

**Legacies of the 2010 Olympic Winter Games,
a Vancouver case study**



BSc Thesis, Toon Brilman (S3772403)

Supervisor: Prof. MSc. J. Kuper

Bachelor Spatial Planning and Design

Rijksuniversiteit Groningen

Faculty of Spatial Sciences

Abstract

The following thesis studies the legacies left behind by the Vancouver 2010 Olympic Winter Games. Organizing a mega-event like the Olympic Winter Games requires the construction and upgrading of sports venues and infrastructure. A mega-event is often used by host nations as a catalyst for urban development. The event legacy is what remains present in a host city long after the event has passed. Vancouver celebrated the 10-year anniversary since the Games last year. This research discusses what the legacies of the Vancouver Winter Olympics are, what purpose they serve in the province of British Columbia, and their usage. Additionally, the research investigates how the organizing committee planned for lasting legacies and what lessons can be learned from the approach of VANOC (Vancouver Organizing Committee). Through qualitative semi-structured interviews with stakeholders involved in planning, organizing, and managing of the Games and their legacies, the research finds that Vancouver is home to many tangible legacies, such as the Richmond speedskating Oval and Hillcrest Center, as well as intangible legacies, such as increased Olympic competitiveness, social and economic benefits for people all over BC (British Columbia), and pride and memory of the Games. VANOC had a vision of an Olympic Games for everyone, with a rich legacy for the people of Vancouver, Whistler, and BC to enjoy long after the Games are gone. Through this vision, elaborate planning, and strong commitments from partners who shared this vision, VANOC was able to organize an Olympic Winter Games that benefits thousands of people in British Columbia to this day.

Table of contents

1.	Introduction	.	.	.	.	4
2.	Research problem	.	.	.	.	5
3.	Research questions	.	.	.	.	5
4.	Theoretical framework	.	.	.	.	6
	4.1 Conceptual model	.	.	.	.	8
5.	Methodology	.	.	.	.	8
	5.1 Research sampling	.	.	.	.	8
	5.2 Data analysis	.	.	.	.	9
	5.3 Ethical considerations	.	.	.	.	9
	5.4 Positionality	.	.	.	.	10
6.	Results	.	.	.	.	10
	6.1 Legacies and purpose	.	.	.	.	10
	6.2 Legacy planning	.	.	.	.	12
	6.3 Legacy usage	.	.	.	.	14
	6.4 Legacy planning	.	.	.	.	14
7.	Conclusion and recommendations	.	.	.	.	16
	7.1 Recommendations	.	.	.	.	17
8.	Discussion and reflection	.	.	.	.	17
	8.1 Reflection	.	.	.	.	18
9.	References	.	.	.	.	19
10.	Appendix I.	.	.	.	.	22
11.	Appendix II	.	.	.	.	24
12.	Appendix III	.	.	.	.	25

1. Introduction

Hosting a Winter Olympics requires a lot of preparation. Sports venues have to be constructed or upgraded, slopes must be prepared, infrastructure upgraded, and the city must look fantastic, because “The world is watching”. When the Games are over, what remains is the event legacy. Preuss (2007) defines an event’s legacy as follows:

“Irrespective of the time of production and space, legacy is all planned and unplanned, positive and negative, tangible and intangible structures created for and by a sport event that remain longer than the event itself.”

Since the 1970’s, cities and nations bid to host a mega-event for political reasons, using the mega-event as a driver for socio-economic and urban development (Dawson & Jöns, 2018). However, mega-events are notorious for leaving behind negative legacies. Displaced people and neglected venues are common after mega-events (Death, 2011; Talbot, 2019). Additionally, if the event is organized in a flawed democratic context, it tends to leave a bitter aftertaste for many of the host-city inhabitants (Müller & Gaffney, 2018).

Last year, the Vancouver 2010 Winter Olympics celebrated their 10-year anniversary. A good moment to reflect on the legacies to see what they contribute to Vancouver and Whistler to this day. Many media articles on the legacies were published, and unlike the legacies in many other host nations and cities, the Vancouver legacies seem to be doing quite well (Tomalty, 2016; International Olympic Committee, 2018; Chan, 2020). The venues are being used, the infrastructure developments transport thousands of people every day, and the Games seem to have had an overall positive effect on Vancouver. How did they manage to achieve this while other cities failed?

According to Brimicombe (2015), for planned legacies to succeed, they must be incorporated in the mega-event planning from the very beginning. Positive legacy does not succeed as an afterthought. This research aims to study the 2010 Vancouver Winter Olympics legacies, both tangible and intangible, and provide insight into how they were planned, what they contribute to Vancouver and Whistler to this day, and what lessons can be drawn from VANOC’s approach.

2. Research problem

From the publications mentioned prior, as well as the study of Müller & Gaffney (2018), the Vancouver legacies seem to be performing relatively well in terms of contribution to the community and usage. There is, however, little academic literature on how and why some host cities enjoy positive legacies of the Games whereas others don't. Additionally, Stewart & Rayner (2015) mention the gap between optimistic forecasts of the Games versus the actual outcomes. This thesis will investigate this gap by interviewing stakeholders involved in planning, organizing, and managing the legacies of the Vancouver 2010 Olympic Winter Games, to try and find out whether the optimistic forecasts materialized in Vancouver, and if so, how it was done.

3. Research questions:

Due to the aforementioned research problem, this research adopts the following research question.

How do the legacies of the Vancouver 2010 Olympic Winter Games perform, in terms of contributing to society, a decade after the event, and why do they perform the way they do?

To answer the research question, the following sub questions are formulated:

- *What are the legacies of the Vancouver Winter Olympics, and what purpose do they serve in the city of Vancouver a decade after the event?*
- *How did the organizing committee plan for lasting legacies?*
- *How has usage of the Olympics venues changed over the past ten years?*
- *What lessons can be learned from the legacy management of Vancouver?*

The following chapter will discuss the relevant theoretical framework, after which chapter 5 presents a conceptual model, visualizing the themes and relations discussed in the theoretical framework, also a hypothesis is given.

Chapter 6 formulates the specific characteristics of the research methodology, and chapter 7 presents and the research results. In the concluding chapter the main findings are summarized, generalized, and recommendations for further research are given. In the discussion the shortcomings of the thesis will be discussed.

4. Theoretical framework

The following chapter will give an overview of the literature on mega-events and legacy. Furthermore, it will discuss the context of Vancouver as a host city in relation to the literature.

Before discussing mega-event legacy, it is useful to first get an idea of what defines a mega-event. To classify event sizes, Müller (2015) scores events on four criteria: visitor attractiveness, mediated reach, costs, and transformative impact. In the article, the Vancouver 2010 Winter Olympics are classified as a mega-event.

Academic literature on mega-event legacies seems to mainly focus on the negative legacies left behind by mega-events, often hosted in developing countries. Emerging economies see hosting a mega-event as an excellent opportunity to gain international recognition, boost tourism and push forward urban developments on the political agenda. Thus, using the mega-event as a catalyst (Oliveira, et al., 2019; Müller & Gaffney, 2018). However, Stewart & Rayner (2015) point out the gap between optimistic legacy ambitions and forecasts during the bid phase, and the actual legacy realization in terms of economic, social, and cultural benefits on the local level. For Vancouver, the opportunities for using the Olympics as a catalyst for urban and regional development are similar to the opportunities of other host cities. However, the context in which the event is hosted *is* different, as Canada is not a developing country.

According to Müller & Gaffney (2018), impacts of a mega-event depend largely on the political and economic context of a host country. Under the authoritarian regime of Russia, the Sochi Winter Games legacy seems to be predominantly negative (Müller & Gaffney 2018). Brand new structures went out of business almost as soon as the Games were over because there was a major misalignment between supply of- and demand for sports infrastructure (Müller, 2014). Opposingly, in states with a strong democracy and a market-led economy such as London or Vancouver, impacts of organizing a mega-event tend to be more positive (Müller & Gaffney, 2018). Therefore, political and economic influences are included in data collection.

However, legacy remains an abstract and ambivalent term. Positive outcomes for one group can mean negative outcomes for another. Additionally, official evaluation of an event by the organizing committee often focusses on the positive legacy outcomes (Preuss, 2007), whereas academic studies overemphasize the negative outcomes of mega-events (Dawson, J., & Jöns, H. 2018). So how can legacy be assessed?

To assess legacy, Preuss (2007) proposes the three-dimensional model of legacy cubes (figure 1). This model can assess legacy impacts over three axes; planned-unplanned, positive-negative, and tangible-intangible. The distinction between 'gross' and 'net' legacy is also emphasized by questioning what *extra* benefits the mega-event brought. What would have changed if the mega-event had not been hosted (the 'without case')? The 'net' event legacy is the difference between the 'event case' and the 'without case'.

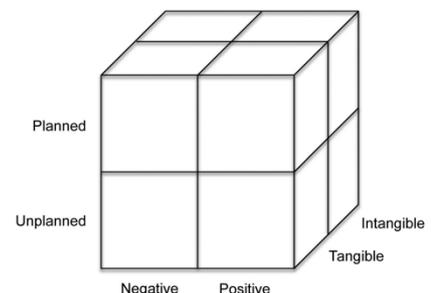


Figure 1, The legacy cube. Source: Preuss (2007)

Dawson, J., & Jöns, H. (2018) elaborate on the work of Preuss (2007) and propose the ‘five legacy rings’ model (figure 2). The ‘legacy rings’ model uses three grades of valuation per ring (triadic thought) instead of the binary approach in the legacy cube model (dyadic thought), and is thus, more nuanced. The ‘five legacy rings’ model supplements the upper three rings that were also in the ‘legacy cube’ model by placing them in the context of time and space (lower two rings). From short-term ‘effect’ (within 1 year after the Games) to long term ‘legacy’ (more than 10 years after the Games), and from the ‘micro’ city level to ‘macro’ country level.

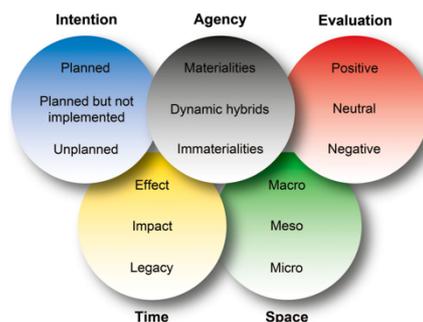


Figure 2, Five Legacy Rings. Source: Dawson & Jöns (2018)

Müller, M., & Gaffney, C., (2018) took a different approach in assessing the urban impacts a mega-event leaves behind, by scoring various city impacts (e.g., displacement, material transformation, underutilized infrastructure, etc.) from 1 (not at all prominent) to 5 (very prominent). As mentioned in the first paragraph of this theoretical framework, Müller, M., & Gaffney, C., (2018) consider the political and economic context of the organization of the Games as key indicators for positive or negative legacy outcomes.

What most scholars seem to agree upon; long-term *positive* legacy of mega-events will only occur if there is a relevant, long-term, well-planned and effectively managed effort to produce impacts (Preuss, 2007; Bairner, 2015; Brimicombe, 2015). A driving force intended to produce such change is needed. The government, who is a stakeholder that intentionally attempts to leverage the Games to achieve educational, health and environmental goals, has the potential to use the mega-event as a catalyst and harness positive lasting legacies when planning for them beforehand. As Brimicombe (2015) states: “*Legacy does not succeed as an afterthought*”.

The city of Vancouver held a referendum before bidding, asking the ‘Vancouverites’ whether they were in favor of the Games being hosted in Vancouver or not. This is a clear sign of democracy in Vancouver. The fact that VANOC won this referendum is interesting, as more and more cities vote against hosting an Olympics in their city (Maenning, 2017).

4.1 Conceptual model

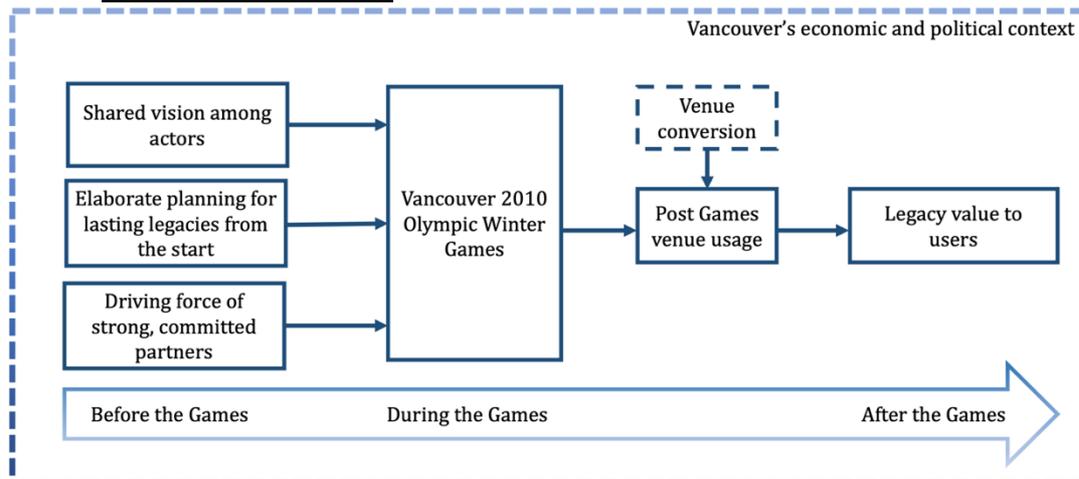


Figure 3, Conceptual model

Based on the literature, this thesis hypothesizes to find that Vancouver enjoys predominantly positive legacies. The political and economic context in which Vancouver is situated (democracy and market-based economy) would, according to Müller & Gaffney (2018) allow Vancouver to use the Games as a catalyst for urban development. Additionally, an organizing committee with a vision and driving force to create legacies may be able to plan for and materialize their ambitions in Vancouver (Brimicombe, 2015).

5. Methodology

The following chapter will discuss the process of data collection, analysis, ethical considerations, and the positionality of the research.

Data was collected through semi-structured qualitative interviews with stakeholders involved in organizing the 2010 Olympic Winter Games, as well as stakeholders taking care of the venues today. Qualitative data collection is preferred over quantitative data collection, as interviews will provide a more ‘in depth’ understanding of a somewhat unknown research phenomenon than a questionnaire would (Gill et al., 2008).

The reason for choosing semi-structured interviews over structured or unstructured interviews is to allow the researcher to pursue an interesting idea or response in more detail when it arises (Gill et al., 2008). When stumbling upon a factor to legacy planning not mentioned in the research, it is important to be able to follow-up on this. Speaking to stakeholders will allow for new insights into legacy planning, management, and maintenance, that will contribute to answering the research questions.

The interview guide can be found as ‘Appendix I’.

5.1 Research sampling

As this research on Vancouver is conducted from the Netherlands, the interviews will be done via videocalls. Reaching interviewees in Vancouver was done through the contacts of a relative of the researcher, in Vancouver. The relative did not know any of the respondents, the researcher came into contact with a respondent via an intermediary contact. After the first respondent was contacted, sampling was done via the snowballing principle, using the network of the respondent to get into contact with more relevant people in the field (Ghaljaie et al., 2017). As the target group for the research is challenging to reach from the Netherlands,

this strategy seemed the most effective. Table 1 presents the anonymized list of respondents interviewed for data collection.

Interviewee	City	Gender	Profession	Date
Expert 1	Vancouver	Male	- Director of sponsorship sales for bid and later VANOC.	21/04/2021
Expert 2	Whistler	Male	- First employee 'Whistler Sport Legacies' from 2008 to late 2010	03/05/2021
Expert 3	Vancouver	Female	- Vice president Communications during bid. - Vice president Sales and Marketing for VANOC. - Now CEO of TTG Canada.	04/05/2021
Expert 4	Vancouver	Male	- President of LIFTS - Former CEO of 2010LegaciesNow - Legacy advisor to the IOC.	10/05/2021
Expert 5	Whistler	Male	- Vice president of Sport for VANOC - Chair of 'Whistler Sport Legacies' - Venue advisor to the IOC	13/05/2021

Table 1: Overview of anonymized interviewees

5.2 Data analysis

The interviews were recorded using the voice recorder on a mobile phone. The records were transferred to the researcher's laptop and transcribed using otter.ai. Otter.ai is a software that transcribes audio files into written transcripts, and therefore saves the researcher a lot of time transcribing. There is, however, need to check the transcripts for errors before sending the transcripts to the respondents, for their opportunity to correct the transcript for inaccuracies.

Data analysis was done using Atlas.ti coding software. Atlas.ti allows for elaborate, yet organized coding of the main relevant and recurring topics in the interviews. There is a lot of literature on legacies, therefore many codes are deductive. However, there were also aspects to legacy planning that were not found in the literature and, thus, required inductive coding. Hence, the mix of deductive and inductive coding. The codebook of the research can be found as 'Appendix II'.

5.3 Ethical considerations

Before each interview, the rights of the interviewees are read to them, as well as what will be done to safeguard their anonymity. The respondent is asked whether he/she is comfortable with the interview being recorded to allow the researcher to work out a transcript which the respondent can later correct for inaccuracies. This can all be found in the interview guide under Appendix I.

Additionally, because of the researcher's powerful position to interpret the responses of the interviewees, a high level of reflectivity and ethical responsibility is required from the researcher (Steffen, 2021). To prevent misinterpretation, the quotes of the respondents used in the result sections, are sent to the respondent for approval, prior to implementation.

This method of data collection and analysis was learned in the 'Methods of Academic Research' course of Spatial Planning and Design, year 2.

5.4 Positionality

The respondents of the research are all very closely linked to the Olympics, and therefore, there is a higher possibility towards positive bias (Dawson & Jöns, 2018). To increase validity of the data, cross-referencing and triangulation are used. Linking statements of respondents to academic literature and other publications increases validity of the data.

A shortcoming of using the snowballing principle is that the respondents all have a similar background and perspective on the research topic (Ghaljaie et al., 2017). During the data collection process, it has been a major challenge to come into contact with anyone who has a different background and/or perspective on the matter. The researcher has not been able to interview someone with a more neutral view towards the Games.

6. Results

This chapter discusses the results of the qualitative interviews with 5 experts involved in planning and maintaining the legacies of the Vancouver 2010 Winter Olympics. The outcomes are sorted by assessing each sub question, to finally answer the main research question in the conclusion chapter.

To start, a positive legacy, as defined by the combined responses of the interviewees, is anything that leaves a positive impact on a community and improves people's lives. This can be in terms of health and sports, but also reduced travel time and lower rent, before, during, and long after the Olympic Games.

6.1 Legacies of the Vancouver 2010 Olympic Winter Games and their purpose in and around Vancouver

According to the experts, there is an abundance of legacies, both tangible and intangible, present in Vancouver, Whistler, and the province of British Columbia, and they serve a variety of purposes.

“The one thing about the Vancouver Games in particular, other Games as well, but we're talking about Vancouver. The venues were definitely purpose-built, so they weren't built just for the Games. They were built to serve a purpose after the Games”. – Expert 4

Community centers: The Hillcrest curling center and the Richmond Olympic speedskating Oval are venues that were built for the Games but cannot sustain themselves financially as Olympic curling and speedskating venues respectively. They are, therefore, converted to community centers to be able to benefit the community in a larger variety of ways than by simply being an Olympic venue, while also generating more revenue. These community centers are legacies that promote health, youth sport, cultural programs, and pride and memory of the Games.

Olympic competitiveness: Other venues are still used by Canada's high-performance athletes to maintain Olympic competitiveness. Before the 2010 Winter Games, Canada had already hosted an Olympic Games twice, but had never won a gold medal on Canadian soil. VANOC wanted to change this and started 'Own the Podium', a joint effort of VANOC and the Canadian Government to boost Canada's Olympic competitiveness (expert 3). The project paid off, Canada won 14 gold medals, among which the most important one of all, the gold medal in ice hockey.

“that gold medal game went down in the history of Canada as probably one of the top five things that ever happened to our country”. – Expert 5

While 13,3% of the Canadian population lives in the province of British Columbia, 38% of the national athletes are in some way tied to British Columbia. Part of these numbers can be contributed to the ‘Own the Podium’ initiative (Lifts Philanthropy Partners, 2018; experts 3 and 4).

Housing: The Olympic villages in Vancouver and Whistler were both turned into housing units after the Games. In Vancouver they are now luxury apartments at the waterfront of Vancouver. There is, however, disagreement on whether this legacy is positive. Pentifallo, C., & VanWynsberghe, R. (2015) argue that although the IOC and VANOC classify the athlete’s village in Vancouver as a success, when taking political-, economic-, historic-, and other contextual factors into account, the athlete’s village may not be such a positive legacy. Additionally, in a news article, Currie (2020) states that the 2010 Winter Olympics might have actually contributed to the housing crisis in Vancouver.

In Whistler there was a severe social/public housing shortage before the Games (Lee, 2008). The Olympic village in Whistler is more modest than the village in Vancouver, and the apartments were converted into 550 affordable housing units for people working in Whistler. According to experts 2,3,4, and 5, although the housing problem is not yet solved (Vancouver Sun, 2018), this remains a highly appreciated legacy to this day.

Social and economic legacies: During the bidding process, 2010LegaciesNow was established. 2010LegaciesNow was an organization set up purely to leverage the Games by creating social and economic legacies for the province. Working very closely with the provincial government and BC’s communities, 2010LegaciesNow developed programs generating higher literacy levels, more inclusion, healthy living, sports, volunteer programs, arts programs, coaching, and more (Expert 4). Additionally, 2010LegaciesNow was the first Olympic organization to ever guarantee a legacy (\$5 million investment into sports) regardless of whether the bid was actually won.

After the Games, 2010LegaciesNow transitioned into Lift Philanthropy Partners to benefit more people in other ways. They handed all their programs over to other organizations who continue the legacy to this day. An example is ‘Decoda Literacy Solutions’. Since the 2010 Winter Olympics 1.650.000+ people have attended literacy programs, workshops, and events (Lift Philanthropy Partners, 2018; Expert 4). Another such organization is ViaSport, which has 718.000 registered athletes and 16.000 registered coaches in British Columbia (Lift Philanthropy Partners, 2018). Both organizations are providing benefits to the wider province of BC and keep the spirit of the Olympics alive (Lift Philanthropy Partners, 2018; expert 4).

Another legacy initiated by 2010LegaciesNow is the opening of a fabrication shop in downtown Eastside Vancouver (expert 3), an area with a lot of homelessness and drug problems. The fabrication shop was a program with RONA, one of the Olympic sponsors. Underprivileged youth and unemployed residents of Downtown Eastside could join a free skills program where they were educated to become a carpenter. They built the 11.000 items necessary for the venues and events. After graduating the program, they were qualified

carpenters. After the Games, Tradeworks Training Society took over the facility from RONA to continue the legacy (RONA INC, 2011).

Applying the social and economic legacies achieved by 2010LegaciesNow to the five legacy rings proposed by Dawson and Jöns (2018), the legacies range from micro-scale and short-term effect, such as literacy classes and financial aid for individuals, to macro-scale long-term legacies, such as increased literacy levels in the whole of British Columbia.

Something interesting that may also be linked to Dawson and Jöns’ 5 legacy rings model (2018), is that many of the physical legacies of the Games seem to keep the immaterial legacies alive. In the model, a ‘dynamic hybrid’ is the intermediate step between material and immaterial legacy. This might also hint towards the importance of symbolism that also stands out in the legacies of the Helsinki and Stockholm legacies (Bairner, 2015). Usage of the venues, pictures, and storytelling create a strong connection to the population, keeping the memory alive.



Figure 4, map of the physical legacies in Vancouver

6.2 Planning for lasting legacies

Interviewing experts involved in the planning of the Games gave an insight in the way the Vancouver legacies were established. The reason why Vancouver and Whistler has a lot of legacies, seems to be because VANOC had a vision, with legacy as the most important factor in every planning decision (expert 5). Elaborately planning out their vision from the start, VANOC made sure their partners committed to and shared this vision. Because of this vision and the economic and political context of Vancouver (Dawson and Jöns, 2018), VANOC had a different approach to organizing the Games than other organizing committees, such as the organizing committee of Brazil 2016, from the start (Oliveira, et al., 2019). Their vision

allowed VANOC to use the Games as a catalyst for development *and* enjoy its legacies (expert 3).

The Provincial and National governments of Canada recognized the catalyzing potential of the Games and offered funding for pushing forward plans that had been on the political agenda for a long time. According to Preuss (2007), pushing forward Vancouver's urban regeneration plans cannot be considered official legacies, but rather 'net' legacy, as the developments would have happened at some point anyway. Nevertheless, these developments benefit thousands of people in Vancouver and Whistler every day. Among these 'net legacies' are (1) the Canada Line, which provides high speed transit between the international airport and downtown Vancouver. In 2018, the Canada Line had an average of almost 150.000 boarding per weekday (Saltman, 2019). (2) The Sea to Sky highway between Vancouver and Whistler was improved and is now significantly safer and travel time is reduced. (3) The convention center, which hosts around 500 events a year and boosts the tourism and business sector of Vancouver (Vancouver Convention Center, 2020; Experts 2 and 4).

Another important aspect of VANOC's legacy planning was that they, compared to Sochi 2014, for example, had a modest plan for hosting the Games. Having much of the necessary infrastructure in place allowed them to keep the prices relatively low. It lowered the risk of venues not being finished in time and allowed VANOC to focus on making a plan for when the Games were long gone (expert 1). On the contrary, in more developing host nations the focus is on realizing the Games in the first place (Oliveira, 2019; Expert 3), leaving little room to think about legacy planning (Müller & Gaffney, 2018). VANOC had a plan for how the venues would benefit the communities most after the Games. The physical legacies promote health, youth sports, tourism, and volunteering, and are thus, keeping the intangible legacies of pride and memory of the Games alive.

A textbook example of a post-Games-use plan for an otherwise unfeasible venue is the speedskating Oval in Richmond (a suburb of Vancouver). The venue was built in Richmond to be the speedskating venue during the 2010 Olympics. It is a large venue (400-meter speedskating rink), however, speedskating is not really a widely practiced sport in Canada. To make sure the venue would not turn into a white elephant, Richmond converted the speedskating rink into a community center with badminton fields, basketball fields, climbing walls, wellness, a gym and many events for these sports (Richmond Olympic Oval, 2020). Today, the Richmond Oval is a community asset benefitting many people living in Richmond and wider Vancouver (experts 1, 3, and 5). Additionally, usage numbers are high and rising, as can be seen in the factsheet added as 'Appendix III' (Richmond Olympic Oval, 2020).

Something similar happened to the Hillcrest Curling center.

"I think the best Olympic venue that we built was the curling venue. It would be a community center, but instead of building the full community center out, they built the outside of it. Then we used the inside with temporary seating for the Olympic curling event, I think was about 3.500 seats. And then, when the Games were over, they finished the inside off to have a swimming pool, a hockey rink, a curling club, gymnasium, and a library, all fit into this big box. I still think it's the best Olympic design legacy ever done". – Expert 5

There will, however, always be venues that need additional funding. Learning from the underfinanced venues that remained after the 2002 Salt Lake City Olympics (expert 2), the legacy planners of VANOC initiated the Games Operating Trust (GOT): an endowment fund

to keep the venues operational after the Games (Leopkey, & Parent, 2012). The Sliding center and Nordic center up in Whistler are examples of venues that need additional funding, as they cannot generate enough revenue to sustain themselves (experts 2 and 5). These venues do, however, generate revenue from offering tourist rides with bobsleighs (for which they can charge high prices), and selling passes for Nordic skiing.

6.3 Legacy usage

Usage differs per venue. The most used venues seem to be the Hillcrest Center and the Richmond Oval, which were converted into community centers. The high usage numbers may be because of the large variety of facilities offered, attracting a large variety of people. According to expert 2, the Nordic center is also doing quite well. There was a significant increase of people that bought daily passes and season passes after the Games. Expert 5 mentioned that during the COVID-19 pandemic there was another increase of ticket sales, because “*Nordic skiing is safe, outside, affordable, and anyone can do it.*”

The Sliding center is still being used by Olympic athletes and also offers tourist rides, but the venue will remain in need of additional funding. The ski-jump is even more challenging. Ski-jumping is not part of Canadian culture, and there are very few people practicing the sport (experts 2 and 5). Additionally, ski-jumping is not suitable for tourism, which makes it a challenging venue in terms of generating revenue. This was, to some extent, anticipated by VANOC, the ski-jump was supposed to be temporary. However, after the Games, the funding to take it down was insufficient, and so it remained (expert 5). Interestingly, this was only mentioned by expert 5. The ski-jump has been operational every year since the Games, but because of lack of commitment by Ski-jumping Association Canada, Whistler has decided to not operate the ski-jump this winter for the first time since the Games in 2010. While each of the venues in Whistler depend (to different extents) on the endowment fund, none of them are in financial trouble (expert 3).

The housing legacy in both Vancouver and Whistler is fully sold out. It is, however, uncertain whether this is because of the quality of the apartments, or because of the Vancouver housing shortage (Currie, 2020). The affordable housing units were very needed in Whistler (McElroy, 2020; Lee, 2008) and the luxury waterfront apartments are very wanted in Vancouver (experts 1 and 3).

An interesting phenomenon mentioned by expert 2 is that the high-performance athlete activity at the venues is very high before the Games but decreases after. World tournaments are hosted as ‘test events’ for the Games and there is a lot of high-performance sports ‘buzz’ in the run-up to the Olympics. However, after the Games were over, this ‘buzz’ declined, as well as high-performance world tournaments and other professional sport events hosted. Simultaneously, public use and tourism increased, increasing revenue but reducing the amount of high-performance athlete activity.

6.4 Legacy lessons

There are some legacy lessons to be learned from the way the Vancouver 2010 Winter Olympics were organized. All experts mentioned that the planning of the Olympics started with a vision. A shared vision among stakeholders, of a Games that could benefit everyone, long after the Games are over. Legacy was the leading principle in the planning of the Games, from start to finish. That elaborate planning and shared vision would lead to positive legacy is in accordance with Brimicombe (2015).

Assessing the legacy of previous Games, such as the 2002 Salt Lake City Winter Olympics, seeing what they had done and not done, and whether it worked or not, allowed VANOC to learn from the mistakes of other organizing committees and do better (experts 2, 4, and 5). This caused, among other things, the realization that some venues would need additional funding to remain operational as high-performance Olympic venues after the Games, they needed a plan.

“Having the good sense to realize way in advance, you need to do things like convert a curling center to swimming pools. That's good planning to me”. – Expert 2

*“somebody had the good vision, that those venues would need financial support, no matter what they did to run their daily business, they would still need extra financial support”.
– Expert 2*

The Games were planned out in great detail, but besides planning you also need strong, committed partners who share your vision (Experts 1, 3, and 5). To be able to host the Olympics and have positive legacy afterwards, commitment from partners is key. There was one particular case, on Cypress mountain (the freestyle venue) where, among other venues, the halfpipe was built. The operator did not really support the Games and was not willing to make the commitments necessary to operate the halfpipe after the Games. Therefore, after the Games, the halfpipe was removed. Cypress mountain is still a great (Olympic) ski resort, but very little physical sports legacy remained for the Canadian freestylers (expert 5). This demonstrates the importance of shared vision, and strong partnerships and commitments.

In planning for the Games, Vancouver had the advantage of having a lot of the necessary infrastructure already in place. Sochi 2014 was at the other end of the spectrum (Müller, 2014). The entire city of Sochi was transformed for the Games, all venues were built from scratch and there were billions invested into road, rail, and energy infrastructure (Müller & Gaffney, 2018). This amounted to a price tag of about \$55 billion, roughly 10x higher than in Vancouver (Müller, 2014). Despite the high cost, expert 5 argues that Sochi is not the failure that the media often makes it out to be, as everything is still operational and used as *the* luxury winter sports resort of Russia.

The present infrastructure allowed VANOC to keep their planning modest, keep the prices relatively low, limit environmental impacts, risk of not finishing the venues in time, and focus on legacy planning for after the Games. At the time this was not common practice, however, by now the IOC has realized the benefits that come from this modest and legacy-oriented planning (Cashman & Horne, 2013).

“When we bid for the Games in 2010, the IOC model was more around “What can your city do for the Olympic movement?” And now, the IOC is all about “what can the Olympics do for your city and your region?”” - Expert 4

Experts 4 and 5 work closely with the IOC on legacy, and report a significant mindset-change, which is supported by Cashman & Horne (2013), away from an Olympics compacted into a city or region and towards promoting using an odd venue like a sliding center or ski jump in another country. In that scenario, the host does not need to build the venue, *“because does the world really need a new sliding center?”* – Expert 5

Additionally, before the 2010 Winter Olympics the IOC had little focus on legacy and more on hosting the next Olympics, their mindset has shifted. Today, the first question the IOC will

ask to an organizing committee presenting a bid is “*What is the legacy plan for this venue?*” (Expert 5).

This change in the IOC’s perspective is part of the reason that Vancouver is currently working on bidding again, this time for the 2030 Winter Games. According to experts 1, 3, and 5, Vancouver has all the working experience, a strong team that knows how to put on an Olympic Games, and all the venues necessary to host again. Additionally, if the Games were to return to Vancouver in 2030, the organizing committee would put a lot of focus on creating more legacies and benefits for Vancouver, Whistler and British Columbia (Experts 1, 3, and 5).

7. Conclusion and recommendations

The data collected through semi-structured interviews with 5 experts give an insight into the legacies of the Vancouver 2010 Olympic Winter Games, a little over a decade after the event. The low number of interviewees, as well as the fact that all interviewees have worked for or with the Olympic movement, makes it problematic to draw firm conclusions.

Although legacies of mega-events are elaborately studied in the literature, mega-event legacy remains an abstract and ambivalent topic. Positive outcomes for one party can mean negative outcomes for another. This can be seen in the housing legacy of the 2010 Winter Games, where the experts perceive the constructed apartments of the Athlete’s Village in Vancouver as a positive legacy, whereas Pentifallo & VanWynsberghe (2015), as well as a media publication by Currie (2020), are more critical. Additionally, the Cypress Mountain halfpipe, the ski jump, and the volunteering legacy are not the legacies that they could have been, according to the experts and Benson et al. (2013), respectively.

Despite this, many of the tangible legacies of the Vancouver 2010 Games provide positive benefits to the communities in which they are situated. The Richmond Olympic Oval and the Hillcrest center are converted to community centers that give back to the community in a variety of ways. Venues like the Sliding center and Nordic center in Whistler are still used by high-performance athletes, maintaining Canada’s Olympic competitiveness. Additionally, the Nordic center provides accessible sports to the community and tourists.

Canada Line and the Sea to Sky highway are much-used infrastructure legacies, realized through collaboration with the provincial and city-government, that provide transportation to thousands of people every day. Additionally, the Convention center benefits the tourism and business sector of Vancouver.

Intangible legacies initiated by 2010LegaciesNow in the form of non-profit organizations offer literacy courses, sports for everyone, and career opportunities to millions in British Columbia. Additionally, the ‘Own the Podium’ project has boosted Canada’s Olympic competitiveness, which has created pride and many memories of the Vancouver 2010 Winter Olympics.

According to the experts, these legacies were established by elaborately planning out an inspiring vision from the bidding process onwards. According to Brimicombe (2015) legacy does not succeed as an afterthought. VANOC knew this and acted accordingly. Learning from previous Games, VANOC initiated the Games Operating Fund to keep low-usage venues like the Ski-jump and Sliding center operational after the Games. When assessing the legacies

using the legacy cube provided by Preuss (2007), there are many tangible and intangible legacies, but most of them seem to be planned and rather positive (instead of unplanned and negative).

One of the most important factors of positive legacy planning in Vancouver is that Vancouver is a developed, modern city with much of the necessary infrastructure in place. This allowed VANOC to make a modest plan, look beyond hosting the Games and think about a Vancouver with positive legacies after the Games. As legacy takes about a decade to establish (Dawson & Jöns, 2018), Vancouver may be one of the first host cities to enjoy predominantly positive legacies. The IOC has picked up on the notion of modest planning and positive legacy (Cashman & Horne, 2013), however, the impacts of mega-events after 2010 cannot yet be considered legacy.

7.1 Recommendations

Research with larger sample sizes and more variation of interviewees would increase reliability and validity of findings. More independent research into the topic of positive legacy planning is warranted.

Additionally, the research only slightly touches upon the influence of the IOC on legacy planning of host cities, while they do influence host city decision-making. Future research on the influence of the IOC with regards to legacy planning of cities currently planning to host an Olympics would add a new dimension to the research.

Lastly, research into the legacies of Sochi would be interesting. In 2024, when a decade has passed since the Sochi 2014 Games, what legacies are left behind by a mega-event that carried out the polar opposite of Vancouver's modest planning approach?

8. Discussion and reflection

All interviewees of the research work or have worked for VANOC and are thus likely have a positively biased view towards the Olympics. This may reduce the validity of the data. Although there is triangulation of the data to check for reliability, it is difficult to establish certainty. Future research would benefit from an independent perspective to the outcomes of the Olympics, also interviewing people without the bias of an employee.

A shortcoming of the snowballing strategy is that the researcher is dependent on who the respondent proposes to interview next. Because of the challenge of researching a topic so far away and so long ago, the researcher is more or less dependent on the interviewees and who they propose to have interviewed next.

The case study regarding Vancouver's housing legacy, conducted by Pentifallo & VanWynsberghe (2015) shows that the validity of the data provided by the interviewees may be of questionable validity. Pentifallo & VanWynsberghe (2015) use the IOC's 'Olympic Games Impact' (OGI) study together with many quantitative indicators, variables, historical context, and scales. Their conclusion is that the housing legacy is actually *not* present in Vancouver, although the experts mention a positive housing legacy in Vancouver.

The other case study, conducted on the volunteering legacy of Vancouver by Benson et al. (2013), reports missed legacy opportunities. In order for volunteering to contribute to the creation of social legacy, both training and development strategies are necessary (Benson et al. 2013). According to the study, the volunteer training in Vancouver was too focused on event delivery instead of offering professional development opportunities. This resulted in

successful volunteering during the Games but missed potential in terms of volunteering legacy after the Games. Both of the case studies formulate results that are to some extent contradictory to the responses of the interviewees.

Academic research tends to focus on the negative side of legacies, whereas the organizing committees emphasize the positive. This may explain the lack of articles regarding positive legacy planning and management, as well as explain the positive results of my thesis.

8.1 Reflection

Looking back, I am satisfied with the research process. I was positively surprised by the respondents I was able to reach, as they are all in Canada and it has been over a decade since the event was organized. This was mostly thanks to my relative in Vancouver who passed the word along. I am less satisfied with the fact that I was unable to reach respondents outside of VANOC, this would have contributed a lot to the validity and reliability of the research. However, the literature on legacies and mega-events, as well as the literature on the venues and legacies in Vancouver, allowed me to conduct interviews which generated a lot of valuable results, thanks to the elaborate answers of the interviewees. I think that this research, despite the one-sidedness of respondents, has come up with interesting findings.

9. References

- Bairner, A. (2015). The legacy of memory: The Stockholm and Helsinki Olympic stadia as living memorials. In R. Holt, & D. Ruta (Eds.), *Routledge handbook of sport and legacy*, 120–130. London: Routledge.
- Benson, A. M., Dickson, T. J., Terwiel, F. A., & Blackman, D. A. (2013). Training of Vancouver 2010 volunteers: a legacy opportunity? *Contemporary Social Science*, 9(2), 210–226.
- Brimicombe, A. J. (2015). How do we measure legacy? In V. Viehoff, & G. Poynter (Eds.), *Mega-event cities: Urban legacies of global sports events* 33–46, Farnham: Ashgate.
- Cashman, R., & Horne, J. (2013). Managing Legacy. *Managing the Olympics*, 50–65.
- Chan, K., (2020). *Then and now: Lasting physical legacies of the Vancouver 2010 Olympics (PHOTOS)*. [Online]
Available at: <https://dailyhive.com/vancouver/vancouver-2010-olympic-legacies?auto=true>
[Accessed 26 May 2021].
- Currie, E., (2020). *Did the 2010 Olympics contribute to Vancouver's housing crisis?*. [Online]
Available at: <https://bc.ctvnews.ca/did-the-2010-olympics-contribute-to-vancouver-s-housing-crisis-1.4809537>
[Accessed 6 June 2021].
- Dawson, J. & Jöns, H. (2018). Unravelling legacy: a triadic actor-network theory approach to understanding the outcomes of mega-events. *Journal of Sport & Tourism*, 22(1), 43–65.
- Death, C. (2011). “Greening” the 2010 FIFA World Cup: Environmental Sustainability and the Mega-Event in South Africa. *Journal of Environmental Policy & Planning*, 13(2), 99–117.
- Ghaljaie, F., Naderifar, M., Goli, H. (2017). 'Snowball Sampling: A Purposeful Method of Sampling in Qualitative Research', *Strides in Development of Medical Education*, 14(3), -.
- Gill, P., Stewart, K., Treasure, E. (2008) Methods of data collection in qualitative research: interviews and focus groups. *British Dental Journal*, 204, 291–295.
- Maennig, W., (2017) Public Referenda and Public Opinion on Olympic Games. *Hamburg Contemporary Economic Discussions*, 57, 50-75.
- International Olympic Committee, (2018). *Benefits of Olympic Winter Games Vancouver 2010 still felt in local communities today*. [Online]
Available at: <https://olympics.com/ioc/news/benefits-of-olympic-winter-games-vancouver-2010-still-felt-in-local-communities-today>
[Accessed 26 May 2021].
- Oliveira de, F., Vainer, C. B., Mascarenhas, G., Bienenstein, G., & Braathen, E. (2019). Mega-events, legacies and impacts: notes on 2016 Rio de Janeiro Olympics. *International Journal of Urban Sustainable Development*, 12(1), 89-102.

- Lee, J., (2008). *Containers suggerer for Whistler's housing shortage*. [Online]
Available at: <https://www.pressreader.com/canada/vancouver-sun/20080114/281500746927254>
[Accessed 6 June 2021].
- Leopkey, B., & Parent, M. M. (2012). Olympic games legacy: From general benefits to sustainable longterm legacy. *The International Journal of the History of Sport*, 29(6), 924–943.
- Lift Philathropy Partners, (2018). *viaSport Legacies of 2010: Sports and athletes thriving in BC ten years after the 2010 Games*. [Online]
Available at: <https://www.liftpartners.ca/work/viasport>
[Accessed 5 June 2021].
- Lift Philanthropy Partners, (2018). *Decoda Literacy Solutions Legacies of 2010: Cultivating a legacy of literacy*. [Online]
Available at: <https://www.liftpartners.ca/work/decoda-literacy-solutions>
[Accessed 5 June 2021].
- McElroy, J., (2020). *Vancouver's lasting 2010 Olympic legacies, from big arenas to iconic art*. [Online]
Available at: <https://www.cbc.ca/news/canada/british-columbia/olympic-legacies-2010-vancouver-list-1.5460374>
[Accessed 28 May 2021].
- Müller, M. (2014). After Sochi 2014: costs and impacts of Russia's Olympic Games. *Eurasian Geography and Economics*, 55(6), 628–655.
- Müller, M. (2015). What makes an event a mega-event? Definitions and sizes. *Leisure Studies*, 34(6), 627–642.
- Müller, M., & Gaffney, C. (2018). Comparing the Urban Impacts of the FIFA World Cup and Olympic Games From 2010 to 2016. *Journal of Sport and Social Issues*, 42(4), 247–269.
- Pentifallo, C., & VanWynsberghe, R. (2015). Mega-event impact assessment and policy attribution: embedded case study, social housing, and the 2010 Winter Olympic Games. *Journal of Policy Research in Tourism, Leisure and Events*, 7(3), 266–281.
- Preuss, H. (2007). The Conceptualisation and Measurement of Mega Sport Event Legacies. *Journal of Sport & Tourism*, 12(3-4), 207–228.
- Richmond Olympic Oval, (2020). *Annual reports - 2019 Progress report*. [Online]
Available at: <https://richmondoval.ca/about-us/annual-reports/>
[Accessed 5 June 2021].
- RONA INC., (2011). *First Cohort Graduates From Tradeworks RONA Fabrication Shop*. [Online]
Available at: <https://www.globenewswire.com/news-release/2011/05/20/1409690/0/en/First-Cohort-Graduates-From-Tradeworks-RONA-Fabrication-Shop.html>
[Accessed 6 June 2021].

Talbot, A. (2019). Talking about the “rotten fruits” of Rio 2016: Framing mega-event legacies. *International Review for the Sociology of Sport*, 56(1), 20-35.

Tomalty, R., (2016). The legacy of the 2010 Winter Olympics in Vancouver. [Online] Available at: <https://islandpress.org/blog/legacy-2010-winter-olympics-vancouver> [Accessed 26 May 2021].

Saltman, J., (2019). *By the Numbers: Canada Line turns 10*. [Online] Available at: <https://vancouversun.com/news/local-news/by-the-numbers-canada-line-turns-10> [Accessed 6 June 2021].

Steffen, E. M., (2021). Ethical considerations in qualitative research. *Analysin Qualitative Data in Psychology*. London: SAGE, 35-52.

Stewart, A., & Rayner, S. (2015). Planning mega-event legacies: uncomfortable knowledge for host cities. *Planning Perspectives*, 31(2), 157–179.

Vancouver Convention Center, (2020). *Our story*. [Online] Available at: <https://www.vancouverconventioncentre.com/about-us/our-story> [Accessed 5 June 2021].

Vancouver Sun, (2018). *Whistler struggles to build housing for service-sector workers*. [Online] Available at: <https://vancouversun.com/news/local-news/whistler-struggles-to-build-housing-for-service-sector-workers> [Accessed 9 June 2021].

10. Appendix I

Interview guide

Interview protocol:

Anonymity: The transcript of the interview will be viewed by no one but myself. In case I would like someone else to look at them I will first ask for your consent. Also, I will not use any of your direct quotes without your prior consent.

Can I record the interview in order to make transcripts for later?

Your participation in the interview can be ended at any time and the answers you provide are confidential. After the interview I will send you the transcript as soon as I have it to correct it for inaccuracies like names, numbers and dates. The transcript cannot be changed in terms of rewriting, adding or deleting parts of the text.

Introduction:

Thank you for taking the time to meet with me. The interview will last for about 50 minutes. Your answers will help me with my research on the legacies of the Vancouver 2010 winter games. I am interested in the legacies of the Vancouver 2010 winter Olympics, and especially how they perform within Vancouver, what goes well and what doesn't, and why. It's part of my Bachelor thesis. The goal is to understand which variables, concepts and happenings contributed to the legacies present today.

Questions:

Introduction ~10 minutes

Could you please tell me about your role in the organization and how it relates to legacies?

What projects does your organization work on?

- Which projects were you involved in?

Main ~30 minutes

What do you consider to be the legacies of the Vancouver Winter Olympics?

- Are there also immaterial aspects of the Games that remain present in Vancouver to this day?
- Could you explain this in more detail? Could you give an example?

Are there any unintentional legacies?

- Could you explain this in more detail? Could you give an example?

How would you define a 'positive' legacy?

- What are in your opinion the most important factors to planning positive legacies?
- What do you consider to be positive legacies of the Vancouver Winter Olympics?
- Do you consider there to be negative legacies from the Winter Games? (+probing)

Who else is/are, according to you, involved in legacy maintenance and performance?

- How are the responsibilities divided between the organizations involved?
- What role does your organization play in relation to the legacies? (+ probing)

How has usage of these Olympics venues changed since the Vancouver Winter Olympics?

What do the legacies add to Vancouver, and for who?

What did VANOC/Vancouver do differently than other host cities when organizing the 2010 winter Olympics, in terms of legacy?

- What lessons can be learnt from the Vancouver 2010 winter Olympics legacies?

How did the political and economic climate of Vancouver have an impact on legacy planning?

When 'planning for lasting legacies', what do you focus on? (John Furlong specific maybe)

Closing ~5 minutes

- Is there anything you would like to ask me or any last thing you would like to add?
- Do you have any contacts that I should speak to for my research?
- In case you have any questions or concerns you can contact me at any time with the details provided in the e-mails.
- Would interviewee like a final version of my thesis?
- Note to self: After turning off the recorder make a pause/sentence of reflection so as to give the interviewee a chance to make a last remark off tape if they wish. I cannot quote whatever is said, but it can be very interesting and contribute to the wider understanding of things.

11. Appendix II

Codebook

Concepts	Code groups	Codes
Legacies	Tangible legacies	New venue
		Upgraded venue
		Transportation
		Housing
		Conference center
	Intangible legacies	Community benefits
		Youth sports
		Mindset shift
		Pride and memory
		Culture
		Tourism
		Olympic competitiveness
		Working experience
		Volunteering
Legacy planning	Legacy lessons	Legacy planning
		Commitment and partnerships
		Legacy funding
		Legacy purpose
		Venue conversion
		Shared vision
		Modest planning
		White elephant management
		Positive legacy requirements
		Bid planning
Context	Context	Political and/or economic influence
		Games as a catalyst
		Legacy management

12. Appendix III

