

**A Strategic Plan to Increase Transit Use through the U-Pass Program at UBC Okanagan**

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# **A Strategic Plan to Increase Transit Use through the U-Pass Program at UBC Okanagan**

## **SEEDS Project**

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**Abstract:** A strategic look at the various components of a U-Pass Program designed to meet the needs of UBC Okanagan students. The components are defined and then analysed through a sustainability screening process: a cost-benefit analysis from an economic, social and ecological perspective. Following the sustainability analysis, recommendations for marketing U-Pass are discussed. In particular, strategies for community based marketing are outlined with reference to student preferences. The conclusion is that the transit system in the Central Okanagan is underdeveloped and commitment from all stakeholders is needed in order to succeed at setting up a U-Pass at UBC Okanagan.

## **A Strategic Plan to Increase Transit Use through the U-Pass Program at UBC Okanagan**

In March 2006 the UBC TREK Program Centre conducted preliminary research, through the use of a survey ([www.trek.ubc.ca/okanagan](http://www.trek.ubc.ca/okanagan)), to predict the popularity of a “made in Kelowna” version of the UBC Vancouver U-Pass Program at UBC Okanagan. The positive response from the survey results was presented to the UBC Okanagan Student Union for a September 2005 U-Pass implementation, which did not occur. Building on this research and the recent actions of the Student Union, this paper outlines and recommends next steps including a triple bottom line assessment of value-added features of the U-Pass program for UBC Okanagan students, staff, and faculty. This will include an evaluation of each component from a sustainability perspective indicating the social, economical, and environmental costs and benefits of each element. Barriers to these features will be included, should this be warranted. In addition, an implementation strategy is provided in order to gather and engage support for sustainable transportation at the UBC Okanagan campus. Each feature listed within this report could be promoted through a U-Pass Program booklet given to all new and continuing students, staff, and faculty at UBC Okanagan. This would include benefits listed in categories from a sustainability perspective. This promotion might include categories of social, economic, and environmental savings inherent to the U-Pass program including increased health and community inclusion, financial savings and incentives, as well as reduced green house gas emissions and cleaner air.

### **Triple bottom line Assessment of Value-Added Features of U-Pass Components**

The University of British Columbia Sustainability Office publicly states, “UBC is among hundreds of leading educational institutions that signed the 1990’s *Talloires Declaration*. These institutions pledged to make sustainability the foundation for campus operations, research, and teaching. They are encouraging their faculty, staff, and students to factor ecological, social, and economic consequences into all of their personal and professional decisions” (Sustainability Office [SO], 2006). In reality there are value-added features of U-Pass that should be implemented to help ensure a successful and sustainable program, which include: 1) end of trip facilities, 2) merchant discounts, 3) emergency ride home, 4) recreational partnerships, 5) combination of U-Pass and campus parking permits, 6) infrastructure improvements, and 7) transit service improvements.

#### **1. END OF TRIP FACILITIES**

The University should be committed to encouraging other transportation choices to the campus other than the single occupancy vehicle (SOV). End of trip facilities should be accessible to all students, staff, and faculty, and should include showers, toilets, change areas, clothes lockers, bicycle racks and bicycle lockers.

End of trip facilities (EoTFs) should be available in a central building or developed as part of new building projects. Depending on the size and feasibility of the building, end of trip facilities should include a minimum of a bike rack, and two shower stalls per washroom (Lovegrove, 2006). An EoTF centre should include several male and female toilets, showers and change areas, lockers, and sufficient bicycle parking (Western Australia State Government, 1996).

### **Sustainability Perspective of End of Trip Facilities**

There are social, economic, and environmental benefits to cycling, including improved health benefits (Carnall, 2000), opportunities for social contact and inclusion with other cyclists (CTC, n.d.), cost effectiveness and efficiency over short distances in urban areas (David Suzuki Foundation, n.d), reduction of green house gas emissions (eartheasy, n.d.), among others. Cycling to the university can be encouraged with end of trip facilities, which assist in making cycling more feasible for students, staff, and faculty members.

*Bicycle Lockers:* it is anticipated that the cycling community would prefer secure bike parking in a convenient area to minimise the risk of theft or damage to the bicycle. This may include a highly visible, well-lit, outdoor bicycle cage with a combination lock provided through a campus cycling association or the Student Services Centre.

Hygienic, private, and functional *change rooms:* must be secure facilities capable of being locked. These facilities should be relatively close to the bicycle lock-up area to increase the riders' convenience. As discussed, the change rooms should be well designed and include showers, toilets, sinks, and access to lockers for personal gear. A towel service would be beneficial within the facility.

## **BENEFITS**

1.1.1 SOCIAL: A cycling club will increase the opportunity for cyclists to ride to campus together as well as motivate each other to continue cycling throughout the year. Cycling may reduce 'road rage' and other stresses related to driving in urban areas. The City of Kelowna, like many North American cities is not primarily designed with the cyclist in mind although it is working to improve secure bike paths and routes that may lend to a full-blown cycling culture (Lovegrove, 2006),. Ron Westlake states that "[Kelowna has] more kilometres of bike lanes per capita than any other city in North America" (August 2006). There is an opportunity for the University to promote and educate cycling programs within the internal and external community. Potentially there are students, faculty, and staff who do not have a driver's license and feel isolated in the community because of this. Access to a bike club, cycling community, or carpool community could help broaden their inclusion within the community.

- Burning of 300 calories per hour
- A 15-minute bike ride to and from work five times a week burns off the equivalent of 11 pounds of fat in a year

- Moderate exercise can reduce levels of depression and stress, improve mood and raise self-esteem
- Cyclists actually absorb lower levels of pollutants than car drivers

The University will benefit from healthier staff and students, which may translate to lower sick days and longer-term health impacts such as heart disease, obesity, and other illnesses reduced by increased fitness levels.

1.1.2 ECONOMIC: *Cost Recovery*: UBC Vancouver offers rental rates for bicycle lockers “of \$23.00/month with a \$15.00 deposit. The price is calculated in whole months only, starting from the first day of the month to the last, and must be paid in advance. You can hold a locker for a minimum of 1 month and a maximum of 12 months” (TREK, 2006). Students paying for a U-Pass may argue that the cost of a bus pass that they may or may not use plus the additional cost of a monthly rental rates for their bike locker is expensive. UBC Okanagan could investigate reducing the \$23.00/month rental rate to a more reasonable cost should the U-Pass Program be adopted. Further, they may wish to explore the feasibility of offering free bicycle racks to users.

*Transit: Canadian Driver* (Cato, 2005) states that owning an economical vehicle such as the 2005 Toyota Echo costs a typical owner approximately \$6,209.77 per year including, “cost estimates for depreciation, fuel, insurance, finance, repairs, maintenance, and license and registration.” The City of Toronto promotes that, “the average car-operating cost in Canada is estimated at between \$6,000 and \$9,000 per year (\$15,000 for the first four years of owning a new, full-sized car)” (City of Toronto, 1998-2006). The U-Pass will cost \$50 per semester as compared to the current City of Kelowna cost of \$122 per semester. The U-Pass Program is far less costly than it is to own or lease a vehicle or to ride public transit at the current rider rate as a student or adult.

1.1.3 ENVIRONMENT: Continuing on with the Toyota Echo example, the green house gas emissions for this vehicle is 5.2 tons per year. A popular Okanagan vehicle is the Ford 150 Pickup, which emits up to 13 tons per year depending on the model. Cycling does not emit greenhouse gases, therefore it is the cleanest choice for the environment.

## 1.2 Social Marketing: Increased Cycling on Campus

1.2.1 Promotion: Accessibility of end of trip facilities at the campus. Supposedly cyclists will be most encouraged by this however all commuters should have access to such facilities. Promotion should include signage that is available in the Student Services Centre and within the gym and student oriented spaces within the Library and Faculties. When students rent access to the storage locker they could be given a secure locking device as part of their rental. Students that ride the bus with their bike should also have access to the end of trip facilities. Events including ‘Bike Week’ and ‘Cycling Days’ should be organized throughout the year by the University with prizes and cycling oriented giveaways including UBC

Okanagan water bottles, bike lights, reflectors, bike tune ups, and back packs. Partnerships with local bike shops could promote cycling from within their shop and discounts could be organized within the partnership.

1.2.2 Education: from a social perspective, families should be made aware through education and promotion that the number one cause of teen deaths is automobile accidents: “Traffic accidents are one of the leading causes of death among Canadian youth. Teenagers aged 20–24-year-olds are twice as likely to be injured or killed in accidents as any other age group” (Pan American Health Organization [PAHO] (2001). The use of transit or carpooling could mitigate fatalities and injuries. Additionally, the health benefits of cycling and walking should be promoted. Economically speaking, families should be educated on the long-term costs of vehicle ownership including insurance, maintenance, fuel, and depreciation. Information on public transit and other alternatives should be made available in order to change the notorious car culture mindset as students develop and grow.

Facilities Management and the Deputy Vice-Chancellor’s Office should work together to plan for end of trip facilities within existing and new buildings. Current and potential cyclists should be encouraged through a positive and supportive promotional campaign. An emissions calculator could be added to the UBC Okanagan website to promote the environmental benefits of cycling and other alternative transportation options to the SOV; UBC Vancouver includes such a calculator on their website: <http://www.trek.ubc.ca/research/toolbox/ghc.asp>.

### 1.3 Potential Barriers

Increasing the number of campus commuters who travel by bicycle will take time; current community attitudes towards cycling and alternate commuting behaviours may only change when people believe that they are safe and routes are convenient. Quality bicycle routes and well-maintained end of trip facilities are crucial to encourage more people to begin cycling to campus. UBC Okanagan should encourage the City of Kelowna to expand and promote cross town bike routes throughout the city as is done in Vancouver (City of Vancouver, 1999) including more user friendly cycle paths from the west side of campus via the Robertson Lake corridor. There are opportunities to improve all access points to the university connecting from all directions for instance bike lane connections from the east, getting to the campus from Rutland, is a major barrier for commuter bicyclists (Lovegrove, 2006). Currently the existing overpass and the new Highway 97 flyover to UBC Okanagan do not yet have, or have been designed to have, bike lanes. According to Dr. Lovegrove “the existing overpass could be modified to add via narrowing [of the] Highway 97 median [at a] relatively low cost, which would be less expensive than a major structural addition to the overpass” (2006).

Unfortunately a large part of Kelowna and its outlying areas are not serviced by the transit system, which accentuates the definition of urban sprawl.

“Sprawl spreads development out over large amounts of land; puts long distances between homes, stores, and job centers; and makes people more and more dependent on driving in their daily lives” (Sierra Club, n.d.)

With that said transit advocates from this region and others can benefit from an understanding that a well-established, and warranted culture in the Central Okanagan is that the ‘car is king’—an outcome of urban sprawl. This culture ignites a few key milestones including the ‘rites of passage’ experience for a sixteen year old Kelowna teen to get a car and a driver’s license. Owning a car as an adolescent is celebrated, almost as a birthright, in high school; and owning a car is considered to be an achievement in adulthood. If a teen or adult decides not to own or drive a vehicle in Kelowna their peer community can ostracize them as buses are termed ‘loser cruisers’. Promotional campaigns and education may alter the car culture but again this will take time.

The cost of implementing end of trip facilities may be an expensive project despite its favourability on campus. The university should consider their immediate budgets for implementation of these facilities to coincide with the roll-out of the U-Pass Program. This cost should be discussed prior to promoting end of trip facilities to the internal community. As well, the new flyover should be designed to accommodate bike lanes, which promotes bicycle commuting to campus (Lovegrove, 2006). All new roads, overpasses, or highways connecting the external community to the university should be designed with bicycle commuting in mind.

## **2. MERCHANT DISCOUNTS**

According to the TREK Program Centre survey “the majority of students 67 percent [of the total campus population, more than 14% of students responded to this survey] would find U-Pass more desirable if it included discounts to local recreation centres” (TREK, 2006, pp. 3). Merchant discounts could include discounts at local recreation centres, bike and outdoor shops, as well as admission to concerts or night clubs, retail purchases, day ski passes and/or equipment rental, Greyhound and/or Big White and Silver Star ski bus discounts, movie theatres, non-campus related sports events, among others.

### **2.1 Sustainability Perspective of Merchant Discounts for U-Pass Holders**

Offering merchant benefits to U-Pass holders is primarily categorized with social and economic benefits. However if pass holders determine these discounts as valuable, then it could become a large motivator to accept the U-Pass by transit and non-transit riders. The benefits of this feature follow.

#### **BENEFITS**

2.1.1 SOCIAL: U-Pass holders will benefit from discounts at local merchants they deem worthwhile. When a discount is given for necessary or wanted items or services, the merchant may feel that they are contributing to a valuable University program. The University receives a double benefit from merchant

discounts, namely, a good-will partnership to improve external relationships while adding value to U-Pass beyond a deep-discount bus pass program.

2.1.2 ECONOMIC: the students will inevitably save money with a merchant discount program. The University and merchants should not be economically affected by offering merchant discounts since the volume of purchases should increase as the number of U-Pass holders' increase.

2.1.3 ENVIRONMENT: the environment will continue to 'win' should a U-Pass be implemented and accessed by students. It is assumed that the number of students taking transit or commuting alternately to campus and recreational destinations, i.e. Big White will increase with the implementation of U-Pass.

## 2.2 Social Marketing: Collaboration for Merchant Discounts

As a first step, a committee could be organized to establish an initial list and relationships thereafter with preferred merchants that the students, staff, and faculty would like to receive discounts for. This list may include vendors and establishments located within or beyond the Central Okanagan. Once a list is generated, the committee on behalf of the university should establish relationships with the preferred so as to establish merchant discounts. A promotional campaign would be organized to review and promote the program on an annual or other basis. Likely spaces for promotion would include the University U-Pass Program website, all print promotional materials for the U-Pass Program, as well as at the merchant locations. The Student Service Centre website could also include the listing of these vendors for the private accessibility of students checking their grades or registering for courses at UBC Okanagan.

### *2.2.1 Potential Partners based on the Location of UBC Okanagan*

A. Okanagan Golf and Country Club: a strategic asset of UBC Okanagan's location is being neighbors to a world class golf community. Both the Bear and Quail golf courses are Jack Nicholas designed and have considerable drawing power. Furthermore, the Country Club has terrific food at good value. The investigation of merchant discounts at the Okanagan Golf Club would be worth the research. Students represent a client with non-traditional working hours, potentially disposable income as well as a moderate level of leisure time. The golf club might look at the student market as a good way to generate twilight and shoulder season revenues. From a U-Pass perspective, golfers in general are car owners (assumption), however if there was a merchant discount for golfing, there might be an incentive for car users to support the U-Pass referendum. Continuing on this line of reasoning, there are other golf course with in three kilometers of UBC Okanagan-- Shadow Ridge, Kelowna Springs, Sunset Ranch, and World Beat Driving Range.

B. Movie Theatres: generally, movies are a main form of entertainment for students.

The Grand 10 theatres are closest to campus, followed by the Orchard Plaza Theatres, Paramount and finally, Westside Theatres. Movie discounts for U-pass holders would be an enticing bonus for the students; the majority of these movie theatres are accessible by city transit.

C. Live Theatre: The Faculty of Creative and Critical Studies is the second largest faculty and have many of the "culture creators" on campus. There is talk of a partnership between a downtown theatre space and Neil Cadger, Professor of Performing Arts at UBC Okanagan. It is my understanding that until the theatre space is created on campus, many performances will be held in the Downtown Cultural District. Establishing a merchant discount at these venues is worth investigating. In addition to the student rate, U-Pass holders could receive additional discounts such as reduced prices on concession.

D. Bike Shops: local bike shops including Fresh Air Experience, Cyclepath and Gerrick's Cycle may offer bike tune-ups, bike parts, and retail items for cyclists. These bike shops have been operating in the Okanagan for decades and offer the community excellent services. These bike shops will be cooperating in events such as the Fall Bike Expo, bike week and others organized by the University and the Bike Co-op. They could offer riding or repair clinics to June cyclists. All of these bike shop locations are accessible by public transit.

### **3. EMERGENCY RIDE HOME**

A primary reason often cited by commuters for not riding public transit to work or school is the fear of being stranded without a ride home especially in an emergency situation (Santa Clara Valley Transportation Authority, n.d.). The emergency ride home feature allows U-Pass holders to count on a free taxi ride in the event of an emergency or unplanned schedule change. According to the UBC Vancouver program, there are certain situations that qualify for an emergency ride home including: "illness of your child or dependent, personal illness, and family emergency". UBC describes the Emergency Ride Home (ERH) program as "a Transportation Demand Strategy (TDM) that guarantees students, staff, and faculty a ride to their place of residence, and to certain other destinations under very specific circumstances of need. It is intended for people who regularly utilise forms of transportation other than a Single Occupancy Vehicle (SOV). SOV users are ineligible to use the program as the purpose of an Emergency Ride Home program is to provide a 'safety net' to those who choose an alternate form of transportation. These alternate forms of transportation can include, but are not limited to: public transit, cycling, car or vanpools, and walking" (TREK, 2006).

#### **3.1 Sustainability Perspective of Emergency Ride Home Program**

Should U-Pass holders determine that the Emergency Ride Home Program is of value, there will be benefits to including this program in the package of U-Pass features. The following are benefits of this feature from a sustainability perspective.

## **BENEFITS**

3.1.1 **SOCIAL:** this program is primarily a social benefit for U-Pass holders. The internal community will feel supported by the program and will believe that the University is serious about supporting alternative transport to the campus. The Emergency Ride Home Program could be likened to an insurance policy; should anything go wrong within the parameters of the program then the student, staff, or faculty are guaranteed a safe ride home.

3.1.2 **ECONOMIC:** should a staff, student, or faculty member be eligible for an emergency ride home, they will save the cost of an expensive taxi to a designated area. Since Kelowna is a sprawling city, a taxi ride from the University to many residential areas of the city could cost over \$25 (based on a taxi fare from the UBC Okanagan campus to the Kelowna General Hospital only), which will save them money in critical situations.

3.1.3 **ENVIRONMENTAL:** the benefit of this program is that those students, staff, or faculty commuting by transit or other modes will reduce their environmental impact throughout the year. Despite taking a taxi or other vehicle minimally to campus during the year, there likely will be decreases in green house gas emissions overall.

### 3.2 Social Marketing: Emergency Ride Home Program

This program should be promoted to all students through the UBC Okanagan U-Pass website. The criteria and eligibility of this program should be included to encourage U-Pass holders to feel assured that in the event of a personal emergency, that they will not be stranded. It might be unnecessary to create a full campaign around this one feature; however it is important to inform all U-Pass holders of this benefit.

## **4. RECREATIONAL PARTNERSHIPS**

Recreational programs offer people the opportunity to join in local programs in order to meet others and to learn new skills, as well as increase their fitness. Since UBC Okanagan promotes the application of knowledge through academic programs it seems fitting that partnerships with community centres be developed. There may be service and other opportunities that staff, students, and faculty can involve themselves in, resulting in increased social benefits.

### **4.1 Sustainability Perspective of Recreational Partnerships**

Offering U-Pass holders the option to join recreational facilities will benefit both the users and the university. It is important to create a healthy community, physically and socially, that allows community members to be included in local programs whether through volunteer positions, or personal opportunities.

## **BENEFITS**

4.1.1 SOCIAL: the staff, students, and faculty can access community centres that promote social and physical well being of community citizens. Community recreational centres are an excellent venue to meet new people outside of campus. Participants may find a community centre in their neighbourhood that they can walk to on the weekend or when they are not on campus, which promotes the opportunity for volunteer involvement and fitness. On campus recreational facilities are also a great way to meet other internal community members. The University will benefit from healthier staff and students, which may translate to lower sick days and longer-term health impacts such as heart disease that may be linked to stress and obesity (American Heart Association, 2006). People that lead a healthy lifestyle reduce their stress levels and actually improve effectiveness with schoolwork (Kurtus, 2002).

The official journal of the *American College of Sports Medicine* reports in a study through a joint partnership between the Michigan State University and Grand Valley State University that, “Middle school students who perform more vigorous physical activity than their more sedentary counterparts tend to do better in school.”

4.1.2 ECONOMIC: through partnerships the students, staff, and faculty are afforded the opportunity to participate at a recreational centre that will normally cost additional funds including access to fitness classes, pool facilities, and other programs.

4.1.3 ENVIRONMENTAL: access to local community and recreational centres will promote the local use of facilities rather than students, staff, or faculty travelling to the campus to exercise. However should these people travel to campus for work or class it would be beneficial to have them exercise at the gym facilities as part of their daily trip.

### 4.2 Social Marketing: Recreational Partnerships

There are three main recreational centres in Kelowna, besides the UBC Okanagan recreational facilities, including the Kelowna Family YMCA-YWCA (Rutland), Parkinson Recreation Centre (mid town), and Capital News Centre (Mission). Investigating merchant discounts and partnerships for U-Pass holders might be productive. However, a partnership with the UBC Okanagan gym facilities makes more sense as staff, students, and faculty are frequently on campus. Financial incentives such as free lockers for bike users, reduced gym pass rate for U-Pass holders, or free days (e.g. one per month) are worth investigation. Rob Johnson is the Athletic Director at UBC Okanagan. Through discussions with Rob, he is open to discussing a partnership with the U-Pass Program Coordinators. If the UBC Gym is the best value for recreation, then there is a greater impetus for students to arrive earlier or stay on campus after their classes.

A promotional campaign would best promote this feature of the U-Pass. Signage at point-of-sale areas within the facilities as well as within the student orientation packages would best communicate these partnerships. The social benefits of healthy lifestyles should be linked to the promotional campaign including the economic savings of joining a centre through the U-Pass program.

##### **5. COMBINATION OF U-PASS AND CAMPUS PARKING PERMIT**

In the short term, there may be little that the University can do to change the current reality of sprawling Okanagan communities; therefore, it may be unrealistic to think that the entire UBC Okanagan will embrace the U-Pass Program. Since many faculty members, staff, and students may commute from outlying areas such as Westbank, Penticton, Vernon, Lake Country, and the outer suburbs of Kelowna, the likelihood of these individuals commuting by transit may be limited by their geography despite their interest in the benefits of the U-Pass Program. They may be, or feel, completely bound to their automobile based solely on the distance between their home and campus. Alternative transportation including car or vanpooling may be a more realistic and welcomed option for this group. This is where a combination of a U-Pass and a campus parking permit might act as a bridge or compromise for these who are geographically limited.

##### **5.1 Sustainability Perspective of U-Pass and Campus Parking Permit Combination**

From a sustainability perspective carpooling is a great way to save money, meet new people, reduce traffic congestion, and reduce pollution (TransCanada Carpool, 2001). Providing incentives to promote the combination of the U-Pass and campus parking permits may act as a primary motivator to increase carpooling to and from the UBC Okanagan campus. Options to promote carpooling on campus may include reduced regular parking rates on campus for those U-Pass holders that carpool. Yale University offers parking discounts for people sharing a car on campus; they also offer three free parking passes per month for the days that carpooling does not work for the passengers schedules (Yale University, n.d.). Another option to promote carpooling is guaranteed parking spots located in preferred locations on campus. Carpooling reduces the number of single occupancy vehicles traveling to campus and therefore should be considered as a key solution for increasing sustainable transport at UBC Okanagan.

**BENEFITS**

5.1.1 SOCIAL: the staff, students, and faculty can increase their personal relationships by carpooling to campus. The UC Irvine campus offers a carpooling database that is accessible to all students, faculty, and staff (UC Irvine, n.d). The carpooling option allows internal community members, who reside outside of current transit service areas, to participate in a sustainable transport option available at the university. Carpooling may clear up some of the parking problems that currently exist at UBC Okanagan including displaced parking lots due to continued construction especially if preferred parking were an option for carpoolers.

5.1.2 ECONOMIC: staff, students, and faculty are able to save money while traveling to campus via the carpool option. For instance, the UC Irvine campus offers a \$50 gas card to the first 100 new carpools each academic year and offers two free parking passes per month to carpool participants who are unable to carpool during the month (UC Irvine, n.d). Following up on the Yale University reduced parking rate model is shown in the enclosed example of a 60 percent discount each for two people sharing a car – “Jane currently pays \$100 to park and Bill currently pays \$50. When they register as a Yale car pool, Jane pays only \$40 per month (40% of \$100) and Bill pays only \$20 (40% of \$50)”; there is 75 percent discounts for three or more people sharing a car (Yale University, n.d.). There is the opportunity for students, staff, and faculty members who do not own a vehicle to partake in commuting to campus by car without the expense of actually owning one. The owners of vehicles benefit from carpooling by sharing the costs of individual parking rates and perhaps fuel despite reducing their continued habit of driving to campus.

5.1.3 ENVIRONMENTAL: carpooling will reduce traffic congestion, and consequently will reduce pollution, as commuters share rides to and from the campus thereby reducing the number of SOVs on the road. The university could reduce the number of parking lots by providing incentives for carpoolers, which will leave an opportunity for more green space on campus, which will contribute to sustainability goals set in the Academic Plan, “UBC Okanagan must be safe, clean and green...” (UBC Okanagan Academic Plan, 2006).

### 5.2 Social Marketing: Combination of U-Pass and Campus Parking Permit

Discussions with Facilities Management at UBC Okanagan could be initiated to discuss the probability of offering carpoolers with reduced parking rates and preferred parking spaces. Based on the outcome of these discussions a promotional campaign would be organized to promote the incentives and benefits related to carpooling to campus. Likely spaces for promotion would include the University U-Pass Program website, all print promotional materials for the U-Pass program, and through the UBC Okanagan homepage. The Deputy Vice-Chancellor, the AVP Facilities, and the UBC Okanagan Student Union could cooperatively introduce the parking permit incentives as a step towards implementing aspects of sustainability within the University's Academic Plan.

## **6. TRANSIT IMPROVEMENTS**

When speaking to the student government representative, Krystal Smith, and the General Manager, Rob Nagai, the key concern they have is transit service and infrastructure. They point to the fact that many bus stops along the highway are “nothing but a pole and sign” and that an investment in bus shelters and better signage will go a long way into making the bus system more user friendly and safe, less demeaning, and more visible. Krystal also made mention of a gas tax as a way to fund public infrastructure. This opens up a new realm of politics and is one that is beyond the scope of this paper. At the city planning level, the move towards more nodal urban areas with denser cores is in the official city plan and transit services should follow this densification.

### **6.1 Sustainability Perspectives on Transit Improvements**

6.1.1 ECONOMIC: The arguments for increased infrastructure are a game of chicken and egg. Students want more bus stop shelters, safer places to stand, seats for comfort, bigger bike racks, more dependable drivers, better frequency of service and schedule ‘poles’ at major stops similar to Vancouver infrastructure. The transit authority wants more ridership before they can pay for these upgrades and the game continues in this fashion. Who is going to pay for better infrastructure? The question is similar for who will pay for the increase in bus service, although the City has taken the first step through their Smart Transit Plan for the Central Okanagan (City of Kelowna, 1998-2006). It is important to differentiate between the benefits of a U-Pass Program and that of bus services; the U-Pass is far more than just a bus pass and should be considered as such during the organization, promotion, and implementation of such a program. Changing the mind set of the current and prospective internal community will require a broader discussion of all benefits and options involved in the U-Pass Program or else the entire program may be minimized.

One student is willing to pay with her time and inconvenience, although not financially, to take transit. The following is a student profile with many recommendations in it.

## Student Profile

*Francis Dixon, third-year Bachelor of Arts student, Student Representative on the Board of Governors*

Francis is a regular in the student union headquarters. She is an opinionated and informed English and History major that is a model transit user. Francis lives in Westside and takes transit year round. Her decision for taking transit has multiple reasons that could be identified with sustainability characteristics. The main reason was economic. She did not want to have to get a part time job in order to afford a car and the associated cost of operating the vehicle. Her second reason for taking transit is the health benefits of riding her bike. Francis takes the number seven bus at 7:10 a.m. each morning; the #7 turns into the #21 at the exchange downtown and then heads up the Glenmore Valley. Francis likes the fact that she does not have to change buses during the trip and can enjoy the time to get ready for the day at school. Once in the Glenmore Valley on Valley Road, Francis gets off and rides her bike the remaining way to UBC via the Robertson Lake route. Most days she is the only rider at that time in the morning but she sometimes sees others. Her experience riding is relatively positive, as she has no complaints about the dogs, residents or barbed wire fencing that has been mentioned as deterrents by other cyclists. Once at school she rarely uses a shower but she does rent a locker at the gym for her books and gear. (Recommendation: free lockers for cyclists). Francis has a great attitude about transit however she still has many recommendations to make the service better. Mainly there should be more evening bus service to the Westside.

A. In the evenings her bike can be a barrier as there are only two spaces for bikes per bus and the bus driver will not allow bikes on board, unless it is the last bus of the night. Her recommendation is that each bus be equipped with four bike spaces rather than two. The frequency of bus service at night is every two hours. There is a 6:30 p.m., 8:30 p.m. and a 10:30 p.m. bus which for her 'is a real pain'. Francis recommends that the frequency of after-hour service hours be extended for students, staff, and faculty staying late for night classes, studying, or attending events.

Finally, Francis had an innovative suggestion for transit providers.

B. Considering a proposal to ICBC to offer car insurance rates for avid cyclists. Many students purchase insurance at a premium for their vehicles and then justify its use because the car insurance is 'paid for' and feel that, therefore it should be used. If ICBC could offer an insurance package that was flexible to accommodate a daily rate so that people could insure their car for only the days utilized per month versus the monthly or weekly rates, this could be an incentive for less car use and more transit use.

## 6.2 Social Marketing: Infrastructure Improvements

If the students are to take the promises for transit improvements seriously, the commitment from the Transit Authority, the City of Kelowna, and UBC has to be evident. According to the TREK survey (TREK, 2006) transit inconvenience and safety concerns top the list of the majority of students for why they do not take the bus. The addition of bus shelters with covered seats at bus stops, the addition of schedule poles and the addition of safety lights for night riders would all be tangible improvements that students would appreciate.

The General Manager of the UBC Okanagan Student Union Rob Nagai states, “in terms of getting people out of their cars, this battle will not be won until the convenience of taking the bus [land use system solution] outweighs the convenience of independent automobile driving” (Nagai, 2006).

For those students, staff, and faculty who have trouble giving up the convenience of the automobile may find comfort to know that “the first car share co-operative is about to begin at UBC Okanagan” (Lovegrove, 2006).

## 7. BUS RAPID TRANSIT – EXPRESS ROUTES

The success of the express routes initiated last year by UBC Okanagan and the BC Transit Authority have been met with mixed reviews. One Education student who lives in Rutland and has been taking transit to the UBC Okanagan campus (formerly Okanagan University College) for six years had mixed thoughts about the new express route. His three options to travel to campus via transit are:

1. To ride the regular bus to Rutland this will take him one hour to arrive home;
2. To ride his bike this will take him 30 minutes; or
3. To take the new express bus this takes him 20 minutes.

Although option three is his preferred choice based on the shorter travel time, the frequency of the express bus route is limited and unrealistic for students’ schedules since it arrives on campus at 8:00 a.m. and departs for his home at 4:00 p.m., which unfortunately is inconvenient for him based on his academic and personal schedule.

### 7.1 Sustainability Perspectives on Transit Service Models: BRT and Unlimited Access

There are two distinct transit service models noted in this section including the Bus Rapid Transit (BRT, high capacity transit corridors) and Unlimited Access (aka U-Pass, see Brown, Daniel, Baldwin, Hess & Shoup, 2001). Both models have service implications as land system service solutions.

7.1.1 SOCIAL: BRT would be both more convenient and potentially safer for all riders since the frequency of the buses is increased and the wait times are reduced. Unlimited Access “reduces parking demand, increases students’ access to the campus, helps to recruit and retain students, and reduces the cost of

attending college. Transit agencies report that Unlimited Access increases ridership, fills empty seats, improves transit service, and reduces the operating cost per rider. Increases in student transit ridership ranged from 71 percent to 200 percent during the first year of Unlimited Access (U-Pass), and growth in subsequent years ranged from 2 percent to 10 percent per year” (Brown, Daniel, Baldwin, Hess & Shoup, 2001). Taking people out of cars and into buses (typically a 40:1 ratio), also significantly reduces congestion and risk of collision, than producing travel time and road safety benefits as additional social benefits. Both service models address the social perspective of transit as well as potential goals of the university.

7.1.2 ECONOMIC: Some may say that this is the crux of the U-Pass dilemma. The infrequency of service is the biggest complaint from students. The City of Kelowna, BC Transit Authority and the University have to improve transit service for the U-Pass to be successful. Students are very concerned that the U-Pass, if supported in a referendum, will mean that service is improved on the ‘backs of the students’. The expression of good faith by BC transit was received with mixed reviews. There were some service improvements in Rutland and the Westside but more service is needed to the Mission, along Gordon Drive and through Glenmore. Given the regional economic driver that UBC Okanagan is expected to be, the City of Kelowna should consider revamping the transit services in anticipation of the population growth of the city.

7.1.3 ENVIRONMENTAL: It generally accepted that traditional transit vehicle technology, combined with low occupancy (i.e. Non-BRT, Non-U-Pass) emit as much or more GHG and other pollutants as the average SOV. Therefore, the recommended BRT and U-Pass service models, which would lead to high occupancy transit, are expected to produce overall lower emissions per passenger than the SOV travel mode.

#### Social Marketing: Transit Service Models BRT and Unlimited Access

Building a culture of transit in the Okanagan will be a slow and steady process. The service improvements with a more focussed destination grid route would help accommodate the needs of students, staff, and faculty. Transit schedulers should recognize that student’s are not following a 9-5 schedule. There needs to be some creative and lateral thinking in the scheduler’s office to be more accommodating to students needs in consideration of class time as well as personal time. The express route marketing last year was good, but the early morning and late afternoon scheduling is just a start. The express BRT routes should be increased to a frequency of “a minimum of 30 minute service throughout the day” much like the when the B-Line was introduced in Vancouver (Lovegrove, 2006). Marketing around the BRT routes could be advanced as well. Making a U-Line or a Rocket Line would help profile this service. The key is to invest in the development of the transit services to a reliable and suitable level prior to developing costly marketing plans.

## **8. U-PASS PARTNERSHIPS**

Strategies to promote transit and other alternatives to the exclusive use of single occupant vehicles might include introducing a transit pass system for high school students, which may change the notorious car culture mindset as students develop and grow.

### **8.1 Transit Pass System for High School Students**

The success of a U-Pass system at the university level may be predicated on the success of a transit pass system that includes high school students in the Okanagan.

Okanagan schools including: Rutland Middle School, Rutland Senior Secondary, George Elliott Secondary, Spring Valley Middle School, KLO Middle School, Dr. Knox Middle School Kelowna Senior School, OKM Secondary, Mount Boucherie Secondary, Glenrosa Middle School, Constable Neil Bruce Middle School and the Kelowna Christian School all represent potential future U-Pass users; a part of the U-Pass strategy for the Okanagan should include partnerships from with these schools directly. Although School District #23 has its own bus system, there is a demand for kids relying on public transit for after-school activities and commitments such as sports and theatre.

### **8.2 Possible Partnerships**

#### **8.2.1 Okanagan College**

In the conversation with Rob Nagai and Krystal Smith, it came up that Okanagan College (OC) is lining up their student government to discuss a U-Pass system for university transfer students. The student government at OC believes that the current infrastructure is developed well enough to go ahead with a U-Pass system. I recommend looking at partnerships with the OC students and the UBC-O students to increase the draw of students onto transit.

8.2.2 KLW Airport: Exploring synergies with the Kelowna Airport is recommended. Currently the use of transit to get to and from the airport is grossly underutilized. The low cost and convenience of parking at the KLW airport makes transit a distant option but this destination is suited for transit use. Possible links to the U-Pass is an Airport Shuttle service for students flying on holidays.

8.2.3 Seniors Services: As mentioned in the demographics discussion above, seniors will make up the bulk of the population in the Okanagan in the foreseeable future. Creative thinking to increase the transit use by seniors would bolster the ridership and increase the viability of the system. Professor Mary Ann Murphy is the leading researcher on Geriatrics and Health at UBC Okanagan and may be a good starting place for research into partnerships in transit.

### **8.3 Barriers and Social Marketing**

#### **8.3.1 Education and Promotion**

From a social aspect, families should be made aware through education and promotion that the number one reason for teen death is automobile accidents: “Traffic accidents are one of the leading causes of death among Canadian youth. Teenagers aged 20–24-year-olds are twice as likely to be injured or killed in accidents as any other age group”.<sup>1</sup> The use of transit or carpooling could mitigate fatalities and injuries. Alternately, the health benefits of cycling and walking should be promoted. Economically speaking, families should be educated on the life cycle costs of vehicle ownership including insurance, maintenance, fuel, and depreciation;

## 9. STUDENT PROFILES

9.1 *Erica Triggs*, Second Year Sustainability Student (unclassified) Student Leader of Create, the first year orientation program.

9.2 *Ana-Maria Frai*s, Fourth Year, Arts Student with a goal to complete the Social Work degree. Ana is a Create leader as well.

Erica and her colleague Ana-Maria Frai>s are very interested in sustainability issues and alternative mobility options. They have a certain amount of energy and enthusiasm towards acting in a more sustainable way and walking the talk. The two students are having trouble however walking the talk when it comes to transit. Ana lives near Father Pandosy Mission and says the nearest bus stop is Okanagan College. She is very surprised that there is no bus service along Gordon Ave beyond KLO road heading south.

Erica is a SOV driver and has a huge insurance premium from having an accident. Her average monthly insurance bill is \$300.00. She is not interested in paying for her car insurance all week long. She would prefer to take transit but her investment into her car is too big for her to justify paying more for transit while her car sits in the driveway. She, like Francis Dixon, is very interested in a weekend rate for car insurance. It is worth investigation into the plausibility of ICBC giving students a specialized rate structure that allows them to insure their car on a daily rate, through an online service.

9.3 Sarah Stang, Fourth Year Anthropology Student, Student Ambassador for Recruitment & Alumni Tours. Sarah Stang was responsible for the Postal Code analysis of the distribution of students in the Central Okanagan for the TREK Office in 2005. She had the following recommendations for the transit improvements at UBC Okanagan:

1. More routes from Rutland
2. More routes from Glenmore
3. More weekend service to / from campus – with over 700 students on campus, this service needs to be increased to at least once an hour instead of once every 1.5 hours. There should also be a bus at night for students getting back from the downtown nightclubs. The on campus pub might want to

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<sup>1</sup> <http://www.paho.org/english/sha/prflcan.htm>

consider longer hours to entice students to remain on campus rather than losing their business to downtown establishments. The taxi option is very expensive and students have been known to drive impaired in the past.

4. More service from Mission – a route out Gordon Drive south of KLO Road into the deep mission.

5. Training drivers on new routes, i.e. express from the Westside, which in the morning seems inconsistent with Sarah mentioning that various drivers are unsure of the exact route and number of stops. She recommended that the drivers need more training on what the express route actually entails in order to increase consistency.

## CONCLUSION

The transit system in the Central Okanagan has opportunities for future growth and expansion. The foundations of a successful system are there, but the current state is rather underdeveloped; yet it is poised for rapid growth if planned and executed with the new market of UBC Okanagan riders in mind. The administrators at UBC Okanagan, BC Transit, and the City of Kelowna cannot afford not to get to know the student demographic and understand their needs. A successful partnership between these stakeholders is possible if the students are listened to. The expressed needs of the students are improved service throughout the Central Okanagan. In terms of gathering support for the U-Pass system, a real commitment to improve service is needed prior to a U-Pass referendum. As these transit improvements are made in the coming years, combined with increases in parking prices, reductions in parking supply (relative to enrolment), improvements in bicycling, and enhancements to other sustainable transportation modes, the necessary student support for a U-Pass at UBC Okanagan will occur. The question is how long it will take to grow that support. Funding and policy are keys to answering that question.

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