

TransLink's Transportation Demand Management Measures at the 2010 Olympic Winter Games in Vancouver

Overview

The 2010 Olympic Winter Games was the largest event ever held in Metro Vancouver. In planning the Games, it was often said that, "It's going to be like having three Superbowls a day for 17 days."

Although most municipalities will likely never host as large and logistically complicated an event as the Olympics, the lessons learned and tools used to manage transportation demand in Vancouver can be applied to smaller events.

As one of the key partners in preparing for the transportation demands of the event, TransLink's challenge was to help coordinate the movement of people and goods during the Games in order to reduce overall vehicle traffic by at least 30%.

Resources

This case study was based primarily on a Transport Canada ecoMOBILITY webinar (<http://cullbridge.na5.acrobat.com/p13113497/?launcher=false&fcsContent=true&pbMode=normal>) and discussions with TransLink officials. For additional information see the **Resources** section on the last page.

Context

Well before skier Alexandre Bilodeau made history by becoming the first Canadian to win gold at an Olympics held on Canadian soil, TransLink was already planning how it would deal with the increased transportation demands of the 2010 Olympic Winter Games.

By prioritizing walking, cycling and public transit, and accommodating the movement of goods and general-purpose vehicles, Vancouver's Olympic Transportation Plan reflected the city's values on sustainable transportation planning.

An agreement with the Vancouver Organizing Committee (VANOC) gave TransLink the responsibility of leading transportation demand management (TDM) measures for the Games.

"If you've ever been to Vancouver, you know that we are geographically constrained in the downtown area," says JoAnn Woodhall, TDM Officer with TransLink's TravelSmart program. "This was the largest event to ever be held in Metro Vancouver and transportation planning was quite daunting."



Aerial photo of the City of Vancouver.

Rationale and Objectives

The City of Vancouver estimated that during the Games road capacity would be reduced by up to 50%. The overall transportation goal for the Games was, therefore, to reduce vehicle traffic by at least 30%.

Based on previous experience, TransLink estimated that the use of transit during other major events in Vancouver is typically in the range of 30%. For the Games, TransLink estimated that transit use would be closer to 85%. To meet that demand, TransLink had already increased transit services prior to the Games, and planned other transit service increases and TDM measures. Even so, the transit system would be under enormous pressure during the Games and Woodhall says that, "TransLink was looking to provide an outstanding transportation experience."

Actions

TransLink worked with six partners to plan and deliver the integrated transportation plan for the Games:

- VANOC
- Vancouver Integrated Security Unit (police and emergency services)

- BC Transit
- Resort Municipality of Whistler
- City of Vancouver
- BC Ministry of Transportation and Infrastructure

TDM was only one of TransLink's seven internal transportation working groups:

- Transportation Service Planning
- Operations, Maintenance and Facilities
- Security, Safety and Policing
- Communications and Marketing
- Human Resources and Host Centre
- Queue Management
- Transportation Demand Management

Each of its internal working groups worked on portions of the plan and, once agreement was reached among them, the plan was then approved by the senior executives of all of the partners.

One of the key actions that TransLink took was determining how the planned city road closures, pedestrian corridors, parking restrictions and Olympic traffic lanes would affect the transit system.

Twenty-six kilometres of Olympic lanes were in place between February 4 and March 1, 2010 to ensure that athletes and officials arrived at venues on schedule. These lanes were reserved for use by Olympic-accredited vehicles, transit and emergency vehicles.

"Transit vehicles were allowed the use of the Olympic lanes," says Woodhall. "That allowed us to move quickly and, prior to the Games, it was estimated that travel time was going to improve between three and 14% on those lanes. From a systems management perspective, that was really going to help our TDM initiatives."

To reach as broad an audience as possible and to support specific sectors that would be most affected by the Games, TransLink focused on four main TDM strategies:

1. Directly engaging employees in downtown businesses;
2. Outreach to schools and community associations;
3. A general community awareness initiative; and,
4. An integrated media and communications strategy.

"In any city, you have your morning and afternoon peak periods, but we were told that we could expect peak conditions between 7:00 am and 7:00 pm in our downtown area," says Woodhall. "These TDM measures were put in place to reduce demand in this new peak period."

Directly engaging employees in downtown businesses

The business outreach strategy reflected previous TDM initiatives that TransLink had undertaken in Metro

Vancouver.

"We started by reaching out to large businesses," says Woodhall. "VANOC staff helped send that message out by making available to us a group of retired CEOs. These people knew the business community, had friends and associates that they could contact, and they did. They were a tremendous help in getting this message out."

"A direct mail was then sent to the human resources contact at hundreds of local downtown businesses. Others were contacted by email and by telephone," says Woodhall. After initial contact was made, the TDM team met with the businesses and eventually asked them to pledge their commitment on its TravelSmart website to reduce vehicle traffic by at least 30%.

The pitch to business was simple. "We told the companies that while vehicle traffic needed to be cut by at least 30% during the Games, we wanted business to keep moving, that the event was a great way to showcase the region, and that their commitment would contribute to the success of the Games and leave a lasting legacy of sustainable travel," says Woodhall. It was valuable, she says, to show business "what was in it for them."

"We also included incentives because no matter how much the information is well received, you need that carrot to influence behaviour change," she says. Companies that made an online commitment were eligible to receive tickets to medal ceremonies and were recognized for their support in newspaper ads. "That gave us an immediate spike in pledges."

The TDM team asked businesses to develop a Games Travel Plan specific to their employees. "It began with a review of their workforce to see who needed to come to work during the Games in the downtown and an understanding of their goods movement and couriers," explains Woodhall.

"We wanted to make sure that they knew exactly what could be done," she says, "so we provided them with a checklist that they could use as workbook." The checklist included a variety of TDM initiatives that companies could take, such as encouraging employees to take transit, ride-share, cycle, walk, telework or modify their work hours to avoid peak traffic times. Traffic modelling had shown that if employees arrived before 7 a.m. and left before 2 p.m. downtown staff would avoid the busiest times of the transportation network.

To keep the momentum going, TransLink also hosted lunch-and-learn events for the employees of businesses as the date for the Olympics approached. "We reiterated what needed to be done, gave them options, and also recognized what businesses were already doing."

Woodhall uses the success of an earlier telework project that TransLink had conducted in 2008 as an example of

how they encouraged businesses to become involved.

“Depending on how you look at it, fortunately or unfortunately, in September 2008 we had a major blackout in downtown Vancouver,” she explains. “This allowed us to showcase how one company’s telework policy allowed them to continue with business without a hiccup.”

Some businesses did much more than make a pledge. Some ordered breakfast for staff arriving early, while many others hosted Olympic-themed office events.

By facilitating these events, local businesses created a spirit of support for the Games. “People who saw that their own company was supporting it made it that much easier for them to say ‘if my company’s behind it, then I can be, too’.”

Commercial Deliveries

The City of Vancouver was chosen as the best partner to deliver the message to the commercial trucking industry because they already had a relationship and had worked with them on other issues. It was important to coordinate commercial deliveries to ease the traffic burden on the downtown roads during peak times.

Part of the business strategy, therefore, included shifting the time of commercial deliveries. “We explained to businesses how the road network would be affected and asked that their commercial deliveries be done between midnight and 6 a.m., the preferred period, or between midnight and noon for those who couldn’t,” says Woodhall. While TransLink met with the businesses, the city held separate outreach sessions with trucking associations and local courier companies to ensure that all aspects of day-to-day business would run smoothly.

Outreach to schools and community associations

TransLink chose to work closely with 10 elementary schools and four community associations that were located close to Olympic venues or were near areas where road changes and high traffic volumes would occur.

“We strategically picked these schools and community associations to match staff resources (one full-time equivalent) with the greatest need,” explains Woodhall.

Between October 2009 and January 2010, TransLink hosted events at community associations and schools to give people the information they needed to develop their own travel plan.

“For the schools, we used a student leadership model to deliver the program,” says Woodhall. “Student leaders delivered the message, so they taught each other and also influenced their teachers and parents. It’s great to see how they used their creativity to send this message—poems, raps, we even had one school who played a song

on ukuleles, and others worked on a video called TravelSmart, the movie!”

TransLink also arranged for the Olympic mascots to visit some of the schools involved. “The students didn’t know about it ahead of time and were thrilled,” says Woodhall.

Like the businesses, students and residents were asked to make a pledge to reduce their vehicle trips and TransLink set up a separate website page for the children to indicate what they were going to do.

General community awareness initiative

Beginning in late November 2009, TransLink began offering a Souvenir Games Transit Pass that allowed for unlimited travel on all TransLink buses, SeaBus and SkyTrain. The cost of the pass was based on Vancouver’s three-zone system of transit.



Top: TransLink’s Three Zone Fare Card. At right: Sample advertising used to promote the Games Transit Pass. Images courtesy of TransLink.



Passes were valid for travel beginning February 8, 2010 and could be used for the entire six-week Olympic period through to the Paralympic Closing Ceremonies on March 21, 2010.

TransLink also used social media tools, such as Facebook and Twitter, as well as an umbrella marketing campaign, to raise community awareness of the impact that the Games would have on transportation.

Advertisements at all transit stations urged residents to develop their own travel plan, and provided tips and information on getting around during the Games. TransLink also made travel alerts and real-time information on the various transit systems (bus, seabus, light rail) available through mobile phone and web-based applications.

“It was all about managing people’s expectations,” says Woodhall. “We told people ‘know before you go,’ get information ahead of time and sign up for the traffic alerts. We told people to expect delays, to dress for the weather, basically to be prepared.”

The TravelSmart website was one of their major communication tools. “It was a one-stop shop for all the audiences—business, schools, residents and spectators,” says Woodhall. “It became a portal where people could link with all of the agencies involved in transportation for the Games, so if someone was looking to go to an event in Whistler, you could get access to that information through the TravelSmart site.”

Integrated media and communications strategy

As part of the overall transportation plan, delivered by all of the Olympic partners, TransLink used its own websites and social networks for the integrated media and communications strategy.



Screenshot of the TravelSmart website, courtesy of TransLink.

The multi-agency Transportation Management Centre, co-led by TransLink and VANOC, communicated all real-time traffic and transit information to all of the agencies involved so that they could flag key issues, then plan and coordinate responses. TransLink’s Media Centre handled its media communications. “Staff members continued to manage the blog [the *Buzzer Blog*] website and the alerts,” says Woodhall, “with their level of activity ramping up during the Games.”

Staff at TransLink’s Host Command Centre coordinated the activities of TransLink’s office staff, who were given the opportunity to be out in the streets during the Olympics and became part of the “Blue Jacket Brigade.” These volunteers took up posts at key stations and transit exchanges throughout the region during the Games, offering residents and visitors their knowledge of the region and its transportation system, as well as maps and other information.

Electronic message signs, provided by TransLink, the City of Vancouver and the Ministry of Transportation, gave motorists advanced warning of road changes and reinforced key messages during the Games. All messages were coordinated and could be easily changed to provide the most up-to-date information.

Additional Actions

TransLink was supported in its TDM strategies by some of the actions taken by its other Games partners.

Walking & Cycling

Four kilometres of the city’s downtown streets were converted into pedestrian corridors to encourage walking and to accommodate increased pedestrian activity during the Games (pictured at right. Photo courtesy of TransLink). The pedestrian corridors featured special street lighting, banners and entertainment, as well as an easily recognizable and consistent wayfinding program.



The city, which had been developing its 2010 Bike Route Network, launched its Walking & Cycling Map to coincide with the Games. The network provided temporary, secure bicycle parking near Games venues. A local non-profit organization, Better Environmentally Sound Transportation, was hired to provide free bike valet services for all users at all seven locations. Woodhall says that the Games represented a milestone for bike valet service in Vancouver with bike valet parking becoming a standard service for large events.

Results

Based on cordon counts, the goal of reducing vehicle traffic by at least 30% was reached and surpassed. Taking all transportation modes into account, the various TDM strategies helped to reduce vehicle traffic by 36% during peak periods.

Before and during the Games, the city performed 24-hour counts at all major entry points (bridges, roads and all transit systems). The table below shows the overall reductions or increases, depending on the travel mode.

<i>Mode</i>	<i>407,000 pre-Games trips (screen counts taken Nov. 2009)</i>	<i>584,000 trips during the Games (screen counts taken Feb. 2010)</i>
Driver	45%	26%
Transit	38%	51%
Walk/cycle	5%	11%

Approximately 1.17 million trips crossed into or out of the downtown area on an average Games weekday, 43% higher than the pre-Games average of 813,000 trips. Based on the screen counts, vehicle trips to the downtown decreased by 29% during peak periods, while average vehicle occupancy to and from downtown increased by 14%.

In addition, the Vancouver Board of Trade conducted a survey between July and September 2010 to determine if those who had made travel changes during the Games would continue those habits.

Of the 750 people (residents and business owners) who responded to the online poll, 75% reported having an excellent experience with the transportation measures taken during the Games, and 44% said that they would continue with their new transportation behaviour.

The survey also asked what TDM initiatives offered during the Games, if made into a regular service, would encourage people to return to their Games transportation behaviour. City of Vancouver residents wanted to see expanded transit services, cycling facilities, and pedestrian-only roads return. Those from outside Vancouver listed additional park-and-ride facilities as their first choice.

Business strategy results

- More than 750 downtown businesses were contacted through the direct mail, one-on-one meetings and lunch-and-learns. Woodhall says that 99% of the businesses approached were supportive of the strategy, noting that, “they said ‘tell me what you need us to do’.” Of the 750 businesses contacted, 250 pledged to reduce their vehicle traffic by 30% on the TravelSmart website, or by contacting TransLink by email or phone. Still other businesses changed their travel plans as a result of the strategy, but because they did not expressly pledge their support to TransLink, the results are difficult to track.
- The volume of commercial deliveries decreased by 37.5%, with the biggest increase in commercial deliveries occurring between midnight and 6:00 a.m., the preferred period.

Transit and active transportation results

- Transit use increased by 31% compared to typical weekday pre-Games boardings. The SkyTrain alone carried more than 10 million riders in 17 days.
- That being said, sales of the Souvenir Games Transit Passes were disappointing. Woodhall says the likely reason is that the passes only went on sale just before the beginning of the Games in late 2009 and regular customers would likely have already bought their monthly pass by the time they were made available.

- Overall, walking, cycling and transit trips more than doubled during the Games. Almost 80% of spectators at downtown venues walked, cycled or took transit.

School outreach

- During the Games, 69.7% of elementary students at the 10 schools involved travelled to school using sustainable travel modes (37% of elementary students had already been travelling smarter, while 32.7% of students switched as a result of the schools initiative).

Communication results

- The TravelSmart website had an average of 13,000 visits a day, and the trip planner had daily visits of 60,000, a 60% increase compared to before the Games.
- More than 7,000 daily visits were made to TransLink’s alert maps that provided information on road closures and real-time transit schedules.
- Next Bus requests, a web-based feature that allows riders to check the real-time arrival of buses, increased by 100% compared to pre-Game requests.
- Twitter ranked TransLink’s Twitter feed 81 out of 6.2 million Twitter accounts, with more than 1,300 followers. “Retweets,” i.e., original tweets that were then forwarded on, reached more than 10,000 people. Following the Games, TransLink has now dedicated full-time resources to continue using Twitter to communicate with its customers.
- Visits to TransLink’s *Buzzer Blog* increased by more than 200% compared to the previous year.

Time Line

Woodhall notes that TransLink began its TDM planning in earnest about two years before the Games, in March 2008. Other key dates are listed below.

2007/2008: City of Vancouver conducts special events surveys.

2008: TravelSmart business telework pilot project. TransLink begins testing the use of real-time information. Tests include scenarios to respond to security issues, weather conditions and major mechanical failures on the SkyTrain lines.

March 2009: Dialogue begins with local businesses. Phase One of the Olympic transportation plan is released.

July 2009: Road closures, parking restrictions, pedestrian corridors, and Olympic lanes are established.

August 2009: TransLink opens the Canada Line SkyTrain service, which includes bike lockers at stations.

October 2009: Phase Two of the Games transportation plan released. Expanded transit services announced. With the launch of the TravelSmart2010.ca website, TransLink begins to encourage residents to develop travel plans for the Games. TransLink offers gas and ferry passes as prizes as part of Ride-Share Week and encourages residents to try ride-sharing as part of their Games travel plans.

October 2009 to January 2010: Outreach in schools and community associations begins.

November 2009: Pre-Games screenline counts (traffic, transit, pedestrians, taxis, etc.) are conducted by the city and TransLink. Souvenir Games Transit Passes go on sale.



January 2010: TransLink launches its web and mobile phone resources for transit information during the Games. Advertisements, such as the one pictured here (*Photo courtesy of TransLink*), and other Olympic-related information are posted at its transit stations.

February 2010: The Games begin!

Lessons Learned

Start early and test various scenarios. All partners agreed that, “failure was not an option, so it was really important to get going as early as possible,” says Woodhall.

Other partners performed some advance testing, such as emergency preparedness, but there was limited ability to test road closures and parking restrictions ahead of the Games. “The inability to set up the incentives and disincentives and test them ahead of time generated some ill feelings so that, once the plan was in place, there was some backlash,” says Woodhall.

Identify gaps. With such a large event, people movement issues—from walking and standing in lines to transit and car use—helped to identify gaps in the overall Games plan. “The biggest gap was in managing queues outside transit stations and although TransLink clearly had this responsibility within the stations, once the lines spilled into the streets, responsibility was unclear.”

Be flexible and be ready with a plan “B”. “When we were asked, ‘What if the TDM measures as proposed don’t work?’ potential mandatory programs were identified,” says Woodhall. The TDM measures, however, were successful and compulsory programs were not required. Assumptions and plans were constantly changing up to and during the Games. “In large events that happens,” she says, “so you need to have a lot of flexibility in your plans and make changes as they’re required.”

Pay attention to details. Woodhall provides an example of how even the smallest detail needs to be identified. “It sometimes took longer than expected to pull the street teams together and, as a result, the Host Command Centre suffered,” she says. “The inability to provide a cable feed in time meant those staffing the location were isolated and did not feel part of the Games experience.”

Communicate effectively. As part of their communications strategy, TransLink and its partners used multiple tools to alert people to traffic and transit delays, route changes, weather, and road closings.

This communication strategy was also flexible enough to let staff shut down rumours quickly.

“There were rumours that all of downtown was going to be shut down, that you weren’t going to be allowed to drive your car, that there would be gridlock, and that it would be chaos,” recalls Woodhall. “One of the first rumours we heard was that the Stadium SkyTrain station would be shut down during the Games. We assured people that we would be running at full capacity. Our communication centre used Twitter to address rumours as they arose.”

TransLink also piloted the use of social media during opening day to assist crowds.

Talk to the target audience. The business and school strategies targeted specific audiences, but regular commuters were not canvassed as thoroughly. For example, the Souvenir Games Transit Passes were not available for sale until shortly before the Games began and, as a result, sales suffered. “Feedback from potential purchasers in the community might have helped to avoid this result,” says Woodhall.

Use carrots & sticks. Woodhall says that you need both incentives and disincentives for people to engage in different transportation behaviours in significant numbers.

For the schools strategy, as noted above, TransLink brought the Olympic mascots to some of the local schools. “If you do have something like that associated with your event [mascot, spokespersons, etc.], book them early and use them to their full advantage because it really did generate a lot of excitement in that market.”

In terms of the business strategy, and as noted earlier, there was an immediate spike in the number of pledges from local businesses once prizes were offered. “If you’re able to provide incentives like that and put them in front of the community, it certainly has an impact.”

In addition, while it did not affect the end results, part way through the business outreach strategy, metrics were created that enabled senior managers to buy into the activities underway, building trust and a foundation for support. “Without them, the outcomes were not being communicated as well as they could be,” she says.

Woodhall says that one of their biggest sticks was parking. “There was no parking available at Olympic venues,” says Woodhall. “If you can build that into a large event, with no exceptions, and get that message out clearly, that’s very helpful.”

Be aware of staff needs. Allowing TransLink office staff to be part of the operations on the street during the Games created an excellent working atmosphere that continues to this day. “Staff worked alongside others they would not normally get to meet. We got a greater understanding of what each other does and how well we can work together,” says Woodhall. “We became one family.”

That being said, Woodhall notes that some staff members “burned out” during the Games. “An event like the Olympics is a marathon and pacing is important. Senior staff may want to work all the way through, but there is a risk of burn out and degradation in decision-making ability,” she says. In TransLink’s case, some staff members did not build sufficient down time into their schedules ahead of time and their decision-making skills were affected.

Rely on your partners. Woodhall says that, “Whether it was police services addressing certain behaviour by protestors, UBC sports team members and the Salvation Army assisting with queue management, or hearing from transit police that large celebratory crowds meant bus service had to be shut down early, we needed to rely on our partners to help create the outstanding transportation experience we promised.”

Respect the local context. The Resort Municipality of Whistler was a member of the TDM working group. “The key message to their businesses and residents was the same as ours,” says Woodhall, “but they customized it for their own community.” Emma Dalsanto, Whistler’s TDM Coordinator, says that, “Given that 100% of free day-skier parking (which is also used by employees) in Whistler Village and Whistler Creek was eliminated during the Games, reaching the community was key. We didn’t have the resources to do a direct mailing or one-on-one meetings, but we were able to use what we had developed and tweak it for their local culture.” For

example, just as TransLink relied on a group of retired CEOs for their business strategy, Whistler also relied on its local business community through the Whistler Chamber of Commerce and Tourism Whistler to deliver the message.

Next Steps

One of the goals of all of the partners involved in transportation planning during the Games was to leave a lasting legacy of sustainable transportation for Vancouver.

The efforts of TransLink helped to reduce overall traffic by 36%—surpassing the original goal of at least a 30% decrease in vehicle traffic—and those efforts continue with its TravelSmart program. The program gives employers, employees, schools and individuals an understanding of the impact of their travel choices and provides options for change. TravelSmart reports that, during the Games, 40% of those who typically drive alone chose to change their regular commuting habits and that 61% of those have maintained some of their TravelSmart habits long term.

In addition, the City of Vancouver engaged the University of British Columbia to conduct a post-Games monitoring study. The study recommended that the Games’ legacy could continue if the city and its partners:

- Continue to monitor all of the transportation systems to improve decision making.
- Use the data collected for the monitoring study to further examine and test new and innovative initiatives and ideas to encourage sustainable travel.
- Pursue TDM measures that take advantage of the unique characteristics and opportunities to be had during other large city events.

Conclusion

Woodhall says that the bright side to managing travel demand for the Olympics was that it gave people a chance to get comfortable with different travel options.

“The work we did for the Games built on the incredible foundation we have in our TDM department,” she says. “The need to reduce vehicle traffic during Games was crucial and we were able to offer so many options because we had those services already in place. The legacy opportunities of this work are tremendous.”

Resources

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