seniors into participating into activities.

The importance of ‘recreational trips’, for social activities such as visiting friends or participating in an organized activity in a recreation centre cannot be overemphasized. Although academic research does not often directly address the need for this type of travel, it does address the need for social activities and networks to maintain a good quality of life (e.g. Rowe and Kahn 1997; e.g. Everard, Lach et al. 2000; Menec 2003). Hence, ‘recreational trips’ need to be recognised as being as vital to one’s health as a trip to the doctor.

Living arrangements are not associated with voluntary driving cessation or limitation (Ragland, Satariano et al. 2004). Academic literature largely reports seniors still driving because of a lack of transportation options (e.g. Millar 1999) and still considering private vehicles as an sign of independence and a factor in their self-esteem (e.g. Adler and Rottunda 2006). It is essential to focus on information and education programs not only to de-mystify the private car, but also to introduce seniors to alternative mode of transportation at earlier stages of their life. However, this infers that alternative modes of transportation are not only available, but also safe, efficient and affordable. It is also interesting to note that the increasing number of seniors on the road, hence the growing number of vehicles, is now considered to add to the current environmental issues (Rosenbloom 2001).

6.2.2 The need for a regulatory framework

One of the problems with the provision of transportation resides in the fact that transportation is a service in itself, but also a service essential to permit the uptake of other services. Thus, transportation is often the link to or between services or activities. Although indispensable in these terms, it stands on its own and tends to be the responsibility of every organization yet no organization in the delivery of their services. In many cases, transportation is an after thought, not included in the
original planning, but when lacking has negative social as well as economic impacts. The responsibility for the delivery of accessible transportation—transportation for all—is not clearly defined Canadian legislation. Because of this, the main concern of the stakeholders in this research project was to know who will—and who should—initiate the implementation of a CAT system in the CRD and be accountable for it. The role of the public transit system, in terms of transportation is also not clear. It is obvious that HandyDART, the biggest provider of accessible transportation in the CRD and the only one with the necessary resources (such as scheduling software), has an important role to play. However, BC Transit is a Crown Corporation and thus, although providing a municipal service, is under provincial authority. According to one informant, the result is a transportation planner or a bus driver in Victoria are both considered provincial employees. This is problematic since a CAT program is essentially the coordination of local providers, often private and non-profit, most of them funded by another governmental agency (VIHA), to provide (and supplement) essentially the same type of services than HandyDART as a part of their mandate.

It is important to acknowledge that transportation is a service that needs to have the same recognition as other key-services in order to be efficient. This recognition should manifest itself through a regulatory framework clearly defining the governance mechanism of transportation at a local level.

Funding remains an important issue for stakeholders who are generally reluctant to talk about it (interviews yielded only elusive answers). Funding usually comes together with specific requirements that limit how the funding made available can and should be used. On one hand, the funding provided is specific enough to some activities that it prohibits coordination with other agencies. On the other hand, funding is not allocated specifically to transportation (it usually considered a part of the program funded). Providers are cautious of having their funding reduced if they hand their transportation ‘duties’ to another agency, for example HandyDART. The solution may implicate the need for funding not to be tied to any program but specifically allocated to transportation. A different funding allocation is necessary for a different approach to transportation. This approach is likely to be possible only through an innovative legislative approach to transportation and transportation funding. Informants in this research project were able to identify some possible
source of funding (for example the gas tax rebate\textsuperscript{15}). Authors such as Steranka, Moss et al. (2000) also reported that states like Illinois, Michigan or Montana use a small percentage of their Motor Vehicles Sales tax or Property tax to finance their coordinated transportation program.

\textbf{6.2.3 Transportation and coordination}

Coordinating the activities of organizations is a complex process which would be made even more difficult in the CRD by the lack of a regulatory framework supporting coordination. Throughout this research project, informants frequently referred to the American system as a point of reference. This approach recognizes the importance of coordination by essentially mandating it through a regulatory framework that gives opportunities to communities to access funding by demonstrating the coordination of their transportation services. In effect, an efficient coordinated accessible system would mean an increase in the transportation capacity of a community by sharing its transportation resources. Further, it is established that coordination and collaboration is facilitated by leadership (Alexander 1993; Chaskin 2001; Schlossberg 2004), whether this leadership takes the form of an individual (a transportation coordinator) or an organization (a leading agency); and that a positive interaction between public and private service is an important element of the effective delivery of services (Agranoff 1991). Leadership in the delivery of services also takes the form of active governance at all levels. Informants recognized that legislation may be necessary to implement a CAT system but at the same time, are averse to the idea of being obliged to participate in a contractual interorganizational coordination. Thus the implementation of a CAT system remains somewhat of a conundrum. Stommes and Brown (2005) identified two elements indispensable to the sustainability of coordination in the context of transportation provision as: a) partnership continuity and b) funding availability. Partnership continuity is supported by policies that are "target specifics" (Agranoff 1991: 540), i.e. by coherent public policies that clearly lay out the steps necessary for collaboration and facilitate its

\textsuperscript{15} According to the CRD (2006, np), the gas tax rebate stems from “an interim agreement with the province of BC and the Union of BC Municipalities (UBM) to share federal gas tax revenue. This agreement sets up 3 funds for the distribution of gas tax rebate monies: a community works funds (providing funds directly to local governments, and a strategic investment fund and an innovation fund, access to which requires the submission of an applications for projects that are regionally significant, that are approved in competition with those of other regions” (Report to the planning & protective services committee, meeting of Wednesday, April 26, 2006)
achievement. Funding, discussed in the section above, enables implementation and sustained coordination, and is pivotal to a program such as a CAT system.

6.3 Reflecting on this research’s approach and study limitations

The purpose of this project was to achieve a more complete understanding of the factors that must be considered regarding the implementation of a CAT in a Canadian community. With respect to this purpose, this research provided a description of stakeholders’ perspective towards CAT, and the PLM built in this research project also became a tool to evaluate the progress of a community towards reaching the short-term and long-term goals identified by transportation stakeholders. It could be argued that the absence of one of the main stakeholders - the users - is the main limitation of this study. In fact, one of the informants pointed out that, in this instance, a CAT program is a program put into place by stakeholders for the perceived benefits of users. Indeed, insights on users’ possible reactions to the implementation of a CAT are given through the lens of stakeholder’s perception and may not be entirely accurate. However, the extension of previous work done in the CRD, this study focused on providers’ perspective and solutions to senior’s transportation issues. To meet the objectives of this study, it was thought beneficial to involve only stakeholders with an ‘insider’s knowledge’ of the factors involved in the provision of accessible transportation in this area. Furthermore, involving users would have required a different approach (e.g. focus groups and/or mail questionnaires) and timeframe and economic concerns ruled such involvement out.

The benefit of using a PLM to identify issues in the implementation of a CAT program in the CRD was very accurately described by an informant who remarked that “[it is] a good thing to look at the bigger picture and try to put the pieces together. At least people have to come with reasons why it does not work...” The process of building up each PLM element forced informants to reflect on the rationale of a program such as the CAT and focused the researcher's attention on the logic of each statement’s connection in the data within the PLM. The end result is a synthesized vision of a CAT program as well as a tool that could be easily used to demonstrate the value and issues inherent in a CAT program, and to support the planning and implementation process. However, this research project examined a program that is yet to be implemented, and thus cannot account for the unexpected elements that it is deemed to meet. Blindly following the structure of a PLM may lead
to a 'linear' thinking, and the inability to adjust to the inevitable evolvement of a program (Cooksey, Gill et al. 2001; Renger and Titcomb 2002). McLaughlin and Jordan (1999) advocated a constant interaction with stakeholders to ensure of the validity of the PLM created. Although meeting with all stakeholders to share the results of this study was considered, time constrains only allowed for a study's synopsis to be mailed to all informants (Appendix 9).

6.4 Conclusion

It is clear that finding an approach that meet users needs while satisfying organizations’ requirements and being financially profitable for all transportation organizations can be a difficult process. However, maybe the best argument for a better approach to seniors’ transportation lays in the fact that improving transportation for older adults is likely to improve the transportation system for communities as a whole (Burkhardt and McGavock 2002). Results of this research are concomitant with previous research on the different topics examined. In fact, when accounting for all variables (e.g. the current demographic shift, transportation as a necessary element to a good quality of life and the paucity of accessible transportation resources in Canadian communities), the CRD is a case study that emphasized the need for a new approach to accessible transportation in Canadian communities, whether this approach takes the form of a CAT system or another system. Demographic projections clearly delineate a shift towards a 'greying society'. As McDaniel (1994:124) was keen to point out while discussing demographic predictions, "older people do not come out of nowhere; they come out of the here and into the future. They are us plus time". There is a window of opportunity for planning (Rosenberg and Everitt 2001; Rosenbloom 2003) and providing transportation for seniors in the community is a pro-active approach to aging.

One question kept repeating itself throughout this project: what would it take to involve all stakeholders in a new, more effective approach to accessible transportation? The answer seems obvious: a regulatory framework that encourages and supports their participation. However, it is unlikely that the current approach will change unless a 'case' can be built to prioritize transportation for older adults, while considering the health, social and economic benefits of coordination, for older adults as well as communities and society as whole. Finally, the most essential element in
the implementation of a coordinated accessible transportation system was identified by one of the informants in this research project: while commenting on barriers, she/he remarked that "these are hoops you have to jumps trough. It is a matter of painting the big picture and asking groups how committed they are to make it work."
7.0 References


Allan, D. and P. Mc Gee (2003). Accessible transportation for all in the Capital Regional District: Where are we now, where should we be going? Victoria, University of Victoria, Centre on Aging.


Appendix 1: Examples of Potential Coordinated Transportation Benefits

(Source: Burkhart, Nelson et al. (2004: 143))

POTENTIAL COORDINATED TRANSPORTATION BENEFITS

<table>
<thead>
<tr>
<th>System Characteristics (Inputs)</th>
<th>Desired or Expected Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of transportation providers</td>
<td>Lower</td>
</tr>
<tr>
<td>Number of agencies purchasing transportation</td>
<td>Higher</td>
</tr>
<tr>
<td>Number of vehicles</td>
<td>Lower</td>
</tr>
<tr>
<td>Number of drivers</td>
<td>Lower</td>
</tr>
<tr>
<td>Part-time/full-time driver ratio</td>
<td>Lower</td>
</tr>
<tr>
<td>Average hourly driver wage</td>
<td>Higher</td>
</tr>
<tr>
<td>Total driver wages</td>
<td>Lower</td>
</tr>
<tr>
<td>Level and quality of driver training</td>
<td>Higher</td>
</tr>
<tr>
<td>Hours when service is provided each day</td>
<td>Expanded</td>
</tr>
<tr>
<td>Days when service is provided each week</td>
<td>Expanded</td>
</tr>
<tr>
<td>Vehicle hours of service</td>
<td>May be lower</td>
</tr>
<tr>
<td>Vehicle miles of service</td>
<td>May be lower</td>
</tr>
<tr>
<td>Total service area</td>
<td>Expanded</td>
</tr>
<tr>
<td>Number of persons who can get services</td>
<td>Expanded</td>
</tr>
<tr>
<td>Joint purchasing</td>
<td>More frequent</td>
</tr>
<tr>
<td>Joint dispatching of agency-owned vehicles</td>
<td>More frequent</td>
</tr>
<tr>
<td>Centralized oversight and management</td>
<td>More frequent</td>
</tr>
<tr>
<td>Level of route duplication</td>
<td>Lower</td>
</tr>
<tr>
<td>Number of funding sources</td>
<td>Higher</td>
</tr>
<tr>
<td>Total transportation funding</td>
<td>Higher</td>
</tr>
<tr>
<td>One central community information source</td>
<td>More frequent</td>
</tr>
<tr>
<td>Segregated client types</td>
<td>Less frequent</td>
</tr>
<tr>
<td>Limited trip purposes</td>
<td>Less frequent</td>
</tr>
<tr>
<td>Community-wide transportation perspective</td>
<td>More frequent</td>
</tr>
<tr>
<td>Time spent in meetings</td>
<td>Higher</td>
</tr>
<tr>
<td>Level of planning processes</td>
<td>Higher</td>
</tr>
</tbody>
</table>

.../...
Appendix 1

POTENTIAL COORDINATED TRANSPORTATION BENEFITS

<table>
<thead>
<tr>
<th>Factor</th>
<th>Desired or Expected Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERFORMANCE MEASURES</td>
<td></td>
</tr>
<tr>
<td>Number of passenger trips</td>
<td>Higher</td>
</tr>
<tr>
<td>Number of passenger trips per service area population</td>
<td>Higher</td>
</tr>
<tr>
<td>Passenger trips per vehicle mile</td>
<td>Higher</td>
</tr>
<tr>
<td>Passenger trips per vehicle hour</td>
<td>Higher</td>
</tr>
<tr>
<td>Number of driver hours per passenger trip</td>
<td>Lower</td>
</tr>
<tr>
<td>Number of admin staff hours per passenger trip</td>
<td>Lower</td>
</tr>
<tr>
<td>Cost per vehicle hour</td>
<td>Lower</td>
</tr>
<tr>
<td>Cost per vehicle mile</td>
<td>Lower</td>
</tr>
<tr>
<td>Cost per passenger trip</td>
<td>Lower</td>
</tr>
</tbody>
</table>

Community benefits:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Desired or Expected Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic activity</td>
<td>Higher</td>
</tr>
<tr>
<td>Economic growth</td>
<td>Higher</td>
</tr>
<tr>
<td>Nursing home admissions per 1,000 population</td>
<td>Lower</td>
</tr>
</tbody>
</table>

SERVICE ATTRIBUTE ASSESSMENTS

<table>
<thead>
<tr>
<th>Factor</th>
<th>Desired or Expected Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptability</td>
<td>Greater</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Greater</td>
</tr>
<tr>
<td>Adaptability</td>
<td>Greater</td>
</tr>
<tr>
<td>Affordability</td>
<td>Greater</td>
</tr>
<tr>
<td>Availability</td>
<td>Greater</td>
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USERS' OVERALL SERVICE ASSESSMENTS

<table>
<thead>
<tr>
<th>Factor</th>
<th>Desired or Expected Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative travel options</td>
<td>Greater</td>
</tr>
<tr>
<td>Ratings of transportation services</td>
<td>More Positive</td>
</tr>
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Outcomes:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Desired or Expected Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independence</td>
<td>Increased</td>
</tr>
<tr>
<td>Security</td>
<td>Increased</td>
</tr>
<tr>
<td>Mobility</td>
<td>Increased</td>
</tr>
<tr>
<td>Isolation</td>
<td>Decreased</td>
</tr>
</tbody>
</table>
Appendix 2: Barriers to implementation

(Fuller and Herold 2000)*

<table>
<thead>
<tr>
<th>Barriers</th>
<th></th>
</tr>
</thead>
</table>
| Political       | - Municipal amalgamation and funding changes (11)***  
|                 | - Lack of enabling provincial legislation and regulations (8)  
|                 | - School board policies restricting non-students riders on school buses (6)  
|                 | - Fewer elected officials to sit in on area services boards (health, school, social) (6)                                                                                                           |
| Organizational  | - Few people willing to share resources (turfism) (9)  
|                 | - Lack of member continuity due to restructuring of involved organizations (6)  
|                 | - Different and restrictive eligibility criteria of organizations already providing transportation services (5)                                                                                     |
| Funding         | - Lack of funding (6)  
|                 | - Finding sustainable funding (4)  
|                 | - Fear of losing transportation budgets by coordinating with others (3)  
|                 | - Clients not used to pay for services (3)                                                                                                                                                       |
| Administrative   | - Time issues (5)  
|                 | - Insurance costs and restrictions***                                                                                                                                                          |
| Geographic      | - Geographic service boundaries stipulated in municipal-by-law (5)  
|                 | - Large geographic area to serve***                                                                                                                                                             |
|                 | - Sparse population*                                                                                                                                                                            |
| Miscellaneous   | - Decreasing availability of volunteers (5)  
|                 | - Clients are accustomed to personal services of the past (3)  
|                 | - Lack if consumer and provider knowledge of existing services (2)                                                                                                                             |

* n=25  
** Indicates the number of times this issue was cited by informants  
*** Not Indicated
Appendix 3: Capital Regional District, Municipalities and Unincorporated Areas

(Source: CRD 2005)
Appendix 4: Human Research Ethics Board Certificate of Approval

Human Research Ethics Board
Certificate of Approval

Principal Investigator: Corinne Dibert
Department/School: GEOG
Supervisor: Dr. Denise Cloutier-Fisher

Co-Investigator(s):

Project Title: Making progress towards coordinated accessible transportation:
A study of the key elements in the implementation of a
coodinated accessible transportation system in the Capital

<table>
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<tr>
<th>Protocol No.</th>
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<th>Start Date</th>
<th>End Date</th>
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<td>22-Mar-05</td>
<td>22-Mar-05</td>
<td>21-Mar-06</td>
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</tbody>
</table>

Certification

This certifies that the UVic Human Research Ethics Board has examined this research protocol and concludes that, in all respects, the proposed research meets appropriate standards of ethics as outlined by the University of Victoria Research Regulations Involving Human Subjects.

Dr. Richard Keeler
Associate Vice-President, Research

This Certificate of Approval is valid for the above term provided there is no change in the procedures. Extensions or minor amendments may be granted upon receipt of a "Research Status" form.
Appendix 5: Fact Sheet

Making Progress towards Coordinated Accessible Transportation in the Capital Regional District: Models

Background

In 2003, a report "Accessible Transportation for All in the Capital District: Where Are We Now, Where Should We Be Going?" (Allan et al., 2003) set out to examine the state of accessible transportation for seniors and persons with disabilities in the CRD. This research determined areas to be improved and steps to be taken toward an affordable, efficient and safe accessible transportation system in the CRD. A follow-up study, "Coordinated Accessible Transportation: A Vision for the CRD: (Dibert et al., 2004) examined coordinated accessible transportation (CAT) as a possible solution to the challenges of providing accessible transportation in our community. CAT is an approach that makes the best use of existing resources to meet transportation needs in communities. In particular, this approach facilitates and formalizes cooperation between transportation providers. Two models are suggested to generate discussion and illustrate different approaches to CAT.

Model One

Model one (Figure 1) entails creating a new position of transportation coordinator (TC) to oversee the process of coordination, and to build on existing informal transportation partnerships. This TC will report to a steering committee, composed of stakeholders in seniors' transportation in the CRD. The establishment of a transportation database will be necessary to facilitate the sharing of resources (human and/or vehicles), to enhance communication between transportation providers, and to support the development of new and sustainable partnerships. This model, akin to an information and referral network, will allow full use of all transportation resources in the community. In addition, providers will retain full control over their organizations/agencies but are able to use other providers' resources to complement their own, in order to meet their clients' needs.

* Both reports are available at the Centre On Aging, University of Victoria, BC, http://www.coag.uvic.ca
Model Two

Model two (Figure 2) is a transportation brokerage model and necessitates the creation of a new umbrella organization to encompass all transportation related activities in a community. This system gives rise to a new structure for accessible transportation in communities. In this model, a Transportation Resources Centre undertakes all activities, including bookings, scheduling, and the functions assumed by the TC, as in Model One. Transportation providers, i.e., public, private and volunteer, are contracted out to supply transportation services. Users are in direct contact with the staff of the Transportation Resources Centre and benefit from a simplified system. Transportation providers are able to focus only on the delivery of transportation services.

Figure 1: Model 1 –Information and referral network: Building on existing partnerships (adapted from Dibert et al., 2004)
Figure 2: Model 2 – Transportation Brokerage Model: Creating a new transportation system (Dibert et al., 2004)
Appendix 6: Participant Consent Form

Participant Consent Form

You are being invited to participate in a study entitled: “Making progress towards coordinated accessible transportation in the Capital Regional District, Victoria, British Columbia” that is being conducted by Corinne Dibert. Corinne is a graduate student in the Department of Geography at the University of Victoria. You may contact her, if you have further questions, by telephone at (250) 721-7345 or by email at codibert@office.geog.uvic.ca.

As a graduate student, she is required to conduct research as part of the requirements for her Master of Science degree in Geography. It is being conducted under the supervision of Dr. Denise Cloutier-Fisher. You may contact her at (250) 721-6289 or by email at dcfisher@uvic.ca.

The purpose of this research is to identify key elements in the implementation of a coordinated accessible transportation system at a local community level. Coordinated transportation develops and uses existing transportation resources in a local area to a fuller extent, in order to better address the needs of the population, particularly of older adults. This research focuses on strategies to foster and sustain coordinated accessible transportation among transportation providers. By extension, this research will examine the relevance of a regulatory framework to encourage coordinated accessible transportation in Canadian communities.

You are being asked to participate in this study in your capacity as an expert in the transportation supply and management field, and/or because of your knowledge of older adults’ mobility issues. Your expertise is desired in order to help to understand the prevailing factors in a community transportation system as well as to identify strategies crucial to the implementation of a coordinated accessible transportation system. If you agree to participate in this research, your participation will be voluntary. You will be asked to participate in an interview that will take no longer than 45-60 min to complete. Individual interviews will be taped for more accuracy. At the end of the project, you will be invited to an informal meeting to share the information gathered.

The potential benefits of your participation in this research include a better awareness of older adults’ transportation issues at a local community level. Your insights will be used to develop a Program Logic Model, which is a tool that helps to outline relationships and linkages between goals, processes and outcomes. This Program Logic Model will support the evaluation of strategies that could facilitate the implementation of a coordinated accessible transportation system in the Capital Regional District. This information should be useful for decision-makers involved in older adults’ mobility issues.

Any identifying information associated with this study will be kept strictly confidential. All documents will be identified only by a code number. Only the researcher will have
access to the observations obtained in this study. The data arising from this study will be kept in a locked file cabinet located in the Centre On Aging (University of Victoria). Electronic computer files will be password protected. Data will be kept for three years after the end of the study (2005). After this time period, hard copies will be shredded and disposed of, and computer files will be deleted from computer hard drives. Results of this research will form part of a Master thesis, will be presented at scholarly meetings and published in academic, peer-reviewed journals.

There are no known or anticipated risks to you through your participation in this research. Your participation in this research must be voluntary. If you do decide to participate, you may withdraw at any time from the study without any consequences. If you do withdraw from the study, your data will only be used in the project with your permission.

Given the nature of this research and the small number of individuals having knowledge in this area, your anonymity cannot be guaranteed. However, your name will never appear on any of the results and no identifying information will be used.

In addition to being able to contact Corinne Dibert and Dr Cloutier-Fisher at the above phone numbers, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Associate Vice-President Research at the University of Victoria (250) 472-4545 or ovprhe@uvic.ca.

Your signature below indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the researchers. A copy of this letter will be left with you.

Name of Participant  Signature  Date

A copy of this consent will be left with you, and a copy will be taken by the researcher.
Appendix 7: Questionnaire (Administrators)

Questionnaire for Administrators

1. What is your role within your administration?

2. In your opinion, are there any problems in meeting the demands for older adults's transportation in the CRD? What are these problems?

3. Are you familiar with the concept of coordinated accessible transportation (CAT) system? Please explain what you understand by coordinated transportation.

Researchers will then discuss the basic elements and intents of CAT to ensure that a common definition is being used for all interviews.

In regard to the CRD

4. In your opinion, what are the benefits of a CAT in the CRD?

5. In your opinion, what are the weaknesses of a CAT in the CRD?
6. In your opinion, what kind of problems might be encountered in implementing a CAT in the CRD?

7. In your opinion, who should the target populations of CAT be in the CRD?

8. What do you think the impact of a CAT on these populations would be?

9. Could you identify strategies that would facilitate the implementation of a CAT in the CRD?

10. Do you think a CAT is relevant to your organization's mandate? Why? Why not?

Looking at the two models of CAT for the CRD

Please look at these two possible models on the attached page (researcher will then discuss the two models with the informant)
11. Could you please identify benefits and problems with these models?

12. Could you please identify which model, in your opinion, is most likely to be implemented in the CRD? Why?

13. Can you identify gaps in these models (i.e. links that are indispensable to your organization but are not yet present in the model)?

14. Can you identify other elements that need to be considered with respect to accessible transportation in the CRD?

In conclusion

15. Finally, is there anything else you would like to raise related to CAT or this survey?

16. Is there anyone else you think should be interviewed for the purpose of this project?
17. Would you be interested in participating in an information session to share the information gathered?

☐ Yes ☐ No

Thank you for your time and interest (researcher will then briefly explain the next steps for the participants)
Appendix 8: Questionnaire (Providers)

Questionnaire for Providers

About your organization

1. What level of transportation is your organization providing?

2. Does your organization have any difficulties meeting the demand for transportation services? Please explain

3. In your opinion, what would help your organization to reach its goals, e.g. strategies, resources, people or funding? How, why?

4. Have you or your agency ever entered into a transportation partnership of any kind?
   If yes,
   1. Who initiated it? Please elaborate
   2. Did you set up goals before entering into this transportation partnership? Was it spontaneous?
   3. Can you describe this partnership? (When, where, how long, how)
   4. Were there any obstacles to this partnership? Please elaborate
5. What were the benefits of this partnership?

6. Were there any negative impacts stemming from this partnership?

If no,

1. Did you ever consider entering into a transportation partnership? Please explain.

2. What factors stopped you from entering into a transportation partnership?

About the CRD

5. In your opinion, what are the main problems in meeting the demand for older adults's transportation in the CRD?

6. Are you familiar with the concept of a coordinated accessible transportation (CAT) system? Please explain what you understand by coordinated transportation.

Researcher will then discuss the basic elements and intents of CAT to ensure that a common definition is being used for all interviews.

Focusing on your organization only:

7. Could you identify any benefits for your organization with respect to a CAT?
8. Can you identify benefits for your clients with respect to CAT

9. Could you identify any problems for your organization in moving toward CAT?

**In regard to the CRD**

10. In your opinion, what are the benefits of a CAT in the CRD?

11. In your opinion, what are the weaknesses of a CAT in the CRD?

12. In your opinion, what kind of problems might be encountered in implementing a CAT system in the CRD?

13. In your opinion, who should the target populations of CAT be in the CRD?
14. What do you think the impact of a CAT system on these populations would be?
15. Could you identify strategies that would facilitate the implementation of a CAT in the CRD?

Looking at the two models of CAT for the CRD

Please look at these two possible models on the attached page (researcher will then discuss the two models with the informant)

16. Could you please identify benefits and problems with these models?

17. Could you please identify which model, in your opinion, is most likely to be implemented in the CRD? Why?

18. Can you identify gaps in these models (i.e. links that are indispensable to your organization) but are not yet present in the model?

19. Can you identify other elements that need to be considered with respect to accessible transportation in the CRD?
In conclusion

20. Finally, is there anything else you would like to raise related to CAT or this survey?

21. Is there anyone else you think should be interviewed for the purpose of this project?

22. Would you be interested in attending an information session to share the information gathered?

☐ Yes ☐ No

Thank you for your time and interest (researcher will then briefly explain the next steps for the participants)
Appendix 9: Study’s follow-up

Dear informant,

In the summer/fall of 2005, you participated in a research project that was seeking to identify barriers and incentives to the implementation of Coordinated Accessible Transportation (CAT) system in the Capital Regional District (CRD). This letter is sent to you to provide you with a synopsis of the results of this study.

A CAT system aims to provide a support for the sharing of transportation resources and encourages communication between stakeholders. Using the information and knowledge generated by the interviews of 23 informants from public, private, non-profit and volunteer sectors, a Program Logic Model (PLM) was developed. A PLM is the diagrammatic representation of the rationale of a program; in this instance, it was used to highlight barriers and incentives to implementation. Although a PLM aims to be as representative as possible, it is important to remember that is a ‘snap shot’ of a program and its context at one point in time, and that it needs to be updated to reflect changes. The PLM developed in this research is composed of 8 elements: (1) initial conditions, which describe the context of this program; (2) assumptions, which are the expectations that each informants hold with regards to the program; (3) target population, which represents the individuals or groups impacted by the program; (4) inputs, which are the processes or resources needed; (5) short-term goals, which describe the immediate results of the program, (6) long-term goals, which are the social and/or economic of consequences of inputs, (7) barriers, which are the obstacles to successful partnerships and (8) incentives, which are the conditions necessary to the success of a CAT program. The PLM developed for a CAT program in the CRD is presented in Figure 1.
Three major issues were brought up during this study:

1) *The importance of transportation in older adults’ quality of life*
Transportation is a service in itself as well as being a link between services. Although research demonstrated the importance of transportation for seniors’ well-being, it is still a factor that is often overlooked when planning activities and providing the necessary infrastructures.

2) *The need for communication between stakeholders*
Communication is the first step towards a more efficient use of current transportation services. Despite existing information programs, stakeholders emphasized the difficulty of keeping track of all transportation options and resources available in the CRD. Further, stakeholders also stressed the benefit of having sufficient information about the needs and resources of other agencies, in terms of potential partnerships.

3) *The need for governance*
The responsibility for the delivery of accessible transportation –transportation for all- is not clearly defined in the Canadian legislation. Because of this, the main concern of stakeholders was to know who will –and who should– lead the way towards coordination, and be responsible for it.

I would like to thank you again for your participation in this research project. If you need more information on the results of this study, you can contact me by email at cdibert@uvic.ca, or by phone at (250) 888-4500.

Kind regards

Corinne Dibert
Figure 1: Program Logic Model for a Coordinated Accessible Transportation program in the Capital Regional District

- **Initial Conditions**
  - Demographic shift and increase in transportation demand
  - Lack of information and communication
  - Disparities in transportation resources between communities
  - Lack of transportation resources and funding
  - Insufficient numbers of volunteers and volunteer retention

- **Assumptions**
  - Enhanced mobility for seniors requires
  - A wider range of accessible transportation options
  - Better use of existing transportation resources
  - More information on accessible transportation options

- **Target Population**
  - Seniors and people with disabilities
  - Anyone disabled and isolated because of the lack of transportation
  - Everybody in the CRD (including visitors)

- **Inputs**
  - Develop an efficient information/educational program for users and stakeholders
  - Develop a structure to facilitate the sharing of resources between stakeholders
  - Develop a plan of action to recruit and retain volunteer drivers
  - Integrate transportation in the planning of strategies and activities developed for seniors

- **Barriers**
  - Different levels of transportation needs in communities and organizations
  - Lack of willingness to share transportation resources
  - Lack of leadership and passivity
  - Fear of change from both stakeholders and users
  - Economic considerations
  - Systemic issues

- **Short-Term Goals**
  - Build or strengthen relationships between transportation providers
  - Increase transportation options in the CRD
  - Increase public and providers' knowledge about available transportation options in the CRD
  - Increase the accessibility to other services in communities

- **Incentives**
  - Stakeholders' involvement
  - Step by step approach
  - Policy framework

Source: Dibert and Cloutier-Fisher (2007)