



Master's degree thesis

EVM950 Event Management

**'Expected event legacies of
Lillehammer Youth Olympic Games 2016'**

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Preface

This thesis is a part of the author's master degree in event management at Molde University College.

The writing of this thesis has been a challenging process. It has been more time demanding and complex than first envisioned. To address event legacy in a pre-event perspective has been a difficult task, mostly related to the methodology of such analysis. Even though the writing of this thesis has been time-consuming, it has given me a greater interest and knowledge towards the topic 'event legacy' and its methodology.

The idea behind writing this master thesis came into my mind during the spring 2011, when I was given the task to write a short assignment about the topic 'manage a positive legacy or how to deal with the white elephant'. This topic was also presented during my class-trip to Switzerland the fall 2011. During my master-class trip, we visited several major international sporting bodies. Within this trip these international federations gave presentations about the view on event legacy, in addition our professor gave academic presentations on the topic. This trip inspired me to write a master thesis about this topic.

During the working process of this thesis, my supervisor professor Holger Preuss has helped me a lot towards the focus of my thesis. The focus within the thesis has been a challenging one to cope with. Therefore I will like to thank Holger Preuss for his contribution. Besides my supervisor, I will like to thank Molde University College and their teachers that have inspired me during the bachelor and master program. Furthermore I will like to thank my classmates, family and friends for insightful discussions about the topic.

At last, to those of you that reads my thesis I hope this will encourage you about the field of event legacy. I hope you read my thesis with critical eyes and learn from the pros and cons of this thesis.

Åsmund Eggen
Oslo, July, 2012

Summary

Event legacy are a quite new research field and my aim was to contribute to this area of research. Traditionally, event legacy are focused towards mega events. Therefore the focus within this master thesis was chosen to be untraditional with a new and smaller event as a case study. The purpose of this thesis was to investigate the 'expected event legacies of Lillehammer Youth Olympic Games in 2016'.

Event legacies have reach increasingly interest simultaneously with the increased interest in events. Event legacies are long-term effects that occur post-event. They can either be positive or negative, planner or unplanned and tangible or intangible. Investments in events are often justifies to the perceived event legacies (positive). The main point with event legacies is to measure the effect of event through a long-term perspective. Therefore it is related to development.

In order to evaluate the case study 'Youth Olympic Games 2016' document analysis will be used as a method. Both qualitative and quantitative data in order to evaluate 'what expected legacies this event can have'. Within the analyses the aim is to outline the event process and individual evaluation of the different types of legacies.

The event legacy process of YOG'16 was quite similar to the process presented within the theoretical framework However, the event legacy planning of YOG'16 was observed as unspecific and without measurements.

The evaluation of the different types of legacies had one similar finding; the uncertainty of complexity was very much present within most of the types of legacies. The author perceives the reason for such to be the time of the analysis. Within pre-event analysis of event legacies, the accurate quantitative data isn't available due to that the events haven't occurred. Therefore creative ways of measuring event legacies have been presented. Even though there are uncertainties involved, the positive findings within this thesis are towards the student apartments and new ice-hall. YOG'16 are neglecting their main event legacy objective, sporting legacy, due to lack of measurements.

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Abbreviations

NIF	Norges Idrettsforbund (Norwegian Sport Federation)
OG	Olympic Games
OG'94	Olympic Games 1994
YOG	Youth Olympic Games
YOG'12	Youth Olympic Games 2012
YOG'16	Youth Olympic Games 2016
YOGOC'16	Youth Olympic Games Organizing Committee 2016

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1. Introduction

1.1 Introduction of the topic / Purpose of the Thesis

Within the last two-decades there has been an increased globalization (Horne). During the last century, globalization has led to many changes in the society. Globalization is defined as “the worldwide movement toward economic, financial, trade, and communicational’ integration” (www.businessdictionary.com). As we can understand from the definition above, globalization is basically about that different markets have been integrated together. From being based on national markets, organizations due to globalization have changed their focus towards to the international market. During the last two decades there has been an increasingly interest in hosting sports events, especially mega-events (Lyck, 2006). “Cities and regions are investing billions of dollars in major multi-sports events...” (Preuss, 2005, p.281). It have been identified that there is an “increasing number of cities from different economic spectrum bidding for mega-events attests their prominence in the urban agenda” (Silvestre, 2009, p.5). Today we can see that sports events are used as tools in both developed and developing areas to improve their given position in the market and society (Bob & Swart, 2010). Furthermore Law (2009) outlines that these events are perceived to create a “high-level of tourism, media coverage, prestige and economic impact to the host cities” (Law, 2002, p.141). Based on these grounds, we can clearly see that cities, regions and nations are using mega-events as strategies towards the globalization and to attract the international markets. These events are perceived to increase the host city awareness and image, and therefore increase tourism. “People are often drawn to destinations because of mega-events rather than the region itself” (Westerbeek et al, 2002, p.). In addition other economic and social aspects, within a society, are perceived important reasons for cities, regions and nations to host these events (Hall, 1992; Getz, 1997). As emphasized above, increasingly amounts of money are being invested in these events.

Since the revival of the Olympic Games in 1896 (Hughes, 2008), as a mega-event the Olympic Games have grown enormously in terms of money input and output, popularity by audience and interest in hosting the event. Today, the Olympic Games are perceived as the biggest mega-event there is and the most complex event to host (Kaplanidou & Karadakis, 2010). As expressed above, during the last two decades Olympic Games have

blown out of proportion. Olympic Games “*is not possible...*” to host “*...without large public subsidies*” (Barchi, Omar & Aman, 2009, p.189). Since the Athens Olympics in 2004 there has been a significant increase of public money required for both security and infrastructure, as it surpassed 10 billion Euros (Preuss, 2009). “*The cost involved of staging the games are now so high that host cities often only justify the expenditure when it is seen as leading to major program of regeneration and improvement*” (Essex & Chalkley, 1996, p.187).

Inter-related with the increasing interest in hosting events, there has also been an increasing interest in measuring the outcomes these events create. What beneficial effects will the event lead to? Whom will it benefit? How long will it be beneficial? These are examples of question that needs to be answered. As emphasized during this thesis, event legacies are long term outcomes. Therefore measurement of legacies has the intention to measure the long-term effects these events lead to. “*Legacies are the thermometer for residents to judge the validity of the hosting*” (Silvestre, 2009, p.8). Legacies will therefore justify whether investment could be perceived as reasonable or not. During the last two decades, while these events have been used for strategic means for increasing long term impacts, the world has witnessed several positive and negative examples of long-term impacts. Therefore it is uncertainties related to whether such events create long-term effects.

1.2 Research Purpose and Research Question

Norway and Lillehammer municipality have been awarded the Winter Youth Olympic in 2016 by the IOC. The Winter Youth Olympics was first organized in 2012, and therefore it is a new concept and a new event. Since Lillehammer was the host city of Lillehammer Olympics in 1994, I found it rather interesting that Norway has applied for a second event within the same host city. The Youth Olympics is a smaller event than Olympic Games. The purpose of this thesis is to discuss what kind of legacies the Youth Olympic in Lillehammer in 2016 can lead to.

Research Question:

What kind of event legacies can be expected from the Lillehammer Youth Olympic Games of 2016?

Sub Questions:

1. How are the event process and the planning process of YOG'16?
2. What types of legacies should be expected to achieve through YOG'16?

1.3 Limitations and Clarifications

This thesis will present a pre-event analysis of the Youth Olympic Games of 2016. Since this is a pre-analysis of the long-term effects, it wouldn't be discussed based on accurate data due to the fact that such data isn't available in the current time. Based on that fact, the Author has perceived document analysis as the most suitable method to evaluate in addition some trends-data will be presented to discuss further. The methodology will be further discussed within chapter 3.

Therefore the limitations with this thesis are obviously the inter-relation between the discussion and the future. Through the analysis some assumptions will be taken, and these could be perceived to be mistaken on a later stage, when the event legacies starting to occur.

1.4 Thesis Outline

The thesis is built upon chapters, as we may see in the contents. It is divided into 5 main chapters: theoretical framework, methodology, event overview, analysis and conclusion. Furthermore will references and appendices be included.

Chapter 2 will go into depth about important theoretical aspects of event legacy, which will be the basis for the rest of the thesis. Furthermore, in chapter 3, the methodology within the research of this thesis will be explained. Before analyzing the 'expected event legacies of Lillehammer Youth Olympic Games of 2016', a short introduction will be presented in chapter 4: event overview. The analysis will be outlined in chapter 5, where the research questions above will be answered.

2. Theoretical Framework

2.1 Definitions

During my master thesis I will dig deep into three main areas: event legacy, white elephants and sustainability. Therefore in this part of the thesis, I will describe what the different areas means through definitions.

2.1.1 Event Legacy

In the scientific literature, ‘event legacy’ is a new concept of theory. However, there have been developed some attempts towards a definition of legacy. As early as in 2001, Harper came up with the following definition:

“Legacy is property left by will” (Harper, 2001, cited in Preuss, 2006, p.3).

When we look at the definition above, it is obviously an easy way of developing a legacy definition. As *Preuss (2006)* outlines: many of the effects or impacts an event creates are not a property of a specific entity, but are rather a public good. Based on the assumptions that event leaves to some degree ‘a public good’, something for the society to have advantages or disadvantages for, the definition misses some important concepts related to legacy. Furthermore, the words ‘left by will’ is also a misinterpreted characteristic because those initially effects or impacts an event was supposed to create didn’t occur or quite opposite those effects that occurs didn’t have the purpose to occur. To sum up, the dimension of planned and unplanned effects should be included in a legacy definition (*Preuss, 2006*).

Since the Youth Olympic Games are the main case throughout this thesis, it is therefore vital to mention that in 2002 IOC organized a congress about event legacy for the Olympic Games. The congress concluded that event legacy could have different meanings, based on the assumption that such a definition would have be perceived differently in various languages and cultures (*Morages et al, 2003*). It emphasized that the concept legacy is quite new. Furthermore, it have been pointed out by *Cashman (2005)* that the legacy concept are misinterpret by event organizations, such as the IOC, due to three main reasons: legacy is perceived as entirely positive, legacy is being taken for granted and

therefore there is no need for a definition (Cashman, 2005). There is quite obvious that to continue the development of Olympic Games, there must be positive surroundings connected with the event also related to event legacy. Therefore such definitions wouldn't be that much valid for research. As we can see underneath from IOC's definition:

“Event Legacy captures the value of sport facilities and public improvements turned over to communities or sports organizations after the Olympic Games” (Gratton & Preuss, 2008, p.1923)

IOC's definitions above are focusing on one area of legacy, infrastructure legacy. There is obviously more to legacy than just infrastructure legacy. As we can understand from the definition, the main intention from the IOC is to create an afterlife for infrastructure built for Olympic Games. In addition, it only focus on the positive aspect of legacy, by expecting if local communities or sports organizations are controlling the infrastructure it will automatically lead to a (positive) legacy. The need and demand for infrastructure may vary from situation to situation. As Preuss (2007) emphasizes *“this definition seems to be narrow in comparison to the various concepts of legacy mentioned in the literature”* (Preuss, 2007, p.209). Such legacy concepts may for example be: increased tourism enhanced international reputation, additional employment, depts. From construction, unneeded infrastructure, increases of property rental and real-estate prices (Preuss, 2007). There are many aspects that need to be covered through a definition of event legacy. Towards a clear and precise definition of event legacy, many aspects need to be considered. Currently the best one is developed by Preuss (2007):

“Legacy is planned and unplanned, positive and negative, intangible and tangible structures that were/will be created through a sport event and remain after the event” (Preuss, 2006 & 2007).

As we can see from the definition above, the definition main frame is focusing on 3 dimensions: planned/unplanned, positive/negative and tangible/intangible. Legacies are not straight forward, and both sides of each these dimensions need to be considered when we are evaluating event legacy. Therefore these dimensions must be implemented in the definition as well. Furthermore, we can see that the definitions are focusing on all types of legacies the event create. Even though infrastructure is an important aspect for legacy

evaluation, this area of legacy doesn't single-handedly create a positive or negative legacy. More areas of legacies must be considered. The time aspect of legacy is also covered, 'remain after the event' referring to that legacy are a long-term concept, and that is vital to create event legacy.

2.1.2 Sustainability

The literature offers several different definitions of sustainability. Within this part of the thesis, the author will explain the concept of sustainability through these definitions and discuss the implications these definitions have on the concept of sustainability and event legacy. As explained and discussed in the previous chapter about definition of event legacy, long-term has been presented as a core element of the event legacy concept. Based on the fact that the word legacy is related to inheritance and future generations, therefore the long-term aspect is important. The word sustainability or sustainable are defined as: *"Able to be maintained at a certain rate or level"* (Oxford English Dictionary 2011).

"Sustainability can be defined as the condition of meeting needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987, p 43).

As we may understand from the sustainability definition above, the concept of sustainability are focusing on the inter-relationship between the current and future generations. Furthermore the core concept, of sustainability, according to this definition, is related to the needs. Similarly to the concept of event legacy, we can see that importance of the concept is related to the time and space. Therefore the two concepts: event legacy and sustainability is related. Within both these concepts the core is about enhancing a process of development. As explained above, the transfer of resource needs between two time-frames is decisive, therefore sustainable development can be perceived as a process between these two time-frames.

“Sustainable development is defined as development that is balanced between people’s economic and social needs and the ability of the earth’s resources and ecosystems to meet present and future needs” (United Nations cited in Furrer, 2002, p.2).

According to this proposed definition of ‘sustainable development’, three core elements within the concept of sustainable development have been presented: economic, social and environmental (Furrer, 2002). Furthermore, Furrer (2002) outlines that this development is a “dynamic processes that will continue to evolve and grow as lesson are learnt and ideas re-examined” (p.2). As we can see from the definition above and emphasized by Furrer (2002) this development process should be “financially balanced, socially equitable, ethically responsible and adequately integrated in the long-term” (p.2). Related to mega events and event legacy, sustainable development is about creating and maintaining “efficient use of urban resources” (Erten & Ozfiliz, 2006, p.4).

2.1.3 White Elephant

A concept that has been introduced through the event legacy theory is ‘white elephant’. Within this section of the thesis, I will explain and discuss the concept of white elephants through definitions. Within the theoretical framework about event legacy and white elephants, it has been focused on the infrastructural legacies and hard structures, which will be discussed more thoroughly later in the thesis.

“A business or investment, that is unprofitable and is likely to remain unprofitable. In the case of businesses, a business usually becomes known as a white elephant, if it is unable to turn a profit because it is so expensive to operate and maintain” (www.Businessdictionary.com).

“A possession unwanted by the owner but difficult to dispose of”
<http://dictionary.reference.com/browse/white+elephant>

“A possession entailing great expense out of proportion to its usefulness or value to the owner: when he bought the mansion he didn’t know it was going to be such a white elephant”

<http://dictionary.reference.com/browse/white+elephant>

“A rare, expensive possession that is a financial burden to maintain”

<http://www.thefreedictionary.com/white+elephant>

As we may see from all four definitions above, the white elephant concept is based upon expensive infrastructure, both to maintain and construct. The concept is related to event legacy, with the relation of unused infrastructure. If infrastructure built for an event are unused or with too little use, it get tagged as a white elephant.

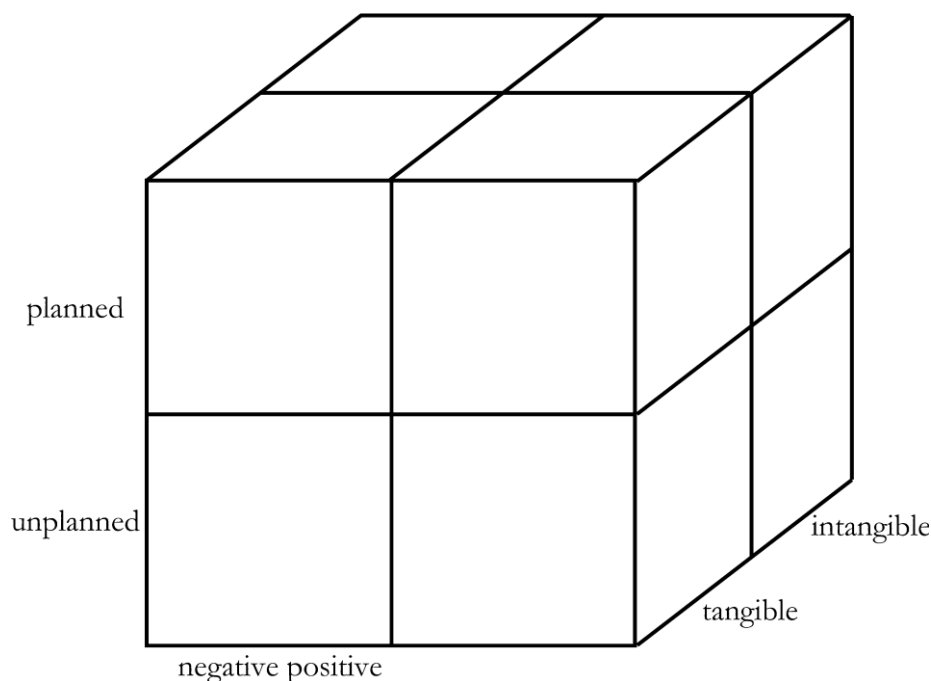
2.2 What is event Legacy?

As explained and discussed in section 2.1.1, event legacy can best be described as long-term outcomes that occurs through events (*Gratton &Preuss 2008; Hiller 2003; Preuss 2003*). As we can see from the different definitions above it is a *“lack of agreement on the concept of legacy and its various elements”* (*Preuss, 2007, p.207*) are of strong issue. Because of the many factors that affecting the legacy, it is a complex area (*Preuss, 2007*). As emphasized in the discussion about event legacy definitions above, there are three main dimensions of legacy: planned and unplanned, positive and negative, tangible and intangible legacies (*Gratton & Preuss, 2008*). All these types are legacies. *Cashman (1998)* outlines that all mega-events have some kind of legacy, either it’s positive or negative. However, it has been a tendency to perceive legacy as something positive, due to the meaning of the word legacy (*James, 2007*). The word legacy has a close relation with inheritance. Therefore, furthermore, the meaning of the word legacy is connection with long term, generation to generation and decades. By the understanding of the meaning of the word legacy, event legacy can be described as a future oriented afterlife of events.

2.2.1 The Legacy Cube

Based on the definition by *Preuss (2007)* above, it was also developed a legacy cube. This cube is based on three structures: planned/unplanned, positive/negative and tangible/intangible (*Preuss, 2007*). It contains of 8 sub-cubes. “*Most pre-event studies and bid committees focus only on one sub-cube: planned, positive and tangible*” (*Preuss, 2007, p. 1924*). In addition, these pre-event studies is normally created and developed with the predetermined perception and in favor of hosting the event, therefore there is likely that they only consider it from one angle. Quite obviously the intention of creating such legacy cube is to draw attention towards other areas of legacy.

Figure 1 – The Legacy Cube



Source: *Preuss (2007), The Conceptualization and Measurement of Mega Sport Event Legacies, Journal of sport & Tourism.*

In terms of planning structures, those legacies that occur after an event has finish can both be planned or unplanned. Planned legacies are those strategies that are decided through the event phase process, while unplanned legacies are those legacies that occurs with no intention to happen. The extension here is that both planned and unplanned legacies could have positive and negative results. Planned legacies will obviously have the intention to be positive, but due to uncertainty in the society the result could end up to be negative legacies. For example, sport infrastructure is important issues in legacies discussions and

can both be positive or negative. The legacies result of such legacies is based on the need and demand within the society, which may change due to the time and space aspects (Preuss, 2007). Same for unplanned legacies, they can as well be positive and negative. Unplanned legacies are all those legacies that occur that wasn't initially in the planning process, it can both be positive or negative. Furthermore, the last dimension in the legacy cube is "the degree of tangible/intangible structure" (Preuss, 2007, p.211). These two opposite characteristics are referring to material dimension of legacies. Tangible legacies are those legacies that are physical "hard" structures. These are those structures in events that we can physical see and/or measure, typically hard structures are infrastructure. While intangible legacies are "invisible" and are based on knowledge, experience and networks that were created through the event (Preuss, 2007). The main difference between these two opposite characteristics is that the ability to measure. As explain above, tangible legacies that are planned and positive are of focus. Due to that fact, tangible legacies are visible and easier to measure.

2.2.2 Research of Event Legacy

Within research of outcomes events creates, both for impact studies and legacies, the focus has been on mega-events (Koenig & Leopkey, 2009). Furthermore, it have been outlined that within impacts and legacies studies the main focus is towards economic and infrastructural effects (Silvestre 2009; Bob & Swart 2010; Gratton & Preuss 2008). Analysis towards social, environmental and political aspects have been neglected (Minnaert, 2012). Even though most of these studies are based on sport events, rarely there is discussions and focus about sport outcomes, such as sport development (Gratton & Preuss, 2008). Often these studies are done before the event (pre-event), and therefore these types of studies have the tendency to exaggerate them (Law, 2002). "Many of the pre-event feasibility and impact studies that consider legacies are potentially biased, because the ambition of those commissioning the studies is to favor the hosting the event" (Gratton & Preuss, 2008, p.1924). Preuss (2007) described them as boosters, which means that they have the intention to create positivity's associated with the event. Lyck (2006) has suggested that there should be "an open and transparent analysis if public money shall be invested in mega sports events in a legitimized way" (Lyck, 2006, p.5). In addition these pre-event studies only focuses on one sub cube, from the legacy cube in section 2.2.1, the positive, planned and tangible outcomes of events (Gratton & Preuss, 2008). According to Lyck (2006) these pre-event studies have shown to be too optimistic through a comparison

of forecasts and result. Furthermore it is outlined that these forecasted outcomes of events couldn't be proven for (Corneliussen, 2004). Hiller (1998 & 2000) has described such outcomes as incalculable or estimates. Based on this fact it is quite obvious to think that such studies are biased, as mentioned above. Because of experiences of misperception of outcome forecasts it has led to an increased interest in measuring outcomes associated with events (Bob & Swart, 2010). There are two different types of outcomes: direct and indirect (Bob & Swart, 2010). Direct outcomes are those outcomes that are directly affected by the event, while indirect outcomes are those outcomes that occur through an event but not as the main reason.

Impact studies have the focus towards short term, and tend to neglect the long-term effects (Bob & Swart, 2010). As mentioned above the focus towards impacts studies are through economic impact. Based on the fact that economic impact is short term and within only the demand side (Gratton & Preuss, 2008), meaning that these results of economic impacts shouldn't and couldn't be considered as event legacy (Gratton & Preuss, 2008).

“Economic impact studies exist primarily to assist decision makers in evaluating the efficacy of projects” (Baade & Matheson, 2002, p.3). Meaning that conclusions of the outcomes are made through the economic perspective only. *“Research and policy makers have called for a longer-term consideration to conceptualize, plan and evaluate the economic, social and environmental outcomes from events” (Bianchi 2003; Gratton & Preuss 2008; Hiller 2003; McIntosh 2003; Preuss 2007 cited in Thomson et al, 2009,p.4).* Within legacies studies, the infrastructural are the most researched and investigated ones, because non-infrastructural impacts are more difficult to measure (Minnaert, 2012).

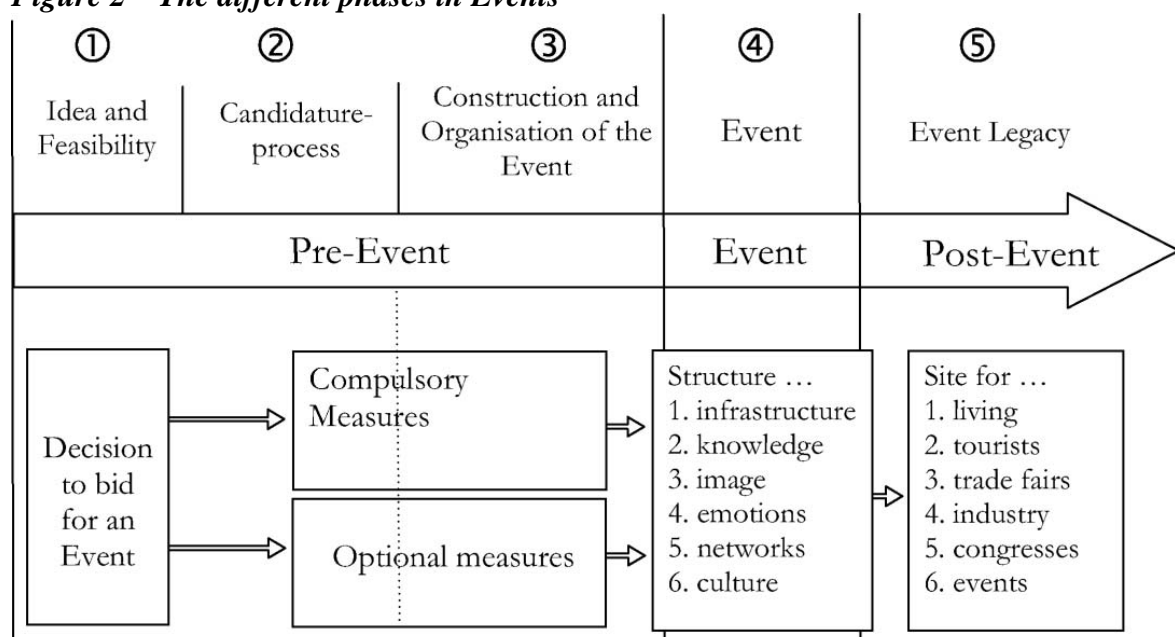
As mentioned above, the short-term measurement contradicts with the meaning of legacy. Therefore legacy studies should and must focus on the long-term consequences and outcomes of events. Since most analysis of legacies is done in the pre-event phase, these are estimates or forecasts only. Therefore legacies studies need to be evaluated after the event. In events, positive and negative outcomes occur beyond economic and infrastructural. Therefore there is a need to measure all kinds of legacies.

2.3 Typology of Event Legacy

2.3.1 The Event Legacy Process

“The bidding and hosting for mega-events must be seen as a component of the strategic planning devised by the main economy centers in response to the changes in course since the late 20th century” (Silvestre, 2009, p.3). The structures in event legacies are organized as top-down planning processes, these processes are heavily democratically that requires a high level of transparency and public participation (Law 2002 & Hall 1989). Hall (1989) emphasizes the importance of planning in order to gain long-term effects through events, and especially mega-events. Furthermore it is outlined by Roche (1994) that “mega-events need long-term development strategies if these benefits are to be realized over time” (Roche 1994 cited in Carlsen & Taylor 2003, p.15). “Strategy is an organization’s long term direction of choice and scope that creates an advantageous position in the ever-changing environment through the composition of resources and competences to meet need of markets and stakeholders’ expectations” (Roos et al, 2005, p.12). As we can understand from the strategic definition above, planning processes are intended to result in a positive manner. However unplanned and negative legacies may occur due to bad planning. Furthermore the definition emphasizes that strategic event legacy planning should focus on the long term perspective and create competitive advantageous for the host city/region. In addition, the reason for the long term perspective within legacy is to satisfy the need and demand within the host city.

Figure 2 – The different phases in Events



Source: Gratton. C & Preuss. H (2008), Maximizing Olympics impacts by building up legacies, the international Journal of the History of Sport

Each event consists of three different phases: pre-event, event and post-event (*Preuss, 2007*). These phases can be described as planning (pre-event), implementation (event and post-event) and control/evaluation (post-event) phase of event legacy. To an easier understanding it refers to what happens before and after the implementation of the event. Regardless, what happens in the event and post-event phase, this model (figure 1) explains the process of planned event legacy. As mentioned in the chapters above (2.1.1 & 2.2.2) event legacy consist of the dimensions of planned/unplanned, positive/ negative and tangible/intangible. Through this model, unplanned and negative legacies are to some degree neglected due to the obvious reason that this model represents a strategic approach to event legacy. Even though the three phases are common in all events, the duration of each phase is difference from event to event (*Solberg &Preuss, 2007*). It have been outlined that creating legacies for the host city or host region have been important and even decisive in the planning process of events, especially mega-events (*Kirkup & Major, 2007*). Related to outcomes of events, especially regarding infrastructural legacies, it have been emphasized and proven that strategies towards post-event use of created structures are being used in some events. However there have not been proven in what specific time event legacy are being implemented in the planning process (*Masterman, 2008*). In a planning perspective of event legacy “*the strategy focuses on the additional structures an event creates and the long-term need for these structures*” (*Preuss, 2006, p.6*). However, negative legacies may occur due to “*the failure of planning or lack of planning*” (*Bramwell, 1997, p.167*)

The pre-event phase of events is mainly a planning phase (*Hiller, 2000*). “*The strategy of building an event legacy starts with the decision for a specific event*” (*Preuss, 2006, p. 6*). Meaning that in all kinds of events, the event legacy process starts with the intention to host or create a specific event. As we can see from the figure above, this phase consist of mainly three areas: idea and feasibility, candidature process, and construction and organization of the event (*Preuss, 2006 & 2007; Gratton & Preuss, 2008*). In an event legacy perspective, the pre-event phase is where events prepare what will happen during the event and post-event phases with the structures created for an event.

In the idea and feasibility phase, it must be evaluated if it suitable to host the event. As pointed out above, the event legacy process occur when it is an intention to create or bid for an event. Within the idea and feasibility phase different event structures must be considered. *“A city must consider the requirements of the development plan:*

- 1. The city development that is planned irrespective of the sport event*
- 2. The infrastructure required for the sport event that is already planned for development by the city*
- 3. The infrastructure needed for the sport event that is not yet included in the cities long-term development plan” (Solberg &Preuss, 2007, p.216).*

“The strategic consideration is to focus on the additional structures a mega event requires and how these structures satisfy the city’s long-term needs” (Preuss, 2007, p. 221).

Within decision to bid for mega-events, there must be evaluated if such events contradict with the city development plan and therefore it is decisive that politicians compare requirements of events with the current or future development plans (Solberg &Preuss, 2007). To summarize, if such plan contradict it shouldn’t be sensible to create or host those events. *“Feasibility studies can provide ideas (and help identify gaps) for future city development” (Preuss, 2007, p.219).*

For some events, the pre-event consist of a candidature process. That means that different cities, regions or nations have to compete with each other to get the rights to host an event. *“The decision to bid for and host mega-events is in many ways a political decision in which interest groups/elites become convinced of the importance of the project and then seek to obtain large-scale support” (Hiller, 2000, p.188).* Several events are bidding for mega-events, and therefore the competition between these possible hosts is strong (Hiller, 2000). As we can see from the figure above, bidding for events consist of two types of measures: obligate measures and optional measures. Obligate measures are those requirements that core-organizations have for their events, while optional measures are those that the different bids can do to improve their bid or improve their legacy opportunities. *The optional measures are strengthening the bid competition (Gratton & Preuss, 2008).* Preuss (2000) and McIntosh (2003) points out that *“bidding committee tries strategically to establish the best possible position in the bid competition” (Preuss, 2007, p, 221).* Furthermore, Preuss (2007) outlines that such measures improve location factors which can improve the city development. In addition, such measures can improve

the possibilities of gaining future economic activity (*Gratton & Preuss, 2009*). Within events that require bidding, the basic planning is presentation inside their 'bid books'. In these planning documents outcomes, impacts and legacies are often specified in these documents (*Hiller, 2000*). As explained above, long-term effects are often overestimated due to the fact that these events need public money support to be hosted (*Bob & Swart, 2010*). They must consist of all aspects related to the events (*Kaplandidou & Karadakis, 2010*). During the bidding process strengths are outlined while weaknesses are overlooked (*Cochrane et al, 1996*). As explained above, such events are based on political processes (*Bob & Swart, 2010*). Only one is successful, among many bid cities, it can be perceived as a risky process because it can be expensive in the short and long-run (*Masterman, 2008*). Meaning that those bidding cities “*that does not win, loses its investment*” (*Masterman, 2008, p.171*).

In the end, as explained above, one city will win the bid for one shot mega-events. If events are created or received the rights to host, the crucial process of the pre-event phase is the construction and organization of the event, as we can see from the figure above. From the decision to create or host an event, the event timeline is decided. In order to create a successfully event, “*fast track planning and implementation goes into effect*” (*Hiller, 2000, p.193*) to exploit the situations events create. The plan of mega-events is created within the candidature process; the role of the organization is to implement the plan in practice (*Hiller, 2000*). It have been emphasized by *Bob and Swart (2010)* that successful event planning and event legacy planning “*requires event management skills and the ability of different tiers of government to work together*” (*p.82*). Furthermore it has been outlined by *Silvestre (2009)* that the planning process of mega-events is a complex one. The implementation of mega-events is perceived as a complex logistic task (*Andranovich et al, 2001*). Therefore to combine event planning and event legacy planning, could create issues. It have been pointed out that there is uncertainties if event legacy planning is implemented at a suitable time within the planning process (*Masterman, 2008*). Since legacies occur in the post-event phase, the pre-event phase is neglected in terms of creating long terms effects (*Solberg &Preuss, 2007*). “*Mann (2008)* indicates that a legacy needs to be created not left” (*Bob & Swart, 2010, p.82*). Which means that event organizers shouldn't expect legacies to occur without proper planning of legacies? Therefore it is important to create and manage a legacy plan to be certain of a positive legacy through an event (*Kaplandidou & Karadakis, 2010*).

Even though, the focus within this thesis is towards legacies we shouldn't neglect that events core activity is what happens during the event phase. All planning in the pre-event phase is either related to the event or post-event phase. Those structures created for the event, is directs effects of the events. These structures are present throughout the whole event phase (*Gratton & Preuss, 2008*). Structures created for the use of the core activity of the event, is direct measures; they wouldn't be developed without this event (*Bob & Swart, 2010*). While indirect measures are structures that were created for the improvement of the city, but they were developed earlier due to the event (*Bob & Swart, 2010*). The implementation of the event and the event legacy is a decisive process within the event phase. The success of the event in the event-phase may affect the result of an event legacy that occurs within the post-event phase.

As explained and discussed in the 'event legacy definition' section structures that are created for the event, either directly or indirectly, should remain after the event has ended. Meaning that all actions, both planning and implementation, of event legacy in the pre-event and event phase should have the intention to occur after the event has finished. It has been outlined by *Law (2002)* that without accurate and specific planning within the pre-event and event phase wouldn't occur properly. However, it has been pointed out by *Gratton & Preuss (2008)* that "*after the event some structures disappear or are reduced in size*" (p.1926). As mentioned earlier, most legacies evaluation is biased and too optimistic, therefore those legacies proposed in bid books may not occur. Within the duration of post-event phase, there is uncertainty "*because it depends on whether the event creates a legacy*" (*Solberg &Preuss, p.215*). Furthermore it is pointed out by *Solberg &Preuss (2007)* that event organizers have 'limited control' on factors that affecting long-terms effects, especially for tourism. External factors, especially within the environment, may affects legacies created in the post-event *phase (Solberg &Preuss, 2007)*. Examples of such external factors are "*wars, economic crises, pandemics, terrorists attack*" (*Solberg &Preuss, 2007, p.221*). These external factors could affect the result of event legacy; therefore there are lots of uncertainties presented within these long-term effects. Meaning; that this would affect the event legacy planning and implementation in the pre-event and event phase.

2.3.2 Different structures in Events

“Mega-events have the potential to create new initiative, new directions and new structures that may not have arisen otherwise” (Hiller, 2000, p.201). As explained in the previous chapter, each events (and especially mega-events) requires and creates different structures (Gratton & Preuss, 2008). The structural changes within a host city are inter-related with the concept of event legacy, meaning that the structural changes will contribute to the degree of legacy whether it is positive or negative. As explained in the previous chapter about the event legacy process, mega-events distinguish between obligated and optional measures. Regardless the measurement each host city does, inter-related with a specific event, will change the consisting structures within the host city. Shown in the figure underneath event structures are create in the pre-event and event phase, and those structures *“change the quality of location factors in a positive or negative way” (Preuss, 2008, p.1926).*

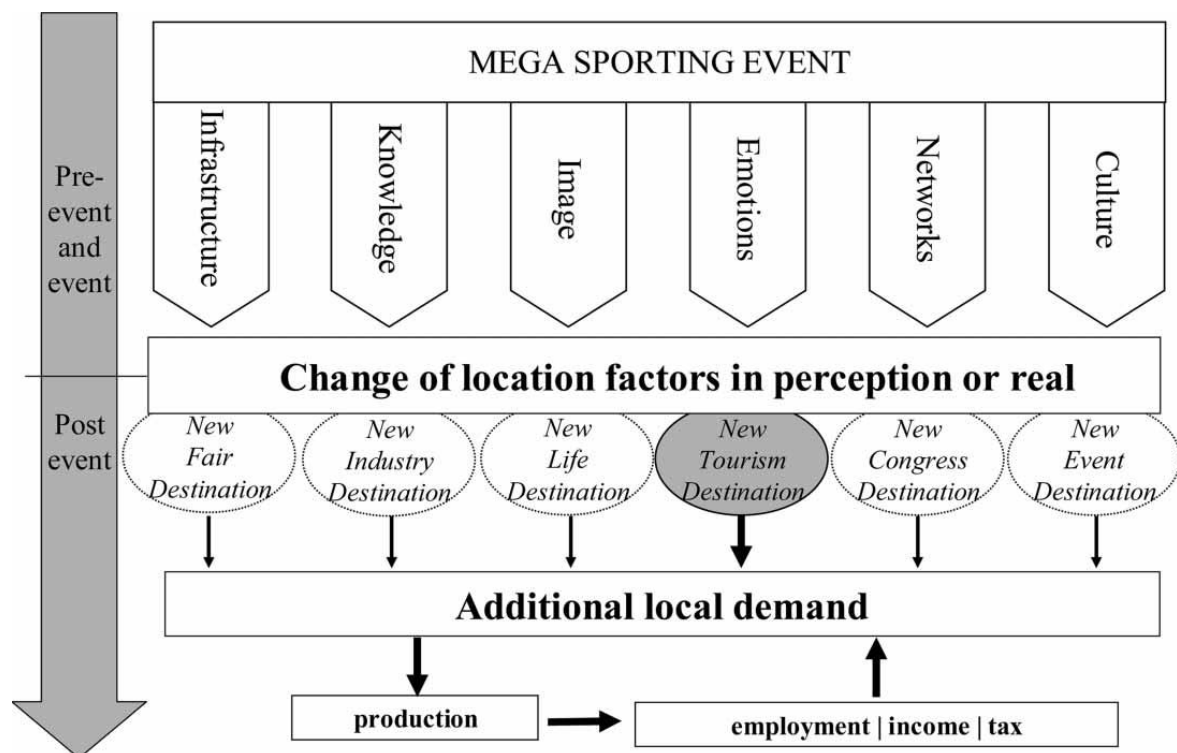
Preuss (2007) outlines that change in the society will only affect within a specific time-frame. Related to changed structures within the host city, there are two aspects that are important: duration and time, and space (*Preuss, 2007*). Important to outline is that events, city and time-period varies events from each other (See more info in section 2.5.1). That amplifies the two dimensions presented by *Preuss (2007)* above. Based on these two dimensions, the structural changes may vary in terms of length and importance. As *Preuss (2007)* outlines, the concept of duration and time are based on the fact that some structural changes occurs in the pre-event phase, while other structural changes appears in the post-event phase. As outlined through this whole thesis, the concept of event legacy is based on the long term effects. Even though we know that event-based structural changes will appear, there are uncertainties related to the duration of these structural changes. The different structural changes may vary in duration, as *Preuss (2007)* outlines.

As expressed above and more thoroughly explained later in this thesis, the space of a host city may vary from event to event. Therefore how these structural changes affect the location factors depends on the city preferences. *Preuss (2007)* also point out that different areas within a city will react differently. In order to create and perceive event legacy and event structures correctly, the two dimensions discussed here is decisive. *“Each city has different quality factors that make the city more or less attractive for living in, for tourists,*

for industry, or for hosting future sport events” (Gratton & Preuss, 2008, p.1925). Those structural changes that occur within hosting of events, will affect the development of a specific city. As we can see from this citation, the intention for event legacy should therefore be to improve the quality of locations factors. The activity that is based on structural changes of these locations factors is perceived as the event legacy, regardless of a positive or negative effect (Gratton & Preuss, 2008).

Preuss (2007; 2008) have identified these structures as infrastructure, knowledge, image, emotions, networks and culture. As we can see from figure 3 underneath, the event structures are created in the pre-event and event phase. As explained above, measurements within these different areas will affect the location factor. Viewed from an economic tourism perspective, these changes will affect the local demand.

Figure 3 – Impact of event-structure on location factors and its economic relevance



Source: *Preuss. H (2007), the Conceptualization and Measurement of Mega Sport Event Legacies, Journal of Sport & Tourism, Vol.12.*

2.3.3 Different Event legacies

Within the literature there are several categorizations of types of legacies from distinguishing researchers. In this section I will present the different types of categorization of legacies done by researchers and will discuss the implications each one have. Furthermore I will explain and discuss the different types of legacies that have been identified within the literature. Before I begin to explain and discuss it is important for the reader to be aware of that there is differentiates between events, host cities and time-frames (See more in section 2.4.1) and therefore these legacies presented here isn't relevant for all situations.

As early as in 1984 *Ritchie* pointed out six types of event impacts: economic, tourism/commercial, physical, socio-cultural, psychological and political. Explained and discussed earlier, impact studies have the tendency and focus around short and medium-term effects, while the core of the legacy concept is based on the long term. Since *Richie* developed his framework as 'Impacts' it wouldn't be reasonable to use this categorization. Therefore it is naturally to need proposed categories that are developed inter-related with the core concept of event legacy.

As we can see from the figure (*Preuss, 2007*) from the previous chapter, we can see that these structural changes are the event-related effects. As expressed above some structural changes are limited in duration, therefore this framework focus both on effects on short-medium and long-terms. Both *James (2007)* and *Cashman (2005)* have identified 6 different types of legacies: 1. economic, 2. environmental, 3.informational and educational, 4. public life, politics and culture, 5. sport and 6. Symbols; memory; history.

Even though the impact and legacy types above may give important insight to the event legacy concept and propose certain effects within the field of types of legacies, I have chosen to use the 5 legacy types outlined by *Chappelet and Junod (2006)* to explain what types of legacies events, and especially mega-events, could create. Those consist of sporting legacy, urban legacy, infrastructural legacy, economic legacy and social legacy. This categorization of legacy types gives a broader understanding on what platform effects will occur, and what they are related to. Within this chapter these 5 different legacies will be explained and in the end it will be discussed how these legacy types are inter-related

Table 1 – Positive and negative effects of different legacy types

Type of Legacy	Positive Legacies	Negative Legacies
Sporting Legacy	<ul style="list-style-type: none"> → Access to Sport → Increased participation in sports → Increased physical health → New sports opportunities → More events → Inspiring young athletes → Neighborhood renewal → Reducing truancy and youth crime → Improved attitudes → Greater community pride → Improved self-esteem 	
Urban Legacy	<ul style="list-style-type: none"> → New direction for the city → Development of new urban districts → Showcasing the host city and urban areas 	<ul style="list-style-type: none"> → Regeneration of poor areas
Infrastructural Legacy	<ul style="list-style-type: none"> → Improved Transport / Communications systems → Opportunities for events / tourism → 	<ul style="list-style-type: none"> → "White Elephants" → High Maintenance Costs → Higher Real-Estate prices →
Economic Legacy	<ul style="list-style-type: none"> → Increased Tourism → New Jobs Created → Improved external investment → New residents → Improved international reputation → Business opportunities → Improved city marketing 	<ul style="list-style-type: none"> → Municipal Debts → Traffic Flows → Tourism displacements → High opportunities costs → Crowding out → Increased real estate prices → Lost tourists → Increase of property rental
Social Legacy	<ul style="list-style-type: none"> → Feel-good experience → National pride and identity → Collective Memory → Uniting people → Improving self-esteem → Encouraging Volunteering → Improved skills /Knowledge → Raising awareness on disability → Better confidence and optimism → Social renewal → Learning new cultures → Improved Social Networks → Improved public welfare → Improved knowledge on host city 	<ul style="list-style-type: none"> → Dislocation of low-class → Crime and Violence → Breaking of Social Networks → Decreased health effects

Sources: Silvestre 2009; Bob & Swart 2010; Smith 2009; Koenig & Leopkey 2009; Minnaert 2012; Solberg & Preuss 2007; Furrer 2002; Gratton & Preuss 2008.

2.3.3.1 Sporting Legacy

Within sports events, the core activity is related towards a sport competition. Therefore the obvious alternative for such events are to create long-term sport development. *Koenig and Leopkey (2009)* have suggested that sporting legacy should be presented within its own category. Due to the fact that in other categorizations of legacy types, sporting legacy have been included in other types of legacy, has created confusions. Even though sports events normally have the intention to be platforms for elite sports, *Parent (2008)* points out that the concept of sporting legacy have a wide concept. Furthermore Parent emphasize that sporting legacy should be related to both elite sports and recreational sports (*Parent, 2008*). According to *Minnaert (2012)* mega-events such as the Olympic Games “*have been linked to increasing interest and participation in sport activities*” (p.363). *Bailey (2005)* outlines that indirectly participation in sport could result in “*improvement in physical health, contributions to neighborhood renewal and communities, reducing truancy and youth crime, improved attitudes to learning amongst young people, opportunities for active citizenship and development of social capital*”(Minnaert, 2011, p.363). All these indirect effects of sport participation, emphasizes the importance for event to contribute and develop a sporting legacy; these effects are all important aspects within the society. Furthermore *Gratton and Henry (2001)* points out that it could lead to a “*potential reduction in vandalism, the empowerment of disadvantaged groups, greater pride in the community, improving employment prospects and enhancing self-esteem*”(Minnaert, 2011, p.363).

2.3.3.2 Urban Legacy

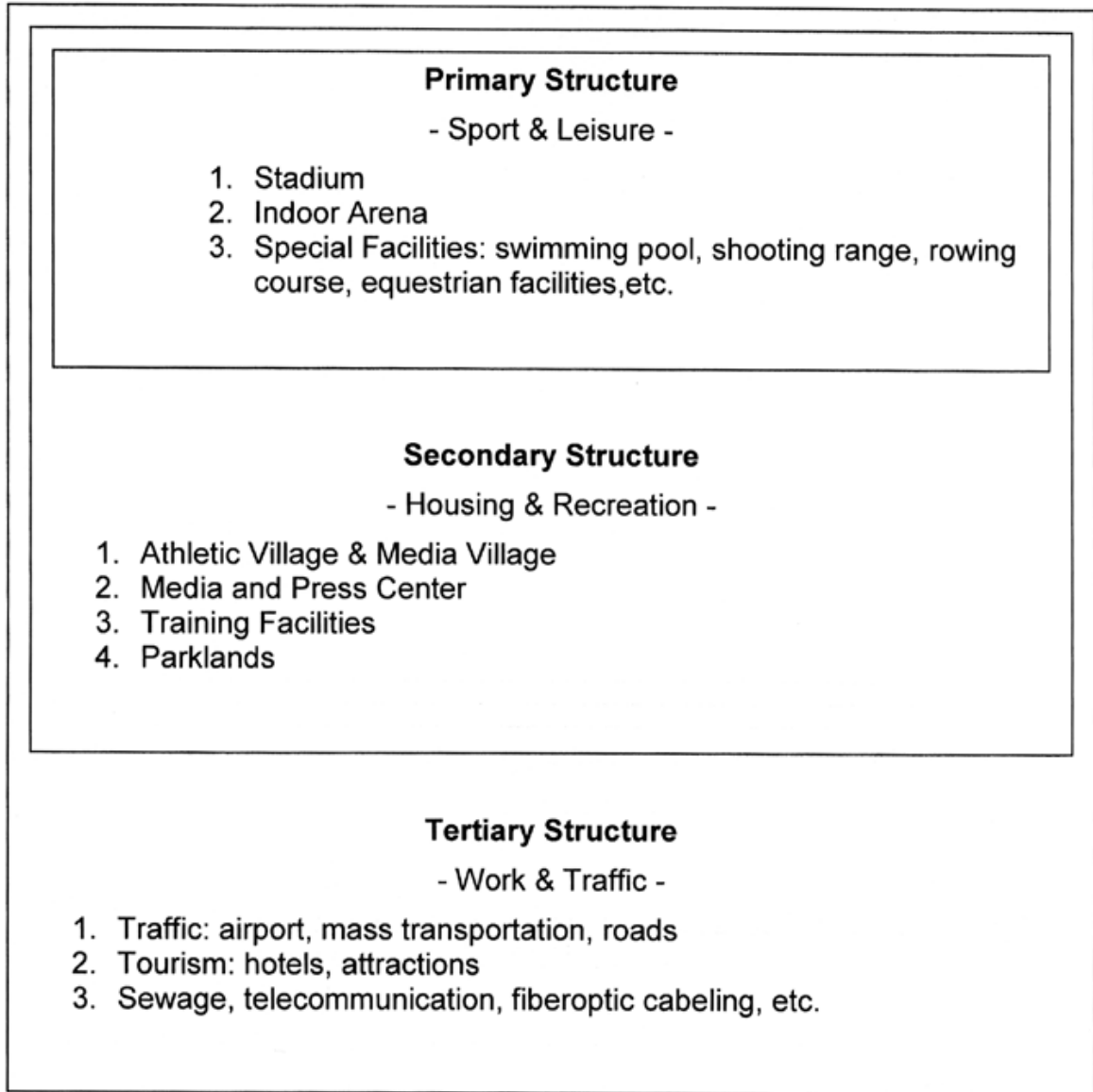
Urbanization or urban legacy refers to the transformation events create. Within the urban legacy, development and renewal of city districts are an important aspect Furthermore it has been outlined by *Solberg & Preuss (2007)* that “mega-events often require a renewal of urban strategies” (p.218). According to *Essex & Chalkley (1999)* these urban strategies are based on the fact that mega-events lead to that the “peak demand during such events exceeds the capacity in almost every city” (*Solberg & Preuss, p.218*). *Carlsen & Taylor (2003)* express that urban legacies are a small category on its own, and is most often linked with other types of legacies (see 3.4.3.6). Furthermore they points outs that urban legacies are based on development of inner cities, which is interrelated with economic and social legacies. As mentioned above urban legacies are based on transformation of urban areas,

therefore urban legacies would be related to the environmental changes events lead to. A typically example on this is the renewal of a city area in Barcelona, through the Barcelona 1992 Olympics (*Furrer, 2002*). *Hiller (2000)* points out that “mega events play a critical role in the support of the transformation of urban space” (*p.198*).

2.3.3.3 Infrastructural Legacy

Within events, especially mega-events, infrastructural structures are built. As emphasized in the definitions about white elephants, the need to create a long-term usage is an important aspect of the infrastructural legacy. Infrastructural legacy relates to all infrastructures that is built or renovated directly or indirectly in connection for an event (*Bob & Swart, 2010*). From the figure underneath we can see that infrastructure for events are divided into 3: primary structure, secondary structure and tertiary structure (*Solberg & Preuss, 2007*), which consist both of sporting facilities and general infrastructures. With sporting facilities its meant facilities used for sports competition and training, while general infrastructure refers to all other types of infrastructure within the society (*Gratton & Preuss, 2008*). The primary structure is those structures that are built for the core activity of the event (*Solberg & Preuss, 2007*). In the case of sport events, the primary structure is therefore related to sport infrastructure used for competition. Secondary structure refers to infrastructure for housing and recreation, meaning training facilities, parks, media and press-center, and houses for athletes and media. Tertiary structure refers to the general infrastructure needed within a city, these types of structure is often referred to as tourism infrastructure (*Solberg & Preuss, 2007*). All these three different types are important infrastructures for mega-events, but the core element related to event legacy is the post-event use of these structures

Figure 4 – Types of infrastructure for Mega-Event



Source: Solberg & Preuss (2007)

Within this thesis the complexity of event legacy have been emphasized, both to plan and measure. The above explanation of different types of infrastructure for events strengthens the point on complexity, both to plan and achieve legacy. Therefore to create infrastructural legacy there is a need for post-event use for such infrastructure. “*All infrastructures left after an event should fit into the city’s development*” (Gratton & Preuss, 2008, p.1926). It have been outlined that such sporting infrastructure is built for the purpose of the mega-event to attract masses of people, and is not needed in the post-event phase (Furrer, 2002). Furthermore it have been emphasized that some specialized facilities, only used for one sport, have a very low level of interest within the host city or

nation (*Lee*). Based on these facts above it is quite natural to believe that in order to create infrastructural legacy the post-event use must be considered. Without a post-event use of infrastructure they would be described as oversized infrastructure and therefore be titled ‘a white elephant’. It has been pointed out by *Koenig & Leopkey (2009)* that infrastructure for mega-events are built in the pre-event phase and are “traded or sold to the city or private organizations”(p.2) in the post-event phase to create an infrastructural legacy effect.

2.3.3.4 Economic Legacy

Mega-Events are costly and the money flow is huge within such events. However the justification for the money flow is important within all types of legacies. Economic Legacy is about what positive and negative long-term effects in terms of economic development. Tourism legacies are a sub-category within the economic legacy. Since an increase or decrease in tourism will affect the economic development within a host city. In addition to tourism - economic legacies include employment, business investment etc. (*Bob & Swart 2010; Furrer 2002*).

According to *Law (2002)* one of the main reasons to host mega-events is the perceived tourism increase. As explained above, in the infrastructural legacies, most of infrastructures built for mega-events are somehow inter-related to the tourism. “Tourism is often viewed as a positive economic legacy linked to the profiling of a specific destination” (*Bob & Swart, 2010, p.73*). If the aim is to improve tourism in the long-run, then a policy for developing and branding the tourism destination as something desirable should be applied (*Chalip & Costs, 2006*). The concept of tourism legacies is therefore basically about the development of tourism, either in a positive or negative way. Furthermore *Law (2002)* outlines that the tourism legacy is based upon the facts that mega-events have a perceived tendency to improve the prestige of the city profile. “Mega-events have tremendous symbolic significance and form, and reposition or solidify the image of a city, region and country” (*Preuss, 2008, p.1927*). As this citation emphasizes tourism legacy is perceived as a cause of increased image.

Based on a development of the tourism section the employment will be affected, new jobs would be created through new tourism infrastructure and products (*Koenig & Leopkey, 2009*) and would affect the employment rate. *Minnaert (2012)* have pointed out that

“increased employment opportunities are often used prominently to justify investment in the Olympic Games” (p.363). *Vigor et al (2004)* emphasized that if the target is to minimize the unemployment rate, then the focus must be towards the unemployed in the society. Another reason for cities or nations to bid for mega-events is the perceived foreign investment or network associated with these events (*Furrer, 2002*).

According to *Preuss (2004)* there are direct, indirect and lost investment reasons for mega-events. Direct investments are investment that wouldn't happen without the event, while indirect investment is those that are fast-tracked or larger with the event even though the investment would have happened anyway. Lost investment is those investment that would have happened without the event, example: the crowding out-effect. To continue the thread about job creation, *Furrer (2002)* points out that increased investment would undoubtedly lead to new jobs.

4.4.3.5 Social Legacy

Social Legacies are those long-term effects that affect either social aspects of individuals or communities in the society (*Koenig & Leopkey, 2009*). It is quite obvious since events, and especially mega-events, have the intention to be for people that social aspects will get affected. The main areas within social legacies are volunteering, symbolic creation, networks, cultural awareness, and norms and values (*Bob & Swart 2010; Minnaert 2011; Furrer 2002; Gratton & Preuss 2008*).

Within events a core complexity and area is volunteering. The amount of volunteers required obviously depends on the type and size of events. Volunteering programs have the intention to improve skills and knowledge for those volunteering that will benefit individuals and communities in the long run (*Minnaert, 2012*). Furthermore *Gratton & Preuss (2008)* outlines that through volunteering for events individuals gain “*skills and knowledge in event organization, human resource management, security, hospitality, service*” (p.1927). As we may understand these areas of expertise is important components within a society. The main reason for volunteering for events is outlined by *Minnaert (2012)* to be national pride, social contact and friendship, and community involvement.

Events have the tendency to be symbolic components within a society, based on the fact that this is a core element of events it is quite natural to believe that such symbolic legacies would occur through events. It has been pointed out by *Bob & Swart (2010)* that events create 'collective memories', however the successfulness of the events will affect this to be a positive or negative legacy and is based upon that the core social legacy is perceived to be national pride. The potential of increasing residents national pride, has been pointed out as one of the main reasons for public and private investments in mega-events (*Bob & Swart, 2010*). Furthermore points *Anderson & Holden (2008)* that the concept of national pride is inter-related with perceived long-term effects such as confidence and optimism, which lead to the consequence that residents would look differently on their own community due to an event (*Bob & Swart, 2010*). This has been identified as the 'feel-good-factor' by several scientists (*Brenke & Wagner 2006; Chappellet & Junod 2006; Maennig & Porsche 2008; Tomlinson et al 2009*).

Within events there are several stakeholders involved, and these different stakeholders must cooperate in order to create successful events (*Gratton & Preuss, 2008*). Interactions between various categories of stakeholders in events will create future relations between them, either in a positive or negative way. The interaction between different stakeholders will create new or improve current networks (*Gratton & Preuss, 2008*). Furthermore *Gratton & Preuss* outlines events as contributors of closer relationships between stakeholders, and will therefore be beneficial in the future.

Through volunteering, and in general for events, residents improve their awareness of their city history and culture (*Gratton & Preuss, 2008*). An important aspect of Olympic Games is the opening ceremony, other events also have similar ceremonies, and this ceremony is basically about presenting the culture of the host nation. Through this, an event could be seen as something educational both for visitors and residents. According to *Gratton & Preuss (2008)* "mega sport events produce cultural ideas, cultural identity and cultural products" (p.1929).

4.4.3.6 Inter-relation between legacy types

“Different types of legacies are interrelated and often overlapped” (Bob & Swart, 2010, p.73). As expressed earlier, events consist of a lot of complexity.

Since sporting legacy should be a core element, in sports events, of the legacy concept and is also the core activity of the event it is quite obvious that all types of legacies should somehow be related to the concept of sport. In order to increase and improve the access to sport in the society new or improved infrastructure are decisive (Minnaert, 2011). To play different sports, specific infrastructure is required. Therefore the link between sporting legacy and infrastructural legacy are inevitable. Together with improved networks (which will be explained later) the construction of sporting facilities have the tendency to lead to more sport events and regular sport activity (Bob & Swart, 2010), which will benefit and improve the sport section within a host city or nation. With required facilities within a host city or nation, it would be easier to host future sporting events because of the city have the sporting facilities required.

Urban Legacy and infrastructural legacy are naturally inter-connection. Since urban legacy is basically about transformation of city areas, infrastructure created for events would obviously be a part of the urban legacy (Bob & Swart 2010). Without infrastructure, the urban legacy wouldn't make the same impact. The transformation of low-class city areas would make different legacy outcomes, based on from what stakeholder perspective you viewing them. For low-class residents living in these areas, transformation of these areas will lead to a decreasing social attachment due to a pricing increase, also referred to as social dislocation above (which will be more thoroughly explained underneath).

One of the core elements for mega-events is the infrastructure created directly or indirectly for these events. It has been pointed out that infrastructure affect economic and social legacies (Bob & Swart, 2010). As Bob & Swart emphasize, infrastructural legacies are connected with other types of legacies. Due to the fact that infrastructure is an important aspect within the society, the link between infrastructural and social legacy is vital and it have been pointed out that event-based infrastructure lead to both positive and negative effects within social relations (Koenig & Leopkey, 2009). Related to the secondary

infrastructure types such as houses, it have been identified by *Hiller (2000)* that due to high requirements for the mega-events could lead to dislocation of specific areas for low-class residents. Furthermore *Smith (2009)* points out that such dislocation are based upon the motivation of urban transformation or within this perspective urban legacy. These types of transformation have been identified as negative legacies by *Highman (1999)* and *Lenskyj (2000 &2002)* because they result in displacement, evictions and high living costs, which in the end will affects social aspects of individuals or groups. As this explanation emphasize there is clearly a combination of infrastructural, social and urban legacies. *Solberg &Preuss (2007)* express that through infrastructures labor and traffic will change, meaning economic legacy. Furthermore *Bob & Swart (2010)* have outlined that the possibility of job creation is based upon newly built infrastructure, since they need new employees, which could result in the change within the “social circumstances of the individual and household” (p.84). Furthermore infrastructural legacy is connected with economical legacies due to the fact to the construction cost of these infrastructures (*Bob & Swart, 2010*). As seen from table 1 on page 20, the negative infrastructure is based on “white elephant”. The concept of white elephant, as explained in the definition explanations, is that infrastructure getting name tagged as white elephant when their unneeded, oversized and costly (both to construct and maintain). Therefore these infrastructures could create negative economic legacies, and therefore these two types of legacies are highly inter-related.

In order to create positive economic legacies through tourism, infrastructure is needed (*Solberg &Preuss, 2007*). This regards especially general infrastructure. Improvements of hotels, transport systems and infrastructural networks are vital to improve tourism within a city. *Furrer (2002)* have signaled that “investment in transport infrastructure improve the mobility of people and goods” (p.4) and he arguments that this would be a major keys to creating economic development. Based on this fact, it is a clear connection between infrastructure and economic legacies. As *Furrer* describes this as a key factor of positive economic legacy, shows how vital economic and infrastructure legacy is for each others. *Minnaert (2012)* outlines that due to the high requirements of housing facilities; it would lead to an increase in market value of housing. That would create a negative legacy for low-class residents as explained above, and will lead to a general increase in real estate prices. From a general perspective this may seem like a negative legacy, however it may be perceived variously from different stakeholders. The main point here however is to

outline the complexity of inter-related legacies and that several factors needs to be considered, in addition would also different perspectives on legacies strengthen the complexity.

Solberg &Preuss (2007) points out that the increase of skills and knowledge will in the end improve the tourism product (economic legacy), and therefore there is a close connection between social and economic legacies. “*When combined with soft factors or better service quality, they have significant potential to increase tourism on a long-term basis*” (*Solberg &Preuss, 2007. p.219*). In addition *Bob & Swart (2010)* emphasize that tourism legacies are urban legacies. Because renewal of urban areas, would in the end affect the degree of tourism development.

2.4 Measurement of Event Legacy

Expressed in previous chapters the concept of ‘Event Legacy’ should focus on the long-term aspect, not only the short- and medium-term. *Gratton & Preuss (2008)* outlines that “*the measurement of a legacy should start with the changes events create*” (*p.1925*). As explained in the chapter about event structures. In addition there is a tendency that measurement of legacy to focus on only a few aspects, while other aspects are neglecting. All event-based changes need to be considering within measurement of an overall event legacy (*Preuss, 2007*). As explained in the chapter about research on ‘Event Legacy’, the measurement of legacy is often measured with economic impact because of its inter-relation with justification for investment in Events (*Preuss, 2007*). Furthermore, as mentioned earlier such impact studies focused on short runs, and shouldn’t therefore be regarded as legacies.

Within the measurement of event legacies, there are typically two implications that need to be considered: re-distributions of resources and the crowding-out effect (*Preuss, 2007*). Within the concept of Mega-event, these events need high amounts of public money invested in order to be hosted. Based on that fact, it needs to be considered whether such money could create through ‘alternative investment’ (*Preuss, 2007*). Therefore if such investment in events should seem as a reasonable investment in the legacy perspective, they should create legacies that would either be greater or equal the alternative investment. To use an obvious example of sport development, investment in sport infrastructure in events has the purpose of increasing sport participation within the host nation. However,

the same level of sport participation would be created through alternative investment then the event investment wouldn't seem like a good idea in terms of sporting legacy.

As expressed through this thesis event legacy should concentrate on the structural changes through an event. *Preuss (2007)* explains therefore that the 'net event legacy' needs to be considered. To explain further with the above example, if the yearly increase of sport participation or increase through alternative investment would be 5% and the investment in sport-event would generate an increase of 7%, then the 'net event legacy' would only be 2%. Therefore external factors, which are not caused by the event, shouldn't be included in the measurement of event legacy. Crowding-out effect is another important aspect (*Preuss, 2007*), and is best describes of residents that leaves a city because of an event. In relation to calculating the 'net event legacy', the crowding-out effect must be considered within the measurement.

Preuss (2007) have outlined the two most common approaches to measurement of legacies: benchmarking and macro-economic indicators. The benchmarking approach is "based on past experiences from other mega events" (*Preuss, 2007, p.208*). While legacies determined by indicators post-event data to evaluate legacies (*Preuss, 2007*). Both aspects will be deeper discussed during this chapter. In the first section of this chapter I will discussed 3 dimensional errors for the benchmarking approach, while in the second section I will explain and discuss two approaches for measuring event legacy in the post-event phase: top-down approach and bottom-up approach.

2.4.1 Benchmarking Approach and Dimensional Errors

Within the benchmarking approach there are three dimensions that make this approach difficult and inaccurate. As *Preuss (2007)* emphasize this approach is basically used for planning purposes in the pre-event phase, often by hosts cities or organizers. There are three different dimensions that distinguish events from each other (*Preuss, 2007*). As mentioned in the previous chapter about event legacy, events create different types of legacies. The core element of events and event legacy: time and space. These two factors are of importance within the concept of benchmarking approach, in order to distinguish events from each other. These dimensions are different cities, types of events and time-

frames (Preuss, 2007). When measuring and discussing event legacies it is decisive to understand that event legacies differs based on these dimensions.

Different cities have different challenges. *“Some cities have infrastructures that enable them to stage major sports events with a very low level of investment, whereas cities have to invest substantially in the infrastructure”* (Solberg & Preuss, 2007, p.216). Therefore it is quite obvious that also the expectations and results for long-term outcomes will differ. The level of expectations is quite naturally higher for cities that have invested higher amounts, than cities with a smaller investment level. Infrastructure is an important aspect of mega-events and since cities differs in consisting infrastructure. Therefore, in terms of infrastructure, this is the core differences between cities. Solberg & Preuss (2007) have outlined that events hosted in one city wouldn't necessary have the same effect in another city. Based on the fact that events differ in size, population, structures etc., same event in two different cities could create different legacies. However, cities with similarities could maybe be narrowed down to have some kind of similarities while opposite cities, in term of city preferences, would create significant legacy differences. *“The same mega-event will create a different legacy in different Locations”* (Preuss, 2007, p.215). As mentioned above in the event legacy process and outlined by Preuss, the same event will differ in optional measurement. The long-term legacy goals may differ from one city to another. Chappelet (2006) have emphasized that global investment are a typical difference between cities for the same mega-event, such as Olympic Games.

Different events have different challenges. *“Different events create different legacies if staged in the same city”* (Preuss, 2007, p.214). Events are either one-shot events or regular events. One-shot events only occur once or within a huge distance of time, while regular events are those events that occurring on a yearly, monthly or weekly basis. According to Getz (2008) events can furthermore be divided into: Mega-events, Hallmark Events, Regional and Local Events – categorization based on event size. In addition the core activity is of importance to distinguish events from each other: cultural celebrations, political and state, Arts and Entertainment, Business and Trade, Educational and Scientific and Sports Events (Gammelsæther, 2010). This expresses the different scope of events, and there is therefore natural that these events wouldn't have the same long-term effects. *“Events are transient, and every event is a unique blending of its duration, setting, management and people”* (Bob & Swart, 2010, p.74). Based on the fact that events are of

unique composition there is natural to think that legacies will also be unique based on the composition events propose and will therefore “lead to different types of impacts and outcomes” (Thomson et al, 2009, p.3). Some events will make more significant impact than others. “Different structure requirements, different social interests, different media exposure, different spaces needed, etc. means...events create different legacies by nature”(Preuss, 2006, p.3). It is likely to believe that events with similar size and program will have more similar legacy outcomes than events of opposite types. Ritchie (1984) have outlined that mega-events have better possibilities to gaining economical legacies than smaller events have. Due to the fact that the balance between competitors and spectators are more equal in small and medium sized events, than in big mega-events (Taks et al, 2009). They have therefore a higher possibility to attract tourism.

Different time-periods have different challenges. “The same event creates different legacies if staged twice in one city” (Preuss, 2007, p.214). Factors affecting legacies most probable have changed from one period to another. In the introduction, it was emphasized that Olympic Games have increased since the revival in 1896. From being rather small in the beginning to being extremely big today, it is rather obvious that also long-term effects will be different with different conditions and requirements, both internal and external. This change in time is according to Thurrow (2004) due to the fact that both the event and environment change over time.

2.4.2 Top-Down and Bottom-Up Approach

Preuss (2007) have identified two types of measurement of event legacy done within the post-event phase: top-down and bottom-up approach.

2.4.2.1 Top-Down approach

According to Preuss (2007) are legacies more difficult to measure than impacts, because of their complexity due to the fact that these effects are spread over a significant number of years. The ideal measurement of legacy should be isolated from the natural development of a city, meaning only event related changes (Baade & Matheson, 2002). Quite obviously this may not be an easy task. Preuss (2007) present three different ways to measure event legacy in the top-down approach: 1. Event case versus without case; 2. Event case versus control case.

Hanusch (1992) suggest that measurement should be measured through the changes event created on its own, and compare it with the changes that would happen without the event. The difference between these two is the event legacy. *Preuss (2007)* outlines that this approach is static, and is uncertain whether this approach would be suitable to measure legacy accurately.

Another approach is to measure event legacy towards the control case (*Hotchkiss et al 2001; Baade & Matheson 2002; Oldenboom 2006 in Preuss 2007*). By control case is meant "the alternative development the city would have without the event taking place" (*Preuss, 2007, p. 216*). The difficulties with this approach are obviously that we need to analyze some alternative developments that haven't occurred and are therefore unknown (*Preuss, 2007*). Within the approach 'event case versus control case' there are two methods. "The first method is to collect data for cities with similar structure and size in the same macro economy for a certain period" (*Preuss, 2007, p.216*). Within this method there reference case is developed through average development of other cities (*Preuss 2000; Baade & Matheson 2002; Sterken 2006; Hagn & Maennig 2007*) and this approach is called 'differences-in-differences' or 'DD approach' (*Preuss, 2007*). The core element within this approach is the measure the difference between the host city and these other cities of similar size within specific areas, for example tourism, employment rate or price level (*Preuss, 2007*). *Preuss (2007)* points out that there are shortcomings with this method are the difficulties in selecting the reference cases and to find similar host cities.

The second method is to use trends within the society and compare them with the event case (*Preuss, 2007*). According to *Preuss (2007)* such a model is based on the long-term development of a society. The event legacy is again, as previous explained methods, the difference between the two data (control case and event case). To use trends to predict future situations could be of failure due to external factors, because these trends data wouldn't include unpredictable external factors, such as an economic crisis (*Preuss, 2007*).

2.4.2.2 Bottom-Up Approach

“The bottom-up approach is based on long-term development path of a city” (Preuss, 2006, p.5). Such an approach has the intention to evaluate all structures (Preuss, 2007). The bottom-up approach measure the event legacy based on the development of a city without the event (without case) (Preuss, 2006). Within this approach all aspects that change location factors need to be considered (Preuss, 2007). Positive and Negative, and tangible and intangible legacies must be involved.

In order to understand this method it is important to understand how cities are affected, Preuss (2007) points out that there is four ways in how cite development is affected. These fours ways need to be considering within the measurement of event legacy.

According to Preuss (2007) “there is a risk that scarce resources get redistributed in order to facilitate the preparation of event infrastructure” (p.219). Baade & Matheson (2002) emphasize that a redistribution of money, could lead to slower city development. The potential decrease of general city development, due to redistribution of money, is perceived as a negative legacy (Preuss, 2006).

Preuss (2007) outlines that the event structures, that are part of the long-term development plans of the city, shouldn't be perceived as a legacy of the event. Such infrastructure is both required and needed from the event and the city development (Preuss, 2006). It can obviously be discussed if this is the case, and as Preuss (2007) express many people will consider this as an event legacy. In addition Preuss emphasize that such shouldn't be regarded as event cost as well. Based on the reason that such structures would occurred anyhow (Preuss, 2004).

The structures created for the event is not needed by the city in the long-term. Therefore it would create negative legacies (Preuss, 2006). Even though it may not be a direct positive legacy, Preuss have outlined that “externalities and spill-over effects may serve other positive legacies in the target system” (p.5). Searle (2002) emphasize that there consist controversy of coordination between event requirements and long-term needs of the city. Even though the infrastructure in itself would create direct legacies, it could lead to other legacies (Preuss, 2007).

Through analysis legacies becomes more visible (Preuss, 2006). Meaning that the tendency in trends and environment are becoming clearer through analysis, and therefore through analysis of the market helps measuring event legacy and to predict it (Preuss,

2007). *“Grievances, shortcomings and gaps in the infrastructure of the city are revealed, and as a result these can be embedded in the development strategy”* (Preuss, 2007, p.220).

Preuss (2007) outlines that the bottom-up approach have both strengths and weaknesses. As explained above, the bottom-up approach outlines that it is complex due to the fact of the implication that structures could lead to different types of legacy (*Preuss, 2007*). A sport facility doesn't necessarily only leading to infrastructural legacy. *Preuss (2007)* emphasize that to understand the concept of indirect effects of structures is decisive in understanding the concept of legacy. *“A positive legacy in one dimension (type of legacy) can be a negative legacy in another dimension”* (*Preuss, 2007, p.220*). Furthermore *Preuss (2007)* outlines that this approach have the weakness of not measuring the without case accurately, since it is based on hypothetical reasons for alternative development in a city.

3. Methodology

Methodology is perceived as a systemized approach in reaching a specific target in a research perspective (Grønmo, 2007). The target towards this thesis is to find out *what kind of legacies YOG'16 can create*. Since this is a pre-analysis, the purpose is to discuss expected legacies for this sport event. Within this chapter the author will present the different topics related to the research.

In the first chapter I will present the research approach towards my target and my research question. I will account for the choice of method, how the data is collected and how the data will be analyzed.

In the second chapter I will explain and discuss the qualities of both the thesis and the research. Meaning; that I will discuss the validity, reliability and transferability of the research, thesis and its conclusion. Furthermore the challenges for the thesis will be discussed.

In the last and third chapter the ethics for the thesis will be discussed.

3.1 Research Approach

“Research is a systematic process of collecting, analyzing, and interpreting information (data) in order to increase our understanding of a phenomenon about which we are interested or concerned” (Leady & Ormod, 2010, p. 2). Scientific research relates to understanding a phenomenon that will improve peoples and a field’s knowledge (Leady & Ormod, 2010). Jacobsen (2005) outlines that in some cases the results will be created by the research itself. Therefore it is important to be critical to our own research science, which will be discussed in chapter 3.2. Leady & Ormod (2010) emphasized that *“knowledge of strong research methodologies and appropriate ways to collect and analyze data is essential for keeping up with advances in your field” (P.8).*

3.1.1 Choice of method

Within this master thesis I have decided to use a combination of qualitative and quantitative methods to strengthen the discussion in the analysis, and that it seems reasonable within this field to combine it. The core difference between these two methods is that the qualitative method has the purpose to use data of words, while quantitative data refers to numbers (Dey, 1993).

3.1.1.1 Qualitative Research

As described above the qualitative research have the intention to base its analysis on linguistic explanations. Shank (2002) defines qualitative research as “a form of systematic empirical inquiry into meaning” (p.5). Grønmo (2007) outlines that the strength of the qualitative method is the depth it creates and therefore increases the understanding of the phenomenon it presents. The main purpose of the qualitative research is to describe and explain, to explore and interpret and to build the theory (Leady & Ormrod, 2010). The reason for that is to create a better understanding of complex cases (Leady & Ormrod, 2010). Within the qualitative research the process is based upon a continuous development and changing process that are centralized around a holistic view (Leady & Ormrod, 2010). “Researchers enter the setting with open minds, prepared to immerse themselves in the complexity of the situation and interact with their participants” (Leady & Ormrod, 2010, p. 95). Within this type of studies variables are unknown. The data for qualitative research is textual or image-based, and its data have the intention to be informative (Leady & Ormrod, 2010). The collection of data is often done informal (Leady & Ormrod, 2010). Data is analyzed categorically in order to explain phenomenon. By nature qualitative studies have a tendency to be biased and contain of subjective perspectives.

Within this thesis, the main analysis and its data is based on qualitative research. The intention for this thesis is to investigate what kind of legacies YOG’16 can lead to. Event legacy is perceived as a complex issue, and this thesis therefore try explaining event legacies trough a case study approach. *“In a case study, a particular individual, program, or event is studied in depth for a defined period of time”* (Leady & Ormrod, 2010, p.137). That is the core for this analysis, since the intention is to analyze event legacies of a specific event (or a specific case) YOG’16. Normally research is based on case studies because of the fact that to understand the case could help improve the understanding

theory and future situations (Leady & Ormrod, 2010). Case study can contain of either one specific case or several cases with a case-study comparison (Leady & Ormrod, 2010). Leady & Ormrod (2010) emphasizes that “*a case study may be especially suitable for learning more about a little known or poorly understood situation*” (p.137). However, case studies with only one case have an error of not finding any generic because only one case is involved (Leady & Ormrod, 2010).

Based on the fact that no data of event legacies is available, I have chosen to focus on qualitative research. Within this thesis, the method used for the analysis is qualitative research is based on public documents (Document analysis). Since the IOC requires bidding documents from candidate cities, most of the planning for the YOG’16 is implemented inside this document. Therefore I will base my analysis on the planning within these documents. Based on assumptions I will discuss if the measurements and planning is likely to create positive or negative long-term effects.

Document analysis relates to research based upon different types of documents (Jacobsen, 2005). According to Jacobsen (2005) a document analysis is suitable when it is impossible to collect data, when the intent is to research cases based on others perception of the situation or when the intention is to analyze what people have said or done. The main reason for using document analysis for this thesis is due to the fact that it is a pre-analysis and the situation will occur in the future, therefore the data isn’t available. Furthermore document analysis in this situation because it is perceived by the author that public planned documents of YOG’16 will be more objective and personal interviews would be more biased. This is related to what people in YOG’16 organization have done with the planning process, and is the basis of the situation. As you as a reader may understand, the intention of the theses is to use public documents as a method to look at what expected legacy the planned measurements can create. The discussion in the analyze chapter will be based on different assumptions.

3.1.1.2 Quantitative Research

“Quantitative research involves looking at amounts, or quantities, of one or more variable of interest” (Leady & Ormrod, 2010, p.94). Quantitative studies have the intention to explain and predict, confirm and validate and to test theory (Leady & Ormrod, 2010). The process of quantitative research is based on hypothesis, and uses the data to ‘test’ if such hypothesis is correct (Leady & Ormrod, 2010). Based on these two factors, quantitative research is about proving hypothesis and show that theory is correct. “The intent is to establish, confirm or validate relationships and to develop generalizations that contribute to existing theories” (Leady & Ormrod, 2010, p, 95). By nature quantitative studies have the intention to be objective and not include personal biased perspectives within their analysis (Leady & Ormrod, 2010). This type of study is very specific, and focuses on only one or a few variables in both its collection and analysis (Leady & Ormrod, 2010). Since the quantitative studies are based on numeric data, the variables are known (Leady & Ormrod, 2010). The data is often collected through large samples (Leady & Ormrod, 2010). Throughout the whole process the objectivity is a core element (Leady & Ormrod, 2010). Based on the data logical conclusion is drawn in the analysis, and since its conclusion is based on numeric data and not subjective perceptions, the method is objective.

In addition to the document analysis, which also contains some quantitative data, statistics from Statistics Norway will be used to build on arguments and assumptions in the analysis. The reason for combining qualitative and quantitative research is to strengthen the analysis.

3.1.1.3 Data collection and data analysis'

I have chosen the research method, document analysis, as my main research approach within this master thesis. The document that is chosen is application documents of Youth Olympic Games 2016. These documents are chosen carefully. From each of them, important aspects in relation to the topic 'event legacy' are picked out. The information with relation to the research question is explained and discussed within chapter 5. Based on the available information, several assumptions and scenarios are created with the analysis. These documents have mainly consisted of qualitative data, with some quantitative data.

In addition, reports by statistics Norway and NIF are used to create insightful discussion of the topic. Within chapter 5.2.4.2, tourism legacy are presented, the reports by statistics Norway are used to present the current level of tourism. The data are presented quantitatively, in number. Within chapter 5.2.1, the yearly reports from NIF from 2002 until 2011 are used to create graphs of athletes on regional and national level. The data are used as part of the discussion about expected sporting legacies of YOG'16.

3.2 Quality Standards

3.2.1 Challenges

The process of choosing the preferably best method for this thesis was a difficult task. As emphasized throughout this thesis 'event legacy' is a complex area of research. Since this is a pre-analysis, the complexity is therefore clearly there. Several considerations have been made in order to choose the method, as presented above. Due to the fact that this thesis is trying to find answers in an event that haven't occurred makes the research process a difficult one and one with several uncertainties. Meaning that the purpose of this thesis is to predict the future, which quite obviously is a difficult task. Preferably quantitative research may be the best method to measure event legacies, since the intention within measurement of event legacies is to measure the changes the event have done within the host city. This measurement and analysis should be done and presented in number, preferably. However, within this approach data must be available. Obviously the data for Lillehammer Youth Olympics 2016 regarded legacies aren't available, since it's not happening for another 4 years. Based on the fact that the core-element of event legacies is

based on the long-term event changes, such data wouldn't be available before after a reasonable time after the event have occurred.

Within this thesis it has both been considered to use interviews and the event legacy measurement method "benchmarking approach". The author considered interviews as a possible method within qualitative research for a long time. Several positive and negative considerations have been considered towards this kind of approach. The first idea that popped up in my mind was to interview key people within the YOG'16. Because it could apply important points to my discussion, and could as well given me some insightful information of Lillehammer YOGOC perspective of legacies or also within this thesis called long-term effects. During the writing of the thesis, which led to an increased awareness and knowledge of the field 'event legacy', several negative points to such an approach appeared reasonable. Events have people that are for and against the hosting of the event, since the YOGOC have basically people that are for the hosting of the event the result gaining from such interviews wouldn't be as beneficial as first presumed. As explained above I have chosen to focus my analysis within this thesis on document analysis of the application documents of the YOG. This document includes the planning of all aspect within this event, and is therefore perceived as sustainable to discuss the topic of event legacy. The perceived information wouldn't therefore be adding much necessary information and the author questions if such interviews would give important points to the concept of legacy, since such interviews objects might be of biased opinions.

Another and maybe more precise research method to follow is 'benchmarking approach' (explained in chapter 2.5). This method is based on using previous events to analyze future events. As explained within the theory there is 3 main dimensions of events: different events in same city, same event in different cities and same event in same city.

Lillehammer municipality hosted the Lillehammer Olympics in 1994. However, this is a different event with another perspective. The Olympic Games is a much bigger one than the Youth Olympics, the preference of these two events is different. The preference of events is obviously important in order to create event legacies. In addition, these two events (OG'94 and YOG'16) are hosted in two different time-frames. Therefore it would be difficult to assess if these two times would create similar legacies both related to type and size. Based on these two assumptions, it wouldn't be reasonable to base the discussion about expected legacies of youth Olympic Games on an event that happened 20 years

before and with other basis preferences. The Winter Youth Olympic Games have only been hosted one time before, in Innsbruck. First of all, the differences between these two cities are different. Their city preferences are different, and different cities have difference quality factors. Quality factors are a core element within the theory about event structures, which is a core within the field of 'event legacy'. It would be difficult and complex to assess if these quality factors are the same, and based on this fact it would be difficult to assess if the legacies occurred through Innsbruck YOG'12 would also occur at YOG'16. The positive of basing the discussion on YOG'12 is that these two in events are close in time and the event preferences would be basically the same, even though they are organized in different cities. The main uncertainty of basing the discussion on YOG'12 is on the fact that the 'event legacy' concept is based upon the long-term aspect. Since Innsbruck YOG occurred only a few months ago, in the writing time, there is doubtful that any types of legacies could have occurred. If such legacies have starting to occur, it can be discussed if these numbers presents such legacies would be the end-legacies. Even though, in the definitions about event legacy the long-term aspect haven't been specified, long-term quite obviously refers to time-frames at least above 1 year. It is perceived by the author that the long-term perspective refers to minimum 5 years. Based on the fact that legacies for YOG'12 wouldn't be visible yet, and the complexity of such considerations would be strong.

3.2.2 Validity and Reliability

The most traditional way to evaluate quality standards is through validity and reliability (Kvale 1997; Yin 1994). Validity and reliability came upon the methodology through quantitative research (Campbell & Stanley, 1963) and it have been discussed by several scientists if such terms should be applied towards qualitative research (Creswell 1998; Guba& Lincoln 1988; Wolcott, 1994). Both Guba & Lincoln (1988) and Creswell (1998 and 2009) suggests that other words such as trustworthiness, confirm-ability, verification and transferability should be used within qualitative research instead. Therefore within this section of validity and reliability the focus is towards quantitative research.

Validity refers to if the data presented within the quantitative perspective is important for the quality of the research and makes the research reasonable to believe. Most of the quantitative data within this thesis is based on the current level within various categories of event legacies, which is presented within the documents from primary sources. Therefore

the author perceives these data as valid, because the sources are trustable. From a pre-event perspective, the data seems important in order to answer the different research questions of this thesis. The event legacies are mostly presented qualitative, therefore the long-term effects associated and its relevance to quality standard is presented within the next sub-chapter: trustworthiness and transferability.

3.2.3 Trustworthiness and Transferability

Trustworthiness and transferability refers to the quality standard of the thesis from a qualitative perspective. As mentioned earlier validity and reliability are mostly used by quantitative research. Trustworthiness is about if we can trust the research (Rubin & Rubin, 2005). Based on the method that is used, document analysis, the data that is associated with this thesis is information from the primary source. Different public documents are analyzed, and the information within these documents are used in evaluating ‘event legacies of YOG’16’. The author assumes that data from the primary source is reasonable to trust.

The event legacies presented, involves uncertainties, due to the fact that these event legacies are post-event effects that are evaluated pre-event. Transferability are an important aspect here. It refers to if we can transfer the research to other similar cases (events). In this case, the reader must be aware of that there is several uncertainties involved with the pre-event analysis of event legacies. First of all, due to the lack of quantitative data the observed legacies will differ from pre-event- and post-event-analyzes. Therefore it must be questioned if the event legacies presented within this thesis are transferable to post-event analysis of the same event or other events. As previously mentioned, the dimensional errors of event legacies affect the transferability of this research. Since difference events, cities and time-frames have different preferences the long-term effects achieved wouldn’t necessarily occur within other cases. Even though the effect isn’t transferable, the method could obviously be insightful for pre-event analysis.

3.2.4 Ethical Challenges

Ethical challenges and dilemmas can occur within the relationship between scientists and research objects (Jacobsen, 2005). Jacobsen (2005) outlines that the biggest challenge, is if the research could damage the research object in any kind of way. Within this thesis the data is collected through public documents and Statistics Norway, the ethical challenges is therefore little. No individual objects are a part of this thesis, except the author. Since the documents are public, and is prepared by a whole organization the ethical challenge is minimal. Ethics issues towards YOGOC'16 isn't much present either, if the organization would have some issues with their documents they wouldn't be public for usage. The thesis has the intention to discuss expected legacies of YOG'16 in a constructive way, meaning that the assumptions and arguments will be presented in the way of looking both at positive and negative sides of it. Therefore the discussion would only benefits YOGOC'16 for eventually things to focus on, and what to expect for future events.

4. Event Overview

This chapter will briefly present information about the event to give the reader a better understanding of the event, before reading through the analysis. This chapter is meant as an introduction to the event legacies of YOG'16, which will be presented within the next chapter (5).

4.1 Youth Olympic Games

Youth Olympic Games was introduced by the IOC in July 2007, after it was suggested by the IOC president 'Jacques Rogge' on a board meeting on April 2007 (*Document 10*). "The vision of the YOG is to inspire young people around the world to participate in sport and to live by the Olympic values" (*Document 10*). The YOG is a sport event for highly talented athletes between the age of 14 and 18 (*Document 10*). Similar to Olympic Games, the YOG consist of both winter and summer games. Both of them are hosted with 4 years space. The summer edition (2010) and winter edition (2012) have only been hosted one time before. They are both organized independently. Approximately 3600 athletes are expected for the summer YOG, while for the winter YOG 1050 athletes are expected (*Document 10*). The duration is respectively 12 and 10 days.

Intentional, the Youth Olympic Games had a purpose of to be something more than just a sport event. The intention was to implement sporting-, cultural- and -educational activities in one event (*Document 10*). YOG presents the best young athletes in the world between the age of 15 and 18. The aim for YOG is to educate young athletes through the Olympic values. The winter youth Olympic Games lasting for 10 days and are held off a time that fit the implementation of the sports within the host city (*Document 10*).

4.2 Host Region

Lillehammer Youth Olympic Games 2016 consist of several public entities, not only Lillehammer municipality. However, Lillehammer is the main area of YOG'16. The municipality have approximately 26 000 residents (*Document 3*). It is located 145 km away from Oslo, the main capital of Norway. The municipality consists of 477 square meters (*Document 3*). Even though Lillehammer is chosen to be the host city/municipality of YOG'16, three other municipalities are connected to YOG'16: Gjøvik, Øyer and Hamar. The main activities will however be located in Lillehammer, that's why

Lillehammer is included in the event name of the event. All municipalities are a part of the YOG through their sport facilities and public economical support.

Lillehammer, Øyer and Gjøvik are all located in Oppland County. These three municipalities are among the 26 municipalities within Oppland County, which consist of a total of 25 000 square meters (www.oppland.no). Gjøvik is the largest municipality within the County with approximately 27 000 residents, while Lillehammer is the second largest (www.oppland.no). Øyer municipality is a small municipality with only approximately 5000 inhabitants. Hamar, the fourth municipality, is located within Hedemark County. Hamar municipality have a population of approximately 29 000 (www.hedmark.org).

This region has a long tradition of being a winter sport region, as it was the host of Lillehammer Olympics in 1994. All municipalities and counties was a part of the OG'94.

Lillehammer YOG'16 will contain of 63 sub-events divided on 15 different sports (IOC, 2011b). The sport competitions will occur on 9 different sport facilities, which are located in the 4 different municipalities mentioned above. According to IOC (2011b) “all the sport venues must be located in the same city, and no new venues are built” (IOC, 2011a, p.2). As we can see, the facilities are spread out on several municipalities. Furthermore this description of the YOG (2011a) outlines that preferably multi-sport venues should be used. Within this section all 9 sport facilities will be presented, with basic information.

5. Analysis

5.1 Event process

Within the theoretical framework, the event legacy process has been explained in sub-chapter 2.3.1. As explained, the event legacy process is based on legacies as planned. The process consists of three different phases: pre-event, event and post-event. The intention of such a model and process is to emphasize the importance of legacy planning throughout the whole process. Within this sub-chapter the event legacy process of YOG'16 will be explained and discussed. Due to the fact that negative and unplanned legacies have a tendency to be neglected especially in pre-event analysis, the author will do the best to comprehend with this within this whole analysis.

5.1.1 The different phases of YOG'16

Simultaneously as the process explained in the theoretical framework, the event legacy process of YOG'16 consists of the same phases: pre-event, event and post-event. The model and explanation within the theoretical framework are based on mega-events. Due to the fact that the IOC has developed Olympic Games (Mega-event) we can assume that the process of YOG will be quite similar.

The post-event phase of Youth Olympic Games 2016 consists of the same three sub-phases as shown in the theoretical framework: idea and feasibility, candidature process, construction and organization of the event. The author assumes that the idea and feasibility phase begun as the IOC decided to introduce YOG in July 2007, when IOC introduced YOG (*Document 10*), since NIF and Lillehammer municipality applied for the YOG'12 (*Document 6*). However, the application was rejected (*Document 6*). Therefore the application process of YOG'12 could be perceived as an idea and feasibility phase of YOG'16. Furthermore it can be assumed that NIF and Lillehammer municipality wanted to build on the premises created for YOG'12. Based on the assumptions above we can draw the conclusion that the idea and feasibility phase lasted from July 2007 until the decision to bid for YOG'16 was decided (28 October 2010) (*Document 6*). As signaling in the previous sentence, NIF decided on 28th of October 2010 to bid for YOG'16 (*Document 6*). During this process, it would be evaluated and discussed the reasonability of hosting the

event. To apply for such costly events, isn't a small decision making process. As emphasized within the theoretical framework, the candidature process is a phase where bidding cities presents how they will implement the event within their host city to the international sporting body. Normally this phase consists of several competing bidding cities for the right to host the event. In this case, Lillehammer was the only host city to bid for YOG'16 (www.insidethegames.biz). Except bidding, this phase consists of evaluation, re-improvements of bids and in the end election of host cities. As mentioned above, the candidature process began at 28th of October 2010 when a unanimously board decided that NIF will bid for YOG'16 to the IOC (*Document 6*). Obviously after all candidates' cities have decided to bid for YOG, then all candidates will be involved with a bidding process (called the candidate process). Even though Lillehammer was the only candidate city, the candidate procedure was still conducted (www.insidethegames.biz). Each city need to develop their own bid books which should implement how the host city will deal with 15 different areas:

1. concept and legacy
2. political/economical climate and structure
3. legal aspects
4. customs and immigration formalities
5. finance
6. marketing
7. sport
8. culture, education and ceremony
9. Youth Olympic Village
10. Medical services and doping control
11. Security
12. Accomodation
13. Transport
14. Technology
15. Media operations

(*Document 10*)

All these topics above, must be explained and asses within the documents. Initial, event legacy are connected with the event concept; meaning that from the IOCs point of view these seems like an important area (*Document 10*). The questionnaire was submitted to the IOC 15 December 2010 (*Document 3*). This was followed up by new questions by the IOC, which was the delivered on the deadline 26th of April 2011 (*Document 3*). Then it was evaluated by the IOC commission 9th and 10th of may 2011, which was followed up by a workshop held by the IOC for Lillehammer YOG'16 (*Document 3*). The intention behind this workshop was to inform and educate Lillehammer, as a host city, about the requirements, create an understanding of the YOG concept and to assist YOG'16 in how to organize the Youth Olympic Games (*Document 3*). Within these different topics, the host city must answer IOC questionnaire. The last deadline for submit public guarantees and missing information was on 11th November 2011 (*document 3*).Then the IOC commission board will make evaluation reports of each candidate city of YOG. At the IOC sessions, the IOC members will vote on the different candidates (*Document 10*). Lillehammer was awarded the right to host the YOG'16 at December 7 2011 (www.insidethegames.biz). The candidate procedure lasted from 28 of October 2010, when Lillehammer decided to bid for YOG'16, until 7th of December 2011 when they was officially awarded the Youth Olympic Games of 2016. At 7th December 2011 the construction and organization of the event have started. Within this phase staff is applied, and then they start the planning of the event. This is an ongoing process, which is in the beginning of this process. The phase has duration from 7th December 2011 until 26th of February, when the event began.

The Event-phase consists of 10 days in 2016, from Friday26th of February to 6th of March (*Document 3*). During this phase the event will be implemented. The planning of the pre-event phase and the implementation of YOG'16 during the event-phase will create the premises. There are obviously uncertainties to both these phases; the first one is currently ongoing while the event-phase hasn't occurred. Within the theoretical framework, the duration of the post-event phase haven't been specified neither have it been specified within the public documents of YOG'16. Within this thesis the time period 2016 to 2025 will be used, meaning that a 10 years' timeframe post-event will be used. The author assumes that this phase have limited duration. Furthermore the author perceives measurements planned pre-event and implemented in the event phase or post-event as the key to achieve positive event legacies within the post-event phase.

5.1.2 Errors of event legacy in YOG'16

The application document of granted public support (*Document 6*), are perceived by the author as a key document towards YOG'16. It is reasonable to believe that planned measurement of event legacies should be implemented within this document, because long-term effects should be of focus from the public sector. Through this document, the word event legacy is rarely mentioned. Long-term effects associated with YOG'16 aren't to any degree specified. Within this document event legacies are not quantified or specified. This document doesn't specify one single measurement of achieving long-term effects. The suggested legacies YOG'16 will create are presented with a high level of uncertainty:

- “→YOG'16 gives the possibility to affect a whole generation of sport
- YOG'16 gives the possibility to develop Norwegian youth sport
- YOG'16 gives the possibility to develop a whole region within sport, culture, education and tourism
- YOG'16 give Norway the possibility to set international trademarks within the sport volunteering, organization and value-creation” (*Document 6, p. 4*).

As we can see from the citation above, the documents present the event legacies with uncertainty. Using phrases such as ‘gives the possibility’, creates surroundings of uncertainties. That use of word gives the author the perception that it can both end in a negative or positive legacy. It all depends on the measurement that is done. There is to a little degree measurement towards these presented legacies. Based on the perception that these legacies presented depends on measurement, the uncertainties towards such legacies are strengthen due to the lack of measurements. The author still wants to emphasize that it is still in the beginning of the construction and organization of the event, the reader must therefore be aware of that measurements will most likely be planned during the process toward the event-phase. However, on the other hand, it has been outlined within the theoretical framework the important of implementing event legacy from the beginning of the process. The two most important aspect of event legacies are neglected through this document: quantities and measurement of event legacies. Throughout the whole application document the event legacies are presented with a superficial twist, with an expectation that event legacies should occur automatically. As expressed within the

theoretical framework, event legacy process, it is a process of planning. It is expressed that the planning of event legacies should be included within the idea and feasibility phase, as mentioned above. Within this document, it is clear that event legacies haven't have focus throughout this process. Since the application of YOG'16 is based on the application of YOG'12, the time of the idea and feasibility phase is quite long. Therefore it seems even more neglected that event legacies aren't specified.

As explained above, the bid books for YOG'16 consist of 15 subject. The first one 'Concept and legacy' is obviously related to event legacy. Within the document 'candidate city for the winter youth Olympic games Lillehammer 2016' this topic is outlined in the first chapter (*Document 4*). This part of this document does to some degree presenting the concept and its relation to event legacy. Even though the measurements aren't specified nor are they quantified, the aims for event legacies of YOG are presented. Likewise with the previously mentioned document these proposed event legacies are presented with an expectation that they will occur automatically, because these proposed legacies aren't specified. Only positive legacies are outlined. The author have in mind that these documents are subjectively developed and biased, because they are developed by a person involved with the event. This person is obviously positive to the hosting of this event. Therefore we can assume that the positivity of event legacy considerations mat be exaggerated. To give a specific example, it is presented an idea of a 'Center for Olympic Youth sports' in Lillehammer. This center isn't specified within the documents. It seems more like an idea or vision than a specific action (*Document 6*).

Within this thesis, the author will give further examples during the event legacy considerations in section 5.2.

5.2 Types of event legacies

In chapter 2.3.3 different types of event legacies was discussed and explained. Therefore, this chapter is related to the theoretical approach earlier in the thesis. However, within this part of the thesis, it will be discussed and explained through a practical point of view.

Within this part of the assignment, the same legacy types as presented in the theoretical chapter will be presented, explained and discussed: sporting legacy, urban legacy, infrastructural legacy, Economic Legacy and Social Legacy. It is important for the reader to have in mind that the elements and different aspects presented here is done in a pre-event period, therefore most of the discussion within this part is based on assumptions. The data presented and discussed is therefore based on the situation based on years upon 2012, which is the year of when the thesis is written. However, the author wishes that the different legacy types presented will give insight and further discussion among these different aspects of legacies both in a theoretical and practical approach.

Urban legacy wouldn't be evaluated within YOG'16, due to the fact that urban legacy related to transformation of the city. Through Lillehammer Youth Olympic Games 2016, few buildings are constructed. The author therefore perceive, urban legacy to have little effect on Lillehammer municipality and the other associated municipalities. As emphasized within the theoretical framework, urban legacies are a small category on its own, and are most often linked with other types of legacies such as infrastructural and economical legacies.

5.2.1 Sporting Legacy

As emphasized in the theoretical framework, from an event legacy perspective sport events should be centralized through long-term sport development. Therefore the sport policy of the given case-study is important. Currently the only available sport policy document available is "Sport political document, 2011-2015" from NIF (*Document 11*), which will be explained and discussed later on. Within the theoretical part it was mentioned that sport legacy should include all kind of sports, both elite and recreational sports. Therefore within this analysis we will dig more deep into such context and discuss it within this specific case. To explain further the expected sporting legacy for YOG'16, different kind of numbers and graphs of members within NIF will be presented and trend analysis based on

these numbers will be used, to explain and discuss what kind of legacy within sport development we can expect through this event.

5.2.1.1 Sport political document

Quite basically “Sport political document 2011 to 2015” (*Document 11*) is a planning document of how Norwegian Sport Federation wishes to develop sport from the year 2011 to 2015. This document operates with the following vision “Sport joy for all” (*Document 11, p.4*). The document emphasize that this vision should be centralized with all Norwegian sport, and is based on that all people within Norway should have the opportunity to express different sport activities based on their wishes and needs (*Document 11*). Already by the vision we can put question marks if YOG’16 are important to reach such a vision. YOG’16 have the intention to collect the best winter athletes worldwide between the ages of 15 to 18 (*Document 10*). Therefore this event is related to elite-sport, and the recreational sport will be somehow neglected. This is also emphasized within the application of granted public support, “from a sport development perspective will a Youth Olympic in Norway be of great inspiration for the achievement-oriented part of sport” (*Document 6, p.1*).

These two various documents contradict with each other, at least to some degree. It is commonly known that elite-sport is a small part of the total sport activity. If the ambition and the vision are to create sport joy for all, this event wouldn’t contribute to that matter, based on the fact that this event is for the best within an age group. Furthermore, it is presented several goals or targets throughout this document. Two of these targets are inter-related with YOG’16: “*strengthen youth sports and strengthen elite-sports*” (*Document 11, p.8*). These are two out of six main targets within the sport policy of 2011 to 2015. Youth Sport in Norway is defined of sport activities between the ages of 13 to 19. YOG’16 is directly related to this age group; therefore it could be seen from an overview perspective as a good match to include Youth Olympic Games 2016 with this time frame to enhance the youth sport. From a quantitative perspective to enhance youth sport must be related to increase the number of active athletes between the ages of 13 to 19. Regardless, on how you put it, youth sport is related to elite sport. Youth sport could be seen as the supply of elite sport. From this perspective is it necessary to strengthen youth sport in order to strengthen elite-sport, which is the second target. Based on the two targets,

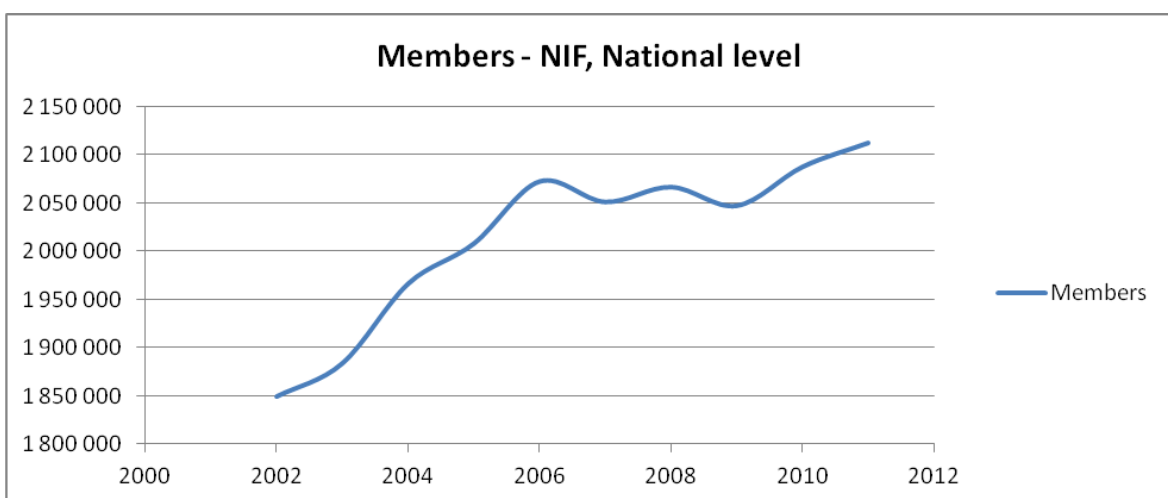
YOG'16 seem to fit well into the strategy of Norwegian sport. That is an important premise of investing in the event and hosting the event.

5.2.1.2 Measuring of sporting legacies

As indicating above, to measure event legacies we must have numbers available. Since this is a pre-analysis, the event legacies achieved through this event isn't available, due to the obvious fact that the event haven't occurred yet. Regardless, we must know some about trends related to athletes. Within a quantitative research perspective and event legacy perspective, the most obvious and easiest way to measure sporting legacy is through memberships of the sport movement. These numbers are collected on a yearly basis by NIF through their yearly reports. Furthermore these various date is collected by the author and thereby created graphs (*Appendices 1*). Within the next section of this chapter, different graphs will be analyzed, which are based on the yearly reports created by NIF from 2002 till 2011 (*Document 11*). Through the discussion about sporting legacy athletes will be defined as those who have memberships inside NIF. Memberships within NIF mean that you are registered as an athlete's through a sport club. The Norwegian Sport Federation is the governing body of all organized sport in Norway.

5.2.1.2.1 Members NIF

Figure 5 – Members NIF on national level



Sources: *Document 11*

From the figure above we can observe Norwegian sport as a developing one. The numbers memberships have increased from approximately 1.85 million in 2002 till 2.1 million in 2011 (*Appendices 1*). Accurately 262 787 is the amount of memberships increased during the last 10 years (2002-2011) (*Appendices 1*). That is a percentage increase of 14.2, which means that there has been a yearly average of 1.4 % (*Appendices 1*). On a mean average it concludes that there is an increase of 26 279 memberships each year during this 10 years period of time (*Appendices 1*). As we can see from the figure there is a positive development. However, there are slightly differences in members from year to year. All years except 2007 and 2009 has a positive increase of memberships (*Appendices 1*). In 2007 and 2009 it was respectively a decrease of 21178 and 19375 members (*Appendices 1*). Within the other years, which had a positive development, the numbers are varying from 15 442 to 82463 in yearly increase (*Appendices 1*). This is reflecting on the fact that the factors aren't constant, which will be discussed later on. The Norwegian sport model is based on three main age groups: beneath 12, 13 till 19, above 20. To adapt the analysis and discussion to the Norwegian Sport Model these age groups will be used within the graphs, explanation and discussion.

The age group 'beneath 12' is categorized as children's sport , while athletes between the age of 13 to 19 is defined as youth sports and all athletes above 20 of age is names as adult sports. The most obvious and apparently observation from the graph is that observation from the graph is that youth sport is the smallest group. Interestingly, in 2011 there was approximately 200 000 less memberships for the age of 12 to 19 than for the ages beneath 12 (*Appendices 1*). These numbers are building upon the common known perception that child's drops out of sports when they are growing. As it has been mentioned through public documents of YOG'16, one of the main reasons for investing in and hosting YOG has been to develop the youth sports. While the age groups 'beneath 12' and 'above 20' have had a positive development of respectively 106 220 and 120 204 from 2002 to 2011, youth sports (13-19) had only an increase of 36363 for 10 years of time (*Appendices 1*). Therefore the youth sports needs a greater development that the current level. The level of dropouts from the age underneath 12 years needs to decrease. From this perspective it could seen reasonable to invest and host the YOG, which are focusing on this specific age group.

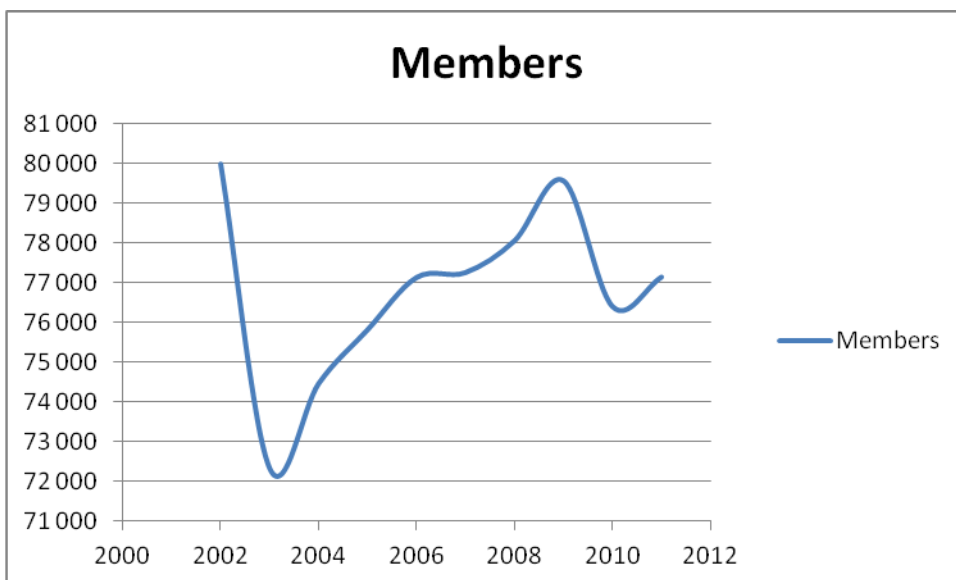
The first two graphs shows numbers related to the whole sports movement in Norway and could be interesting to look at from a general point of view. But is it realistic to believe that YOG'16 will affect all sports in Norway? The individual sport federations connected within YOG'16 consisted of 243 286 athletes in 2011 of the total of 2 112 137 athletes in the Norwegian sport movement, meaning that only 8.68 % of the athletes are connected to YOG'16 sports federation (*Appendices 1*). If we assume that YOG'16 will not affect the amount of memberships for sports that aren't connected to YOG'16 then it wouldn't be reasonable to measure sporting legacies on national levels. Therefore it is important to use sport related statistic and regional-related statistics. Therefore this analysis will dig deeper into these areas. Within the YOG'16 there are 7 different federations related and included in the process, as all these federation are represented within the main committee board, which will be a supervising committee. As mentioned above, the author assumes that only these sports will create a sporting legacy due to the YOG'16. As a reminder for the reader, event legacies could both be positive and negative as explained and discussed in the theoretical framework. For the YOG there are 15 different sports.

Within these 7 winters sport federations there are varying tendency both in development and current number of athletes. Three of these federations have registered a negative development, while the other four federations had a positive development (*Appendices 1*). 'Bobsleigh and skeleton federation' is the smallest federation, with only 353 members (*Appendices 1*). In addition they have had a reduction of 43% members since 2002, which is quite significant. That is a yearly average decrease of 4.3% members (*Appendices 1*). There is important to mention that these sports required specific facilities, which there isn't many of inside Norway. Many factors will therefore affect recruitment and drop outs. The Is-hockey federation is the most consisting federation of these seven, with only a slightly difference in members (+76 memberships) during the last 10 years (*Appendices 1*). That is an increase of 0.66% in 10 years and a yearly average of 0.06% (*Appendices 1*). The ski federation is the biggest winter federation in Norway, with 185 211 members in 2011. During the ten last years they have increased with 64 141 members, meaning it had a positive development of 53 % and yearly increase of 5.3% (*Appendices 1*). The ice skating federation is the federation that have lost the most number of athletes during this period of time, from 2002 till 2011 the memberships was reduced by approximately 2200 (*Appendices 1*). That's a total reduction of 24% and 2.4 on a yearly average. 'Biathlon forbundet' is the most developing federation with an increase of 57%. During the last 10

years the memberships have improved by 3398, which is an average increase of 5.7% (*Appendices 1*). The university-sport federation is the second biggest federation related to YOG'16 based on members, with a membership base of 26 055 in 2011 (*Appendices 1*). During the last 10 years they registered an increase of 19.85 %, meaning they have improved their base with 4317 members or 2% yearly increase if you like (*Appendices 1*). The Snowboard federation has registered a negative development of 16%, meaning that there are 790 fewer athletes in 2011 than in 2002 (*Appendices 1*).

In addition to specific sports, it is reasonable to believe that YOG'16 will have greater effect within their regional area than on the national level. Since YOG'16 will occur in several municipalities within Oppland County, the author will therefore use numbers from Oppland sports region. Among the last 10 years the development has been inconsistency. Some years have experienced positive development, while others years had a negative tendency. As we can see from the figure underneath, we can observe a huge variation in numbers during these 10 years. Amount of memberships decreased with 2844, which are a percentage decrease of 3.55 and a yearly decrease of 0.35%. (*Appendices 1*).

Figure 6 – Members NIF, Oppland County



Source: *Document 12*

Since YOG'16 is related to a specific age-group, it would therefore be preferable to include different age groups within Oppland sport County to the discussion about sporting legacy for YOG'16. As mentioned above, the age groups within Norwegian sport are mainly categorized in three: beneath 12, 13-19 and above 20, and also shown in the figure above. Similar to the age groups on national level, shown and explained earlier, youth sport (13-19) is the smallest age-groups based on memberships, with 13 407 members in 2011(*Appendices 1*).

5.2.1.2 Expected sporting legacies of YOG'16

Within the discussion about sporting legacy for YOG'16 the graphs and findings above are the premises. The long-term aspects haven't been specified within the theoretical framework. As emphasized within the event legacy process of YOG'16, the event legacy is perceived achieved during a 10 years period of time. As emphasize throughout this chapter sport development and sporting legacy are inter-related with each other. The different graphs will be used to get a better knowledge about the current sport development and the possible development for the future. The development observed from 2002 till 2011 are used as premises. The data presented above to evaluate the future. Trend analysis could be based on 'percentage yearly average' achieved during 2002 until 2011.

The explanation and discussion have so far assumed that the external factors will stay constant. When we are assuming that the current factors stay constant, this will obviously mean that the sport development will have the same percentage increase within the future years (2016-2025) as previous years (2002-2011), in addition these factors must stay constant during the pre-event phase as well (2012-2016). This means that a change, either a positive or negative, will be affected by YOG'16. As explained within the theoretical framework, outcomes of events are either direct or indirect induced. Through the assumptions that other factors (factors that aren't related to YOG'16) stay constant, the percentage change observed is the sporting legacy of YOG'16. This type of approach shows the direct sporting legacies of YOG'16, because the change is isolated from all other factors. From a simplified approach the change is the sporting legacy of YOG'16. This is an important point, that event legacy must be considered alone and isolated. In this example, the measurement of sporting legacy is simplified. This assumption is used to simplify the understanding of sporting legacy from a practical perspective, to give the

reader more insight about event legacy. Quite obviously, all external factors that affect sport development wouldn't stay constant from 2012 till 2025. Measurement of event legacies and in this case sporting legacies isn't straight forward. To assume that external factor stays constant wouldn't be realistic. The measurement of event legacies is more complex than explained above. The question will then be how we can isolate YOG'16 from other external factors?

Even though it isn't possible to quantify the sporting legacy of YOG'16 at the current time, the event must be considered as a contributor to the sport section. In the discussion of sporting legacy of YOG'16, the author will discuss to what degree can be a contributor. Will the YOG'16 inspire new youth to begin with sport or to prevent current ones from dropping out? That is important to assess in the sporting legacy context. The Youth Olympic Games 2016 is a sport event for exceptional athletes within their age group (*Document 10*). Each country will have limitations on the amount of athletes they can compete with. Therefore the sport challenge will be limited for Norwegian athletes. The same amount of athletes would compete in YOG'16, if it would be hosted in another city in the world. Even though, it shouldn't be consider as a tool for creating better athletes, the YOG must be seem as an important platform for young athletes. This event can be used as a motivator for young athletes, which they want to be a part of the event in the future. Their impression of the event as motivator could obviously be because their experienced the event itself. However, for this to occur the event bust be an inspiration for young athletes. The author assumes that the effect of YOG as a motivator and inspiration would be pretty much the same independently on where the YOG have been hosted. Athletes would still be motivated to a part of an event that consists of the world best athletes (within a specific age-group). However, the important thing about YOG'16 and its sporting legacy is to recruit new athletes. Though YOG'16 all kind of winter sports (or at least most of them) are put into the same event. For winter sports only the Olympic Games does something similar. Quite obviously, the YOG'16 gives Norwegians the possibility to experience different sports that they maybe wouldn't experience without this event in Lillehammer. Their experience could lead to that they found some of these sports interesting.

The region connected to YOG'16 consists of a wide range of sport facilities within all winter sports. Quite obviously, the infrastructure is important in order to increase amount of athletes. The complexity of the sport facilities, is that they are all different; meaning that they have difference preferences. While some facilities have limitations, others have not. The main point of event legacy is the changes the event creates for the post-event phase. Therefore, in order to create sporting legacy, future activity is important. The sport sector consists of two main areas: training and competition. Training is implemented on a daily basis, while competitions are events that are hosted occasionally. The sporting legacy of YOG'16 depends on new events YOG'16 within the youth Olympic legacy. Quite obviously, the facilities can only used by local sports teams on a daily basis. Therefore the author perceives events as the most important aspect of creating sporting legacy. It is important to develop sporting legacy within the whole nation, not only local communities. The focus in that matter should therefore be to events. In order to create sporting legacy the facilities connected to YOG'16 should be used more frequently to furthermore inspire and motivate youth athletes. Lillehammer, and the nearby municipalities, will be an important platform for sport in the future, because of their wide range of facilities. Therefore it is important to develop events within these municipalities.

A post-event usage will as well create an infrastructural legacy. As indicated above, the infrastructural and sporting legacies are very much inter-related. Increased event activity must therefore perceive to create both a positive sporting and infrastructural legacy. Future events are an indirect cause of YOG'16 and it will create a post-event use of the facilities. Various types of events will trigger youths to begin with sport. YOG'16 will lead to events after 2016, that will create more sporting legacy than YOG'16 itself because they wouldn't have the same limitations on participants. Even though we can't conclude that YOG'16 will create more events, both these types of legacies depend on it.

5.2.2 Infrastructural Legacy

As explained through the theoretical framework, its three main types of infrastructure: primary-, secondary- and tertiary-infrastructure. All these different part of infrastructure will be discussed within this chapter. Within the theoretical part, the focus is towards infrastructures that are built or renovated through an event. But through a practical aspect, there is important to address re-development of already existing infrastructure. Therefore all infrastructures that are used for or in connection with the event must be evaluated through the context of infrastructural legacy.

The concept of Youth Olympic Games is based on using existing infrastructure within the host city (*Document 10*). Meaning there is no requirements from the IOC of new-built facilities. Within the factsheet of Youth Olympic Games created by IOC (*Document 10*) infrastructure have been divided into three categories: venues, youth Olympic village and transport. Even though the IOC doesn't require new facilities, it is still conditional requirements for both the sport venues and youth Olympic venues. However, for transport, the IOC doesn't have any requirements at all. Based on the fact that event legacies are related to the changes event are creating, as emphasized within the theoretical framework, the sport facilities (venues) and youth Olympic village is the only infrastructure that will be discussed through this analysis.

5.2.2.1 Youth Olympic Village

“The Youth Olympic village (YOV) will be centrally located in Lillehammer and placed together with many of the facilities that already exists from the XVII Winter Olympics in 1994” (*Document 5,p.4*). The YOY would consist of two villages, Lillehammer and Hamar. These two villages are laying 62 km apart (*Document 3*). For the YOY there will be used both existing and newly-built facilities. Even though, the YOY will be located in two different areas the main village will be located in Lillehammer, surrounded by the sport core facilities. In total the Youth Olympic Village will consist of above 2000 beds during the YOG (*Document 6*). This numbers are based on the fact that each apartment will consist of 4 beds, while in a post-use these will only consist of one bed (*Document 6*). Approximately 1500 athletes and coaches will need to be allocated during the games; however the number 2000 is based on a reserve in case of special cases (*Documents 6*).

There will be built 300 student apartments for the Student Welfare Organization in the County (SOPP), and 60 for the Lillehammer Cooperative Housing Association (LOBB) (*Documents 6*). Meaning that these two organizations “would be responsible for the planning and development of the new residential buildings” (*Document 3, p.6*). The SOBB apartments will be in connection with the educational institution: Lillehammer University College, while the LOBB apartment will be in connection with Norwegian School of Elite Sport (NTG) (*Documents 6*). The 360 student apartments built by SOPP and LOBB is financed through three various methods. IOC has contributed a money support of 138 mill Norwegian kroner’s to YOG’16, 108 of these will be used for building these 360 student apartments. This equals 50% of the cost, and the rest will be taken out in loan (*Documents 6*). It is important to mention that Lillehammer municipality is given the land to these two housing organizations for building these student apartments in connection with YOG’16; they have a value of approximately 32.000.000 (*Documents 6*). In addition to these two new-built students housing, ‘Birkebeineren Hotel and Apartments’ and ‘Hotel Scandic Hamar’ will also be included within the Youth Olympic Village (*Document 6*).

In a post-event setting the student apartments is planned used by students at Lillehammer University College and Norwegian School of Elite Sport (*Document 6*), as emphasized above. There is a difference between the capacity during the games and within the post-event use. In the post-event phase each apartment will only consist of one bed, while four during the games, meaning that 360 new student apartments will be available after the event (*Document 6*). It is important to mention that there is an difference intentional legacy and an achieved legacy. Therefore the expected achieved legacy of the youth Olympic village will be discussed.

A quite obvious assumption is that all current students at Lillehammer University College have current housing solutions. It is quite reasonable to believe that without housing solutions they wouldn’t be attending Lillehammer University College. According to the application document of granted public support (*Document 6*), the Student Welfare organization of Oppland County have currently 886 student apartments to offer to 4124 students, meaning that only 21% of the students at Lillehammer University College have an apartment in connection with the school (*Document 6*). Within this document it isn’t said anything above the rental market of private housing. Based on the assumptions above, all 4124 students must have housing solutions. Therefore it is reasonable to believe that

79% of the students are renting through the private housing market. Even though, to have only coverage of 21% must be regarded as very low. Based on the fact that the coverage percentage of school related apartments are so low, must be perceived as to limits the development of Lillehammer University College. Based on the assumptions above, that all students at Lillehammer University College have housing solutions, we can furthermore assume that possible and approved students wouldn't attend to Lillehammer University College due to housing limitations. However, if the private rental market is very huge, the situation will however be different. In a practical sense, let's assume that there is a shortage of rental apartments. Therefore in order for Lillehammer University College to develop, the rental housing market must increase. Through a YOG'16 the rental market will increase with 360 apartments, 300 for SOPP and 60 for LOBB (Documents 6). Based on the explanation and discussion above it can be assumed that the housing market is a competitive one. In a competitive market, such as the housing markets for students and others in Lillehammer, the competition will most likely affect the price. When there is lesser apartments supplied than demanded, this will obviously affect the power within the market because of a shortage in supply. Therefore in the current housing situation in Lillehammer, the price will be higher due to a shortage of apartments. Furthermore there is quite reasonable to believe that the prices of private housing apartments than student apartments of SOPP and LOBB. This assumption is based on the fact that these organizations are connected to school, the intention for these organizations should be as so-called interest-organization for students at these schools. Apartments within SOPP and LOBB will therefore only be offered to students, while for the private housing market all kinds of rental consumers would be included. This means that the buying power will be different within these two markets in addition with the intention of sellers.

If we base the further discussion on the current amount of students, the 300 new student apartments will increase the current amount of apartments for SOPP to 1186, which means that the coverage will increase to 28 % (*Document 6*). According to the application document of granted public support (*Document 6*), this increase of student apartments will lead to coverage of 26% with 4500 students, with 5000 students at a level of 23% and coverage of 19% for 6000 students (*Document 6*). Based on the fact that Lillehammer University College, as emphasized within the application document, has developed with 40 % during the last 10 years (2001-2010) (*Document 6*). With a yearly increase of 4% and average increase of 119 students per year, it is emphasizing the need of new student

apartments for Lillehammer University College and SOPP in order to develop further. Based on the level of development of Lillehammer University College during these 10 years, as explained above, the housing market must be developed. Without a development of the amount of apartment in the housing market, Lillehammer University College wouldn't develop due to market constraints.

To continue the discussion about market power, through the increase of student apartments with SOPP and LOBB it must be perceived that this will lead to change in the market power. Let's assume that the level of students will stay constant, then 28% of students will be living in student apartments by SOPP and 72% of students will be living in private housing solutions. If the amount of private solutions stays constant at the same time, there will be lesser consumers willing to live in these apartments. There is quite reasonable to believe that this will affect the price within the private housing market of Lillehammer, because of a decrease in demand. However, there is uncertainty of the private housing market of Lillehammer municipality because this discussion is based on amount on students and student apartments. The author have currently no information about others consumers beside students and amount of private housing apartments. The long-term effects related to the development of Lillehammer University College will depend on the whole housing market (private housing and SOPP/LOBB apartments) and the total amount of consumers within this market. These dimensions will also affect the price within the market.

However, within an infrastructural legacy perspective the interesting thing here is what kind of long-term effects YOG'16 will lead to. To continue the discussion as started above, the new student apartments must be seen as a positive infrastructural legacy of YOG'16 based on the assumptions that all these apartments will create a post-event use. Based on the assumptions above, that the current housing market limits the development of Lillehammer University College, it must therefore be perceived that these investments would occur anyhow. Therefore this construction is 'fast-tracked' due to YOG'16. According to the application document, the development of new student apartments coordinates with the vision and ambition of Lillehammer University College to continue to grow. According to a public document by the Norwegian Government about Education, referred to in the application document of YOG'16, the amount of students will increase from 200 to 300 000 in the forthcoming years (*Document 6*). Therefore we can assume that

a development within Lillehammer University College will occur. Without a Youth Olympic Games the municipality, Lillehammer University College and SOPP would most likely developed new student apartments, in order to develop. Since the development of the Olympic Village for OG'94 in 1991-1993, SOPP have only built 164 student apartments (*Document 6*). With a low development since mid 90's, there is obvious about time to develop new apartments. Therefore YOG'16 must be perceived as 'fast-track-development' of SOPPs apartments. As indicating above, it would probably occurred anyway but we can assume that it occurred earlier due to YOG'16. In a general context and from a development perspective, a question could be raised 'does these 300 new student apartments equals the demand of new students in the forthcoming years?' These new-built housing will not alone solve the issues, but they will certainly contribute in order to development further.

In an infrastructural legacy, the interesting thing about the youth Olympic village is the financing model of these student apartments. As explained above, the student apartments are built on a land for a value of 32 million Norwegian kroner and 50% of the cost of these 360 student apartments is paid by a YOG'16 (*Document 6*). Through the YOG'16 the IOC are investing 138 million Norwegian kroner, 108 out of these will be used for building to building these apartments (*Document 6*). The total construction cost is 216 million Norwegian kroner, the rest of these will be granted in loan which will be served through rental income of these apartments (*Document 6*). As indicating above, the author assumes that these student apartments have been fast-tracked through a YOG'16. Through the financing solutions as explained above, the concept of 'fast-tracked' construction stand strong. Without the YOG'16 the IOC would never have invested 138 million Norwegian kroner, and subsidizing the student apartments with 108 million kroner. Therefore 50% of the cost covered through YOG'16. However, without YOG'16 these costs must have been covered by Lillehammer municipality, SOPP and /or Lillehammer University. On the previous discussion above, we assume further that very few student apartments have been developed since 1991-1993 due to finance constraints. Based on these assumptions, we can perceive that such construction would have occurred on a later time: meaning that they are fast-tracked through YOG'16.

“The student apartments have the intention to be used by athletes in the Olympic Legacy program (after 2016) and are decisive for IOCs involvement”

(Documents 6.)

The above citation is picked out from the application document of YOG’16, and reflects on the reason for IOC to invest in the YOG’16. However, this citation contradicts in the practical sense. Since all new-built apartments will be used by students at Lillehammer University College and Norwegian School of Elite Sport (*Document 6*). According to the application documents these apartments will be rented out from August to June: meaning that they are only available during July for programs within the Olympic Legacy of YOG’16 (*Document 6*). The core sport facilities of the Olympic Park in Lillehammer are related to winter sports, therefore preferable these facilities should be used in winter time. If the reasons for IOC involvement are as such cited above, these must obviously be poorly conceived. Due to the short period of access, the usage of these apartments for a youth Olympic legacy program will be limited. The author obviously assumes that the interest of winter sport would be the core within such a legacy program. Without having the possibility to do so, due to these constraints. Therefore there are several uncertainties to the effects the student apartments will have on the youth Olympic legacy. As mentioned earlier there is a difference between planned- and achieved-legacy, which this example emphasizes. The planned legacy, referred to the citation above, is to use student apartments to create and develop an event legacy of YOG’16. Based on the above discussion, the author assumes that this wouldn’t be achieved due to its constraints. However, the youth Olympic legacy can still be achieved. The discussion above only related to the new-built apartments by SOPP and LOBB. As mentioned earlier, Birkebeineren Hotel & Apartments have a capacity of 360 beds. Through this facility the intended legacy program could be achieved. If the youth Olympic legacy of YOG’16 is based on these three facilities only, the maximum capacity would be 360 in August till June while 720 during July. Furthermore we can assume that Birkebeineren Hotel & Apartments will be used, after 2016, by others than people connected with the legacy program. Therefore the capacity is uncertain.

5.2.2.2 Sport facilities

For sporting events, sporting facilities is needed in order to host the event. In an event legacy context the post-event use of such sport facilities must be considered. Since the event legacy concept is about long-term effect the event has on such facilities, the development must be considered. When evaluating the legacy (long-term effects) of these facilities the changes the event imposes on these facilities must be considered.

Lillehammer YOG'16 and the concept of YOG are using already existing sport facilities in order to implement the different sub-events of YOG (*Document 10*). Since Lillehammer hosted the Olympic Games in 1994, the municipality and other nearby municipalities have a wide range of facilities to host events for winter sports. Through the YOG'16 these various facilities will be refurbish. In total 9 different sport facilities will be used for this event, for 15 different sports (*Document 10*). These facilities and their event legacies will be explained and discussed later. Within this analysis and discussion about the legacy of the sport facilities, there is inadequate information related to the long-term effects such will have. Therefore different scenarios will be used, in order to discuss what we can expect of infrastructural legacy of the sports facilities of YOG'16.

5.2.2.2.1 Measurement

The issues related to measuring infrastructural legacy of sports facilities is present. Quite obvious, when there are 9 different facilities in use for the event, the complexity towards such measurement would be there. First of all, the facilities are spread out on 4 different municipalities. The location factors of each of the municipalities would obviously be different. Secondly, the facilities are specialized for one or several particularly sports; meaning that all facilities represents different sports. Thirdly, the usage of these facilities are different; meaning that some facilities would only be used for training and competition of sport teams, while other facilities includes sports teams, social activities and tourists. The last point is based on the fact that these facilities are structural different; meaning that some facilities are inside while others are in open-air. While some facilities have limitations of capacity, others have not. These four points outlines the complexity makes conclusion about total event legacy of sport facilities. Because the preference of these facilities varies, each facility must be evaluated individually. Due to different preferences,

there are uncertainties of the post-event effect. While one facility may achieve a positive legacy, another one won't change at all and a third facility may experience a negative legacy. Therefore it will be quite complex to assess a total perception of event legacy for sport facilities.

As explained earlier within the theoretical framework, the concept 'white elephant' is a typical phrase used on sport facilities in related to event legacy. Basically the phrase 'white elephant' is used on infrastructure that are costly, oversized and unneeded in the post-event phase. Therefore, as you may understand, the concept white elephant is used on facilities that have a negative legacy. What factors must be taken into account to validate success of sport facilities? Quite obviously several factors play an role in evaluating sport facilities, and their legacy. In a normal context factors such as usage and economic parameters, are important to evaluate sport facility legacy. From an economical perspective, an sport facility is an positive legacy if it makes profit. However, if the costs (building costs and running costs) are higher than the income, then this will be a negative legacy. As explained earlier, infrastructural legacy and sporting legacy are related. The usage (sporting legacy) is important to create a positive legacy. The author perceives usage level and economics of the facility to be connected. Due to the fact that no data related to usage or economic parameters are available pre-event, we can't conclude if these facilities should be considered a white elephant or not. Such considerations could only be done post-event.

For YOG'16, the core of the sport facilities was built for the Lillehammer Olympic Games in 1994; therefore these facilities have been used for a period of time. It is important to outline that event legacies between existing and new-built facilities differ. Existing facility already have an activity level from the past. Event legacies should therefore consider the changes these sport facilities observes; meaning to achieve a positive legacy the activity level must be improved and opposite for negative legacy. According to the application document of YOG'16 through the event will lead to a refurbishment of the existing sport facilities which will create a future usage of these facilities. Furthermore it is outlined that the costs of refurbishing the sport facility have a cost of 4.5 million Norwegian kroner (*Documents 6*). From an economical point of view, then the legacy should be based on this investment. Based on this perspective; if the income in the long-run are bigger than the investement then it should be perveiced as a positive legacy. The application of granted governmental support (*Document 6*) is indicating that there is a need for refurbishment of

the Olympic facilities. Based on this statement, the investments could be perceived as ‘fast-tracked’ due to YOG’16 and therefore would have occurred without the event on a later time. Meaning: the investment is a part of the city development plans.

5.2.2.2 Expected legacies of sport facilities

Within the public documents, infrastructural legacy towards sport facilities aren’t specified. However, through the application of granted public support (*Document 6*). There is outlined that the capacity of Kristins Hall (one of the facilities) is full. Lets assume that this is the situation within all 9 facilities. IF the facility is full, due to infrastructural constraints there isn’t possible to increase the activity of the facility. Then the only way to create an positive legacy, from an economical perspective, is through increasing the rental prices. That will create an positive legacy for the infrastructure while an negative legacy for the consumers. However, a price increase could lead to an decrease in activity. When there isn’t possible to increase the activity level, due to full capacity, then it will either be a negative legacy or the activity level will stay constant.

Due to the fact that all facilities have difference preferences, we can’t consider all of them to have full capacity. The activity level depends on the sporting legacy. When the sporting legacy of a specific sport is positive, then it is likely that the infrastructural legacy of the facility associated with this sport will achieve a positive legacy as well. In the end, infrastructural legacy depends on the measurements of the associated sport. As mentioned within chapter 5.1, the public documents lacks of specific measurements related to event legacy. If the intention is to improve infrastructural legacy, then measurements towards improvements of the different sport should be outlined.

‘Kristins hall’ is the only sport facility that will be expanded. Lillehammer municipality has planned to expand ‘Kristins Hall’ since 2009, because of its full capacity (*Document 6*). Another ice hall in connection with ‘Kristins Hall’ will be built, in order to cope with and develop various ice-sports (*Document 6*). This project was planned independently of YOG’16 (*Document 6*). The question must then be: should it be considered a event legacy? Yes, it should. The facility will be used for YOG’16 and must therefore be considered an event legacy. Based on the statement that the capacity is full, this facility will be a positive sporting legacy of the ice-sports on the local level. This positive sporting legacy will create a positive infrastructural legacy. However, the reader must have in mind that due to

external factors the athletes within ice-sports may decrease. In that case, the new-built facility will be considered a white elephant, due to it will be unused or be a economical burden for the city due to high running costs. The facility has a cost of 48 million Norwegian kroner, without knowing we can assume that it has a high running cost as well (*Document 6*). This may also occur if the facility is underutilized. Then it will be both a negative infrastructural and economical legacy.

5.2.3 Economic Legacy

There is important to emphasize that there is a difference between economic impact and economic legacy, as also outlined within the theoretical framework. Economic impacts are typically measured during the event, while event legacies are measured in the post-event phase. As implied earlier event legacy refers to the long-term. Therefore event legacies have the intention of measuring economic development. In an event setting, the economic legacy is what kind of long-term effects the event has in economical terms, which could be phrased 'economic development'. As you as a reader obviously understand, the event legacy of YOG'16 in Lillehammer refers to what kind of long-term the event has on the economic development of the municipality, county or nation.

5.2.3.1 Investment legacy

Lillehammer Youth Olympic has a total cost of 383 million kroner's (*Document 6*). As obviously the reader may understand such cost needs various types of investments. The IOC are contributing with 138 million Norwegian kroner, the Norwegian government with 173 and various counties and municipalities with 16,5 million Norwegian kroner's; meaning that these investments equals 85% of the cost of Lillehammer YOG (*Document 6*). This emphasizes the role of the public sector. The Norwegian government must grant a public economic guaranty; meaning that they are responsible for the eventual financial burdens. For events it is quite normal that costs increases from the initial budget, such as in the figure underneath. Based on this assumptions and the scenario that costs will increase, the economical contribution from the Norwegian government to YOG'16 will also do. In an event legacy perspective, economic legacy refers to what changes does these investments lead to in an economic context. Like outlined above, economic legacies relates to the economic development within a host city or municipality, county and nation. Therefore we must consider how these investments and their legacy affects economic development. In a YOG'16 perspective economic legacy will in this case be what kind of

effects these investments have on the economic development. A quite obvious assumption is that the allocation of money made by these various public authorities to the YOG'16 changes the priority of other areas in the society. Approximately 200 million Norwegian kroner are planned to be used by these public entities, we can assume that these amounts are covered through a reallocation of money.

In this setting there are two options, either to give smaller economical support to other areas or to increase the taxes. If the investments in YOG'16 lead to smaller economical support within various areas either on a local, regional or national level, then the long-term effects of this event must obviously be regarded as negative. The role of the public authorities, from an economical perspective, is obviously to fund different areas within the society. In an economical context this will affect these social areas potential for development. The complexity of such matters is viable. We can furthermore assume that public funding doesn't stay constant, but will however vary due to various reasons. Therefore in a practical way, it will be difficult to isolate YOG'16 effects on changes within public funding. This complexity emphasizes that to validate the event legacy based on public funding would be difficult, because as within all other legacies external factors have a big role in affecting the future situation.

Another scenario is that due to this reallocation of money the taxes will increase. An increase taxes due to YOG'16 must be considered as a negative legacy. The public authorities are only reallocating money, but for the residents it will be a negative legacy due to these imposed taxes. In a measurement perspective, taxes will vary from time to time due to various reasons. Therefore the specific number that taxes are increasing with wouldn't therefore be isolated because of Lillehammer YOG'16. Even though we can't quantify the legacies of these investments, we can perceive and assume that it will be a negative legacy. By nature both of these scenarios represents negative legacies. It seems reasonable to assume that a public investment for a one-time event, such as YOG, isn't planned for by these public authorities. Therefore we can draw the conclusion that money must be reallocated, either from other areas or through taxes. The only way to avoid negative legacies related to public investments is to neither decrease public funding within existing activity or to increase taxes, which seems like an impossible matter.

Lillehammer YOG'16 is funded by 138 million Norwegian kroner (*Document 6*). As expressed earlier this investment are a direct effect of Lillehammer been awarded the

Youth Olympic Games for 2016. Therefore, without the event, the investment wouldn't be made. From a public authority perspective, without funding from the IOC these money must be paid by the public in order to host the event. Within an event legacy, the importance is related to how these money are used. 108 of these 138 millions are specified for building new student apartments, which would be built with or without the event (*Document 6*). As expressed in the discussion about infrastructure legacies, the need for new student apartment is huge. Based on the scenario that these student apartments would be built without the event, then they public authorities had to pay these 108 million on their own. Therefore the investment made by the IOC must be considering a positive legacy, since it will benefit students and the development of Lillehammer University College (*Document 6*).

5.2.3.2 Employment legacy

As outlined above economic legacy relates to the changes the YOG'16 have on economic development. Employment legacy refers to the jobs an event creates in the long-run. The long-run isn't specified within definitions above event legacy, within this analysis the author have chosen to focus within the post-event phase with duration of 10 years (2016-2025) due to a limited effect, as expressed earlier. The Youth Olympic Games 2016 have the concept of using existing infrastructure, as emphasized above. Quite obviously employment legacy is related to hard structures. Infrastructure includes sports-, housing-, tourism- and transport-facilities.

For Lillehammer Youth Olympic Games in 2016 all sports facilities that will be used for implementing the event was created for Olympic games in 1994, the only new housing that will be built is the student apartments created by SOPP and LOBB and no tourism or transport related infrastructure will be built for YOG'16.

5.2.3.1 Measurement of employment legacies

Employment legacy refers to jobs created because of the event; therefore measurement of event legacies should consider the unemployment rate. Through a quantitative perspective this will give us an idea of the total employment effect of YOG'16. The difficulty with measurement of such legacies, are the other factors that affecting the unemployment rates. In order to use the changes of the unemployment rate as a valid measurement method, we must assume that all factors stay constant. It would be ignorant to assume that the society will stay constant from 2012 (writing time) till 2025. We can expect that internal and external factors will affect the situation within the society. Forecasting is a quite difficult area in itself, because it consists of several uncertainties. There is quite difficult to forecasting in the short-run, based on the assumption that forecasting is difficult we can furthermore assume that long-term forecasting will be almost impossible. Economic crisis are a typical example of what will affect the situation within a society, especially for the job market. Quite obviously a decrease of the economy will make impact on the unemployment rate. When these external factors are affecting the unemployment, it would be difficult to use general unemployment rate to validate the effect of the employment through YOG'16. However, in order to isolate such measurement the amount of jobs created should be used. From a theoretical perspective it would seem like a good idea to measure based on the number jobs. Within a practical context, it would however be a more complex task.

5.2.3.2 Expected employment legacy of YOG'16

As indicating above, employment legacy are based on the jobs created for the post-event phase. However, there is important to also consider the jobs created with a direct connection with YOGOC. Within YOG'16 the YOGOC administration will consist of a total of 62 jobs during the period June 2011 until June 2016 (*Document 6*). The duration of such employment are based on all three different phases within an event: pre-event, event and post-event phase (*Document 6*). However, except from a few months in 2016, from the YOGOC employment legacy perspective, it wouldn't lead to new jobs created in the long-run (*Document 6*). Based on the fact that a core element of event legacies is based on long-term effects, this wouldn't be regarded as event legacies. Another important aspect within the event legacy concept is towards the changes an event creates. Quite obviously these 62 YOGOC related jobs wouldn't occur without the event, therefore based on this perspective

it should be considered as event legacies. Even though the jobs aren't long-term effects of YOG'16, they can still develop long-term effects. According to the application document of YOG'16 the event will be organized for and by youths. Therefore the following discussion will use this as basis. Through YOG'16 and the assumption that the event will be organized by youths we can therefore draw the conclusion that 62 inexperienced youths will get a job here, or at least big amounts of the jobs. If we consider the core of the employees to be inexperienced, then it would be quite obvious that through these employments they will gain more experience and knowledge about organizing sports events than they had before.

From a qualitative perspective, if one person gains greater knowledge about organizing events, then the effect of such must be considered positive. To educate youths in event organizing would obviously create opportunities for the future, related to sport events. If the intention is to use YOG'16 as a platform to develop and educate leaders for sports and events, then inexperienced used must be employed. The event legacy of such will therefore be that Norway will have as a whole a greater knowledge of sports events; this should therefore improve the events in the future. Through this perspective we are obviously assuming that all inexperienced employees are gaining greater knowledge, which seems quite reasonable. In a quantitative context, the number all employees should be considered as a positive effect of YOG'16; therefore the event legacy of YOG'16 is calculated to 62 new job created. Furthermore based on the unemployment rate, if the intention for YOG'16 is to decrease this rate, they must employ youths that are unemployed or newly-educated. Even though the event legacies of such could be perceived as positive, it all depends on the decisions made by YOGOC. If the YOG'16 decides to employ people that already are experienced and have a job, then this wouldn't lead to long-term effects because then this wouldn't develop more experienced in event planning and organization. Therefore it is decisive that newly-educated and inexperienced in order to create a positive legacy for Norwegian sport events.

5.2.4.2 Tourism legacy

Within the theoretical framework tourism is outlined as one of the main reasons for cities bidding for events; meaning that cities perceive events to be tools for improving their tourism activity. Mega events would attract tourist during the event-period, however this isn't an economical legacy. As earlier explained and discussed, the event legacy concept focusing on the long-term changes an event impose within its region. Tourism during the event should rather be considered as economic impact than economic legacy. Because tourist during events have a short-term economical boost, while economic legacy should be focused around the economic development. Therefore economic tourism legacy must be centralized around the long-term aspect.

5.2.4.2.1 Dimensional errors

Two obvious events that could be considered in evaluating tourism legacy in YOG'16, is the Lillehammer Olympic Games in 1994 and Innsbruck YOG'12. OG'94 was hosted in the same municipalities and counties as the YOG'16; however there are two dimensional errors that contradict with such a comparison. First, the time is different. The challenges and dimensions have obviously not stayed constant during this period of time. Therefore it would be difficult to evaluate if such similar tourism legacies would occur. Second, and the most important one, is that these two events are very different from each other. Olympic Games are worldwide know events going on for more than 100 years and have been hosted every 4th year since, while Youth Olympic Games (winter edition) have only been organized once before. Based on the assumption that events grow gradually, the legacies achieved at Olympic Games and Youth Olympic Games would be different. The city dimensions are also important. To use Innsbruck YOG'12 as a framework for legacies that will occur at Lillehammer YOG'16 would be difficult. The event legacy concept focusing on the long-term effects, since the YOG'12 has just occurred it would be difficult to observe any kind of legacies. It is reasonable to believe that event legacies would need more than a few months to be achieved. In addition, Lillehammer and Innsbruck are different cities. The city preferences are different among these two cities. It would therefore be difficult to use Innsbruck as a framework for YOG'16 legacies.

5.2.4.2.2 Current tourism level

In order to evaluate tourism, there would be import to look at the current level. Since the YOG'16 includes several municipalities, and the main activity of YOG'16 will occur within Lillehammer, Oppland County seems like a reasonable regional area to discuss. We assume that YOG'16 will affect the others municipalities connected with YOG'16, not only Lillehammer municipality. Therefore it seems natural to shed light on the tourism situation in this county. As we can see from the figure above, developed by Auno (*Document 9*), we can see that Oppland County Council is the 5th biggest tourism destination area in Norway, based on consumptions tourist leave within their region. Tourist leaves consumption within this county of 6.3 billion Norwegian kroner (*Document 9*). Statics Norway did a tourism report of the years 1997 and 2007, based on the different counties in Norway (*Document 8 and 9*). In 1997 a tourism consumption of 3,06 was observed. During these 11 years the tourism consumption has increased with 3, 29 billion Norwegian kroner (*Document 8*). That equals a percent increase of 107%, and a yearly percent increase of 9.77 % (*Document 8*). An interesting finding by Auno is that those counties that have much higher tourism consumption than others are connected with airports and marinas with international importance. If we ignore those, Oppland County has the highest tourism consumption. Auno (*Document 9*) furthermore outlines that the consumption in Oppland County consist of approximately 60-65 % of Norwegian Tourists and approximately 35-40 % is tourists from abroad (*document 9*).

5.2.4.2.3 Measurement of Tourism legacies

Within an event legacy perspective, such numbers can be used to evaluate the tourism legacy achieved through YOG'16. Within an event legacy, the main point is about future effects; meaning that the legacy will occur after the event have occurred (2016-2025). Therefore measurement of such legacies should be measured during this period of time. Event legacies, as emphasized through this whole thesis, represent several uncertainties. It would be ignorant to believe that there is only one reason for the tourism to develop. Based on this assumption, YOG'16 are one out of many different factors that would affect tourism in the long-run for Oppland County. To use the numbers above in order to evaluate tourism wouldn't be a problem. However, to use these numbers as basis in order to evaluate tourism legacy of YOG'16 would be more complex. If we should use total

tourism consumption observed within the years 2016-2025 as a basis for evaluating tourism legacies of YOG'16, then we must assume that all other factors affecting these numbers to stay constant. As explained earlier, the assumption of external factors to stay constant; meaning that these factors would not affect the change in tourism consumption. Based on this scenario, a positive tourism legacy would occur if the number increases while a negative tourism legacy occurs if the number decreases. As explained about economic legacies earlier, which tourism legacy is, the main focus is about development. Therefore in an event legacy perspective, the development of such must be evaluated; yearly average percentage increase (9.77%) must be evaluated. A change of this percentage will be the tourism legacy, if other factors stay constant. The intention with such an scenario is obviously to show what measurement of event legacies (tourism legacy) can be based on. We can assume that the total tourism consumption will be because of several reasons, and not only because of YOG'16. Based on the assumptions that the development of tourism in Oppland County will be affected by several reasons, we can furthermore assume that these factors will vary. It wouldn't be reasonable that such factors will stay 100% during such a long period of time. In an event legacy context, the measurement must differentiate the factors from each other. Therefore, in order to measure tourism legacies accurately, the YOG'16 effect on tourism must be isolated. That is a quite complex task.

As indicating above, the YOG'16 tourism legacy must be isolated from other external factors that are changing tourism. Event legacy could either be direct or indirect imposed, in both YOG'16 will be a reason for visiting the host city (Lillehammer) or host region (Oppland). The quantity the event reaches out to, would therefore be important. There is quite obvious that tourism legacies will depend on the success of the event. If the intention is to increase tourism through YOG'16, then the amount of audience is important. Within this context, the publicity and marketing the event creates would be decisive in order to achieve tourism legacy of YOG'16. It is important to mention that tourists that are visiting the event aren't tourism legacy. These must be regarded as economic tourism impact. Even though, if these tourists re-visit the host city or region, then they would be regarded as tourists within the event legacy context. It wouldn't be unreasonable to assume that such re-visits will depend on each individual experiences of the event. By tourists in this context, it is meant both domestic and international. Within individual's experiences of the

event several different factors would affect it. The total impression the event and its host city will be the basis for future tourism.

5.2.4.2.4 Expected tourism legacies of YOG'16

As a basis for the further discussion, the ticket forecast made in the application document of YOG'16 will be used. The document are operation with 28 000 tickets (*Document 6*). To discuss about tourism legacy, this number will be used. However, even though we know the amount of tickets, we still don't know the percentage of tourists. The discussion towards tourism legacy is complex, especially in a pre-event phase. As explained earlier, the tourism within the event period isn't event legacy. The tourism legacy refers to tourism in the long run; meaning after the event. Therefore the tourists at YOG'16 shouldn't be used. Based on the tourism of YOG'16, tourism legacy depends on the amount of tourists that visits the event and then it depends on how many of these that re-visits the host city. Therefore it is quite a complex task to evaluate such effects in the pre-event phase. Obviously certain scenarios must be used in order to evaluate the tourism legacy in a pre-event perspective. Based on the tickets forecasted by YOG'16, the maximum amount of tourists will be 28 000. In a matter of re-visits, then the potential tourism legacy would be 28 000.

In addition, to assuming the percentage of tickets sold to tourists, the percentage of people that re-visits must be assessed. That is impossible to know. However, it wouldn't be reasonable to believe that 100% of the audience to be tourists. Lillehammer municipality consists of approximately 26 000 residents (*Document 3*). It is reasonable to believe that Lillehammer municipality would be the main basis of tickets sold. This shows the complexity of measuring tourism legacy in a pre-event phase. Even though we can quantify the amount of tourists that will visit Lillehammer in the post-event phase, we can still say for sure that tourism legacy is dependent on proper marketing measurements. In order to create a significant tourism legacy, the visiting tourists at YOG'16 must also be significant. Especially if tourism legacy, are used as a thermometer for investing public money in YOG.

As mentioned earlier, in the sub-chapter about sporting legacy, the amount of events created after YOG'16 will be decisive for the legacy. YOG'16 creates new network opportunities. These networks, if stimulated properly, will create future cooperation which can lead to new events. New events need skills and knowledge to implement such events. New events are also important to developing sport. Sporting events need infrastructure to be implemented; therefore new events will create an infrastructural legacy as well. All these different types of legacies are explained earlier: employment legacy, network legacy, volunteering legacy and sporting legacy. The main point here is to outline how complex event legacies are. As we can see, most of the legacy types will occur during events. An increased amount of sporting events hosted in Lillehammer in the post-event phase of YOG'16 will also improve the amount of sport tourists. As indicated above, to create new events will stimulate and develop social-, economic, infrastructural- and sporting- legacies. The author perceives new events as the only option for YOG'16 to create a total event legacy. By total event legacy, it is meant something that stimulates all types of legacies. There is however impossible to conclude that this will be done, however if its done then a positive event legacy will be achieved. Therefore new sporting events, for attracting tourists should be the event legacy approach for YOG'16.

Due to the fact that no new tourism related infrastructures are created, tourism related jobs wouldn't be discussed. It can occur due to an increase in tourism. However, the author finds the uncertainties within tourism to be very strong, which will weaken such a discussion.

In addition to re-visits of YOG'16 tourists, tourism legacy of YOG'16 also includes tourists that have been watched the event on media platforms. At the current time, no sufficient information is available to create valid discussion in relation to this topic.

5.2.4 Social Legacy

Social legacy is a wide range of effects, occurred through an event, to individuals or communities through a social perspective. As emphasized through the theoretical framework, social legacies include 5 main categories: cultural awareness, networking, Norms and Values, symbolic creation and volunteering. Within this analysis the expected legacies of these proposed topics will be discussed. Quite basically, social legacies of YOG'16 refer the changes YOG'16 create within individuals or communities. Social legacies are normally dealt with in another way than in other event legacies. As outlined within the theoretical framework about the event legacy cube, there is differences between tangible and intangible legacies. Tangible legacies are easier to measure because they are material effects; meaning that they can be presented in a quantitative perspective. While intangible legacies are immaterial effects; meaning they are presented in a qualitative perspective. Events consist of both types of legacies. Social legacies are examples of legacies that are to the least difficult to measure quantitatively. Therefore within this analysis, these legacies will be presented qualitatively. This balance is however a difficult one for events, it would be therefore difficult to justify investment and reason to host the YOG'16 based on qualitative social legacies.

5.2.4.1 Cultural Awareness

YOG are intentional a sporting event that bring together the most talented winter-sport athletes in the world between the age of 15 to 18 (*Document 10*), this obviously means that YOG'16 will be an arena consisting of different cultures. Therefore YOG will consist of interactions between difference cultures. Cultural awareness need to consider two areas: how it will change the understanding of each individuals own culture and how individuals understand other cultures. Within cultural awareness, the difference between quantitative and qualitative effects is very important. Cultural awareness in a quantitative perspective refers to the amount of people that will be increase or decrease their cultural awareness, while qualitative effects in this context refers to the effects the event will have on each individuals cultural awareness.

The vision of YOG is “... to create a new sporting event to educate, engage and influence young athletes, inspiring them to play an active role in their communities” (Document 4, p.5). The intention of YOG is to have an event that integrates sport, culture and education (Document 10). Within YOG there are programs within cultural and education is mandatory for each athlete (Document 6). Therefore from an athlete perspective the YOG offers a different program than for example the OG, which is the most obvious event to compare. Obviously the interactions between athletes from different cultures will be greater and more frequently through this educational and cultural program than without. Therefore we can assume that athletes within YOG will enhance a better cultural awareness than participates for event that doesn't contain such or similar programs. As indicating above, cultural awareness refers to the knowledge an individual have for its own and other cultures. The balance between positive and negative legacy, related to cultural awareness is however difficult.

In a general context, negative legacy of YOG'16 will be if the event creates a worser understanding and knowledge of other cultures while the legacy will be positive if the event lead to an increased understanding of other cultures. 4 years before the event it will obviously be uncertainties related to such matters. Intentional the education and culture program of YOG seems like an idea that will contribute to a better understanding of other cultures (positive legacy). However, the success of these proposed programs will affect the legacy to be either positive or negative. Cultures affect the behavior of each individual. Two opposite cultures will therefore present great inequality, and could therefore lead to communication problems etc. that will make it difficult for these two opposite cultures to understand each other.

Another important aspect within all kind of legacy discussion is how significant such changes must be to consider it a positive or negative legacy. The issues regarding social legacies and in this case cultural awareness, is that they are difficult to measure. The only way to measure such changes, as the author perceives, are through personal feedback or questionnaires. That is obviously a complex and difficult process. Let's assume that to create a positive legacy at least 50% of the athletes must have achieved a better understanding of other cultures. For the rest of the athletes then the understanding would either stay constant or be negative. It is important to outline that within event legacies and

in relation to 'significant changes' the positive legacy doesn't necessary equals the negative legacy.

As outlined within the theoretical framework, the host city or nations residents have a change in their cultural awareness regarding their own culture and history. For Olympic Games, the opening and closing ceremony could be perceived as a 'showcase of the host's culture'. Similar to the OG, YOG will also consist of such ceremonies. There are uncertainties if the YOG-ceremonies will make the same impact. Based on the assumptions that YOG is much smaller than OG, we can then furthermore assume that the impact it will lead to will be smaller as well. Besides opening ceremonies the interactions between people will occur in sub-events of either the YOG or OG. There is three different groups that will be effected through events athletes (and coaches), residents and tourists.

Athletes are discussed above about how they are affected by educational and cultural programs. However, the core of people in events is the audience. In a social legacy context both residents and tourists must be considered. For mega-events, such as Olympic Games, the audience size is enormous. Within these events, the amount of tourists is significant. Sports fans from the entire world are attending these events. For the Youth Olympic Games several uncertainties are present. Since the YOG-winter edition only has been hosted once, in 2012, there is uncertainties' regarding the size of the event? A possibility would be to discuss it based on Innsbruck YOG'12, as explained through the methodology the author are perceiving such comparison not to be sensible due to city preferences. Even though one event creates one legacy within a host city, doesn't mean another city with others city preferences will achieve the same legacies. What we know is that YOG is much smaller than OG. The dimensions of YOG'16 will therefore be smaller and different from OG'94, both organized in the same host city. Quite reasonable sports fans could be perceive as travelling tourists due to two main reasons: sports idols (athletes) and supporting their country. For mega events, such as Football World Cup or Olympic Games, the best athletes within their sports are competing against each other. Someone for example youths will look up to. An important question to ask: will athletes at the age of 15-18 be considered role models or idols for kids and youths at a similar age? Based on the assumptions that such athletes wouldn't be considered idols or role models for youths, we can therefore assume that this event wouldn't attract tourists. Olympic Games are the biggest and most complex sporting event in the World. Therefore the national pride

associated with hosting such an event and travelling to such events to support you're national heroes is very much present. Based on the assumptions that athletes for YOG wouldn't be regarded as idols, we cannot expect that tourists will travel to this event to support their country, at least not in big quantities. As mentioned earlier in the theoretical framework, event legacies are used as a thermometer for validating investments in events. Through this perspective, the measurement must be quantified; meaning that we have to validate it into numbers. From this perspective, the cultural awareness must be regarded as significant in relation to the amount invested. If the intention is to enhance an increase cultural awareness among residents and tourists, through the opening ceremonies and the event in general, due to the assumptions above this must be regarded to have a little effect. The balance between quantitative and qualitative legacies is difficult. As explained and discussed in the first section, the athletes will most likely will generate a greater cultural awareness; meaning that each individual will enhance a great awareness of different cultures. However, in the big picture, we can perceive that due to small amounts of tourist for YOG'16 the enhancement of cultural awareness will be limited for audience. Even though the cultural interactions between different cultures and the cultural awareness of such interactions to be limited, the main audience for a YOG will be local's residents of Norway. Therefore an improvement of knowledge or awareness of the own history and culture will be enhanced through YOG and especially through its opening ceremony. Even though the opening ceremony would be perceive as a tool for enhancing such cultural awareness. The effect of such would depend on the efforts put into the event and the opening ceremony. The effect of cultural awareness is dependent on the planning done within the pre-event period.

5.2.4.2 Networking

Within the theoretical framework it was outlined that in order to create successful events several stakeholders must interact. Quite obviously, network legacy relates to how this interaction creates future activity among these stakeholders. Within Lillehammer Youth Olympic Games several stakeholders would be included. The Norwegian Sport Federation (NIF) and Lillehammer Municipality applied the International Olympic Committee (IOC) for the YOG'12 and 16. However, their application for YOG'12 was rejected while the application for YOG'16 was accepted and awarded to NIF. The IOC requires a granted governmental public support economical, meaning that the Norwegian government is also involved. In addition to public governmental support, YOG'16 is financially supported by Oppland- and Hedemark-county, Lillehammer-, Gjøvik-, Hamar-, and Øyer-municipality. The Youth Olympic Games in Lillehammer could therefore be perceived as a complex political process in the pre-event phase of the event, with public sector on local, regional and national level financially involved. Based on the fact that this event requires granted governmental support; meaning that the Norwegian government have to grant unlimited money support for YOG'16, the involvement of politicians will obviously be present. As mentioned earlier, there are seven different sport federations connected with the YOG'16, which will be discussed later on. In addition, various actors within the public and private sector will contribute due to various reasons. The point by the above mentioning stakeholders is to outline the complexity with the YOG'16 and the potential the event have in terms of stakeholder's interaction.

5.2.4.2.1 Measurement of networking legacies

In an event legacy perspective, network legacy relates to the changes stakeholders interaction lead to in the long-run. Even though several stakeholders are included with the event, doesn't necessarily mean that it will lead to an event legacy. Networking legacy for YOG'16 will therefore be related to an increase (positive legacy) or decrease (negative legacy) of cooperation among these stakeholders in a long-term aspect. A positive network legacy of YOG'16 will be an increased interaction between stakeholders mentioned above from 2016 and into the future. While a negative network legacy will be a reduction of interaction among these stakeholders. As mentioned earlier, a legacy of YOG'16 will be limited. Therefore the author have chosen to focus on the years from 2016 to 2025 (10 years), which seems like a reasonable duration. Quite obviously such changes could either

be look at from a quantitative or qualitative perspective, as also explained and discussed earlier. This reflects on the measurement.

5.2.4.2.2 Expected networking legacy of YOG'16

Intentional the YOG in Lillehammer will create interaction between several stakeholders that wouldn't occur without the event. As we can observe from the discussions about different stakeholders of YOG'16, the event trigger an interaction between different areas within the society. We can assume that the various stakeholders will affect the success of the event. Based on the assumption that the interaction between such stakeholders wouldn't occur in the same context without the event, the conclusion can be drawn that the across interaction between sport, public authorities and private sector wouldn't occur. An interesting aspect about the Youth Olympic Games 2016 from a development perspective is the various involvements of public authorities. According to the application document of YOG'16, the application of public granted money support from the Norwegian government is based on a collective political cooperation among the 4 municipalities and the 2 counties involved. The intention for these is to use YOG to a local, regional and national development. However, as this whole analysis have outlined and indicated, there's a difference between planned (intentional) and achieved legacy. Therefore in an event legacy context, the achieved legacy must be considered. With two different counties, four different municipalities and the Norwegian government involved, it will obviously create relations that wouldn't be created in other occasions at the same way, at least in very few occasions. The inter-connected cooperation between the public authorities and sport are very rare. Within an event legacy perspective, we must evaluate what changes this will lead to in the future. In the pre-event perspective, such considerations would be complex to assess. If we assume that the intentional (planned) legacy will be achieved, then the network legacy must be perceived positive. Within the planned legacy as mentioned above, the intention is to use YOG'16 to develop local, regional and national preferences. Through a success of such, there will be an across interaction between these various municipalities and counties in the future, since the intention is development. However, the reader must be aware of several uncertainties such an interaction are dependent on. In the pre-event, it would be impossible to asses if such an intention will be achieve.

In Norway, sports are mostly self-controlled. The Norwegian Sport federation are supervising and regulating sport. Norwegian sports are however financed through the national betting company 'Norsk Tipping'. The Norwegian government decides how much percentage of the yearly profit of 'Norsk Tipping' will gain. Therefore in a funding setting, the relationship between NIF and the Norwegian government is important. The important aspect here, in an event legacy context, is how YOG'16 are affecting the relationship among these. Therefore we must differ between direct and indirect effects of YOG'16. Obviously, this is a political process, between these two. There is no secret that health is a big concern for public authorities. Within health, sport is perceived as a tool in order to comprehend the health issues in the society. Therefore through YOG'16, which focusing on youths; that's an important age group within health of society, it can show a developing sport policy of NIF; meaning that YOG'16 shows the future intention of NIF to the government. That can obviously be either a direct or indirect reason for gaining more public funding in the future. Therefore YOG'16 must be seen as a political tool for gaining public funding. Even though, this can be perceived as a positive legacy, several uncertainties are present in such a context. It is dependent on many external factors. To what degree will the relationship between sport and public authorities through YOG'16, is an important question. The author perceives that YOG'16 are branding NIF's sport policy, and therefore YOG'16 must be seen as positive.

The main committee of YOGOC will be a supervising board which will give advices to the YOGOC administration. This supervising board will consist of one member from each individual sport federation. Therefore all different sport disciplines will be represented in this board. Both in short- and long-run the YOGOC main committee will therefore safeguard their own interest related to YOG'16. The post-event effect, especially related to the sport facility, should be in the interest of these federations. Therefore, based on this assumption, it will trigger long-term cooperation between these various federations.

5.2.4.3 Volunteering & Knowledge

For sports event, volunteers play an important role. As outlined within the theoretical paper the numbers volunteers needed depends on the event size. In an event legacy context, volunteering legacy refers to the skills and knowledge volunteers gaining through the event that they can use in the future. Therefore different aspects must be considered within volunteering legacy. As mentioned above volunteering legacies relates to the skills and knowledge the volunteers enhance through the event, therefore its long-term effects is dependent on the training of volunteers. Without proper measurements towards these volunteers, the event (in this case YOG'16) would perceive such effects occur on its own; automatically. Therefore from an event legacy perspective, the event must involve them to create such positive volunteering legacies. As indicating, the volunteering legacy of YOG'16 related to the planning is done in the pre-event phase. This is obviously looked on from a qualitative perspective, meaning that the events intention should be to increase the quality of one individual volunteer's skills and knowledge. From this perspective, we can perceive a positive volunteering legacy to be that individuals have learned new skills and developed a greater knowledge. Since the concept of event legacy relates to the changes the event lead to, therefore this point is very important. This obviously only refers to the qualitative isolated legacy of one individual. However, within a volunteering legacy the number of volunteers must be considered. As indicating above, the achieved volunteering legacies depend on the planning. In the writing time, in the early time of the pre-event phase with still more than 3 years of planning there is obviously uncertainties about the volunteering aspects explained above.

5.2.4.3.1 Measurement of volunteering legacy

In a quantitative context, volunteering legacy is referring to the amount of volunteers gaining new skills and knowledge because of the event. There is quite reasonable to assume that not all volunteers would either have a positive and negative legacy. That's making considerations of event legacies difficult, especially in a pre-event analysis. For the YOG'16 there is planned to have 2200 volunteering before and during the event. The further discussion will therefore be based on the approximately number outlined in the application document of YOG'16. The reader must have in mind that this number may vary due to several reasons.

5.2.4.3.2 Expected volunteering legacies of YOG'16

As these two above mentioning perspectives have emphasized, the volunteering legacies relates new skills and knowledge. Even though, volunteers gaining skills and knowledge through the event, the event legacy would be related to the future. Therefore an event volunteering legacy should create a volunteering culture; meaning that volunteers at the event are willing to contribute in the future. In short, volunteering legacy are focused around to trigger future activity of volunteering; volunteering culture. Without future activity of volunteering there wouldn't be a volunteering legacy, because then the new skills and knowledge learned through YOG'16 wouldn't be used in the post-event phase. Therefore volunteering legacy is dependent on creation a volunteering culture. The author therefore suggests that in order to create volunteering in the post-event phase, that YOG'16 focusing that are already connected with different kind of organized sports or cultural organizations. As explained above, in a quantitative perspective the event legacy of YOG'16 must be considered in terms of the amount of volunteers gaining new skills and knowledge. Therefore by focusing on volunteers with connection with sport or cultural activities, they may have already skills and knowledge about sport events (at least within a smaller context), it contradicts with the core concept of volunteering legacy. As mentioned earlier, volunteering culture is important in this setting. Therefore to create an volunteering legacy, recruitment of new volunteers are important. By 'new volunteers' it is meant people that haven't volunteered for sport or cultural activity before. Such approach will also match the core concept of YOG 'organized for youths and by youths'. The author suggests that a volunteering legacy should focus on inexperienced and young potential volunteers in order to create a volunteering culture. The youth are the next generation and therefore important for future. The future equals event legacy. Importantly, such stimulus will create a positive legacy in order create more events in the future. Then the Norwegian sport will stand stronger through a broader team of event experienced volunteers. That equals a positive volunteering legacy.

6 Conclusion / Summary

Event legacies within the pre-event perspective are certainly complex, because of the several uncertainties within this time-frame. Therefore within this part, I will rather concentrate on the main findings within this analysis than to create a conclusion.

Most of the event legacies are presented with a high level of uncertainties. Due to the fact that there is a lack of information available in the pre-event phase and based on the fact that event legacies depends on planning. The conclusion is that pre-event analysis of event legacies are difficult to measure. The author must also admit that document analysis in relation to event legacies aren't the best method in evaluating event legacies. The uncertainty within this thesis is reasoned in the complexity of event legacies. Some types of event legacies are more complex than others. The involvement of external factors will affect the effect and measurement of event legacy.

Through the master thesis the YOY are a positive legacy, both economical and infrastructural. For the development of Lillehammer University College and Norway School of Elite Sport, it will be important. The need for new student apartments is satisfied. In addition, the new ice-hall in connection with 'Kristins Hall' will highly likely be a positive legacy. The author perceives it will create both infrastructural and sporting legacy in relation to development of ice-skating sport in Lillehammer.

The author has throughout the thesis emphasized on the measurement of event legacies in an early stage. The author suggesting to use YOG'16 as a platform for creating events of various type and size, in order to cope with volunteering legacy, network legacy, economical (tourism) legacy, employment legacy and infrastructural legacy.

As it has come out through the thesis, sporting legacy is the main goal for YOG'16 to achieve. There is however a lack of measurements in relation to developing sport. In order to create sporting legacies, each sport federation must do specific measurements towards the aim of recruit new athletes and avoid drop-outs.

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8 Appendices

Appendices 1:

Overview - Athletes - National level

Year	Members	Change		% Change
2002	1 849 350			
2003	1 883 847	34 497		
2004	1 966 310	82 463		
2005	2 007 873	41 563		
2006	2 072 198	64 325		
2007	2 051 030	-21 168		
2008	2 066 455	15 425		
2009	2 047 080	-19 375		
2010	2 087 382	40 302		
2011	2 112 137	24 755		
Total		262 787		14,2
YearlyAverage		26 279		1,42

Overview - Athletes - Oppland County

Year	Members	Change	Average	% Change
2002	79 979			
2003	72 326	-7 653		
2004	74 458	2 132		
2005	75 810	1 352		
2006	77 126	1 316		
2007	77 249	123		
2008	78 050	801		
2009	79 555	1 505		
2010	76 392	-3 163		
2011	77 135	743		
Total		-2 844		-3,55
Yearly average		-284		0,35

Overview - Athletes - Federations

Year	Bobsleigh and Skeleton federation	Ishockey federation	Ski federation	Skøyte federation	Biathlon federation	University sport federation	Snowboard federation
2002	752	11 206	121 070	9 038	5 996	21 738	4 887
2003	1 564	11 759	147 371	9 438	6 701	24 950	4 797
2004	924	11 114	152 548	8 902	6 885	27 952	3 602
2005	688	10 505	149 145	7 246	5 352	25 552	3 815
2006	385	10 549	158 170	6 983	7 365	26 989	3 134
2007	470	10 461	161 765	7 023	8 040	24 760	3 293
2008	532	11 137	165 083	6 674	7 876	26 768	3 351
2009	464	10 907	168 778	7 117	8 298	24 796	3 600
2010	487	11 162	179 257	6 776	8 887	25 698	3 471
2011	353	11 280	185 211	6 896	9 394	26 055	4 097
Change	-399	74	64 141	-2 142	3 398	4 317	-790
% Change	-43,04	0,66	52,97	-23,70	56,67	19,85	-16,16
Yearly % change	-4,3	0,06	5,3	-2,4	5,7	2	-1,6

Overview - Athletes within different age groups - Nationa level

Year	Beneath 12	13-19	Above 20
2002	424959	292275	1132116
2003	444720	303330	1135797
2004	464669	319244	1182398
2005	477856	329625	1200392
2006	492115	329697	1250386
2007	498677	330589	1221764
2008	503594	331648	1231213
2009	515212	328255	1203613
2010	524098	324235	1239049
2011	531179	328638	1252320
Change	106220	36363	120204
Percent	24,99	12,44 %	10,61
Average	10622	3636	12020
Average %	2,49	1,24	1,06

Overview - Athletes within different age groups - Oppland County

Year	Beneth 12	13-19	Above 20
2002	19975	11705	48299
2003	20303	12446	49479
2004	25915	12738	42810
2005	21412	13540	53577
2006	21355	13930	52679
2007	22271	16375	50195
2008	21746	13928	50358
2009	22564	14085	50964
2010	22325	13627	57722
2011	22365	13407	58893
Change	2390	1702	10594
Average change	239	170	1059
Percentage change	11,96	14,54	21,93
Yearly change	1,2	1,54	2,2