Bachelor Thesis

International Project Management

International Project Management - The Application of Project Management in International Event Management with Focus Switzerland

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24.5.2018

Acknowledgement

I would like to thank my supervisor, Mr. Christian Olivier Graf, for the patient guidance, encouragement and advice he has provided. I have been extremely lucky to have a supervisor who puts a lot of effort into helping me achieve a good result of the thesis.

I would also like to thank all interview partners without whom my thesis would not have been possible. Thank you very much for the exciting interviews and conversations.

Additionally, I would like to thank my father, Mr. Hans U. Baumgartner, who supported me, and Mrs. Helen Zou, who took over the linguistic part.

Management Summary

Switzerland hosted two Olympic Games – in 1928 and 1948. Since then, the size of the Games has grown enormously and is now much bigger than 70 or 90 years ago. Is Switzerland still able to host such an event?

This thesis' objective was to research whether Switzerland is able to host a sports mega-event of such size, and which factors need to be considered to achieve success. Furthermore, the thesis examined the difference between project and event management, and what role project management knowledge plays in managing such events.

The methodology of this research was to first determine possible success factors of event management from theoretical literature, visualised with practical examples of mega-events. Additionally, two mega-events, the London and Sochi Olympic Games, were analysed. The former is recognised as a best practice, the latter was acknowledged as less successful than the former Games. Both events were examined for the factors which led to success and success prevention, respectively. These determined factors from the literature and the examples were further compared with success factors from the practice through conducted interviews. The results were summarised in a model.

Based on the literature and interviews, a total of fourteen success factors could be defined, with reputation, sponsors and social benefits and legacies being the key success factors. A model was created, consisting of the three factors of the iron triangle represented as a wheel, and the determined success factors. Both are supported by project management knowledge and knowledge share programme, and influenced by social benefits and legacies.

Switzerland is able to host such an event, however, some aspects should be considered to get the support of the Swiss population and politics. Event management has many similarities to project management; however, some differences could be identified. Nevertheless, this topic remains a matter of opinion and a general answer cannot be given. Project management knowledge supports event management in achieving its objectives and becoming a success. Especially for the planning phase and new events, project management knowledge is recommendable.

The model is especially created for mega-events in Switzerland, and it supports the event management in order to become successful. However, these determined factors are generalised and can differ depending on the size and shape of an event. Therefore, the event management needs to identify its own additional success factors that need to be addressed, as well. Furthermore, Switzerland could win the support of the Swiss population for hosting a mega-event by merging several regions or using the whole country as a host. Another solution is sharing the host with a country such as the Soccer European Championship 2008 with Austria. Therefore, existing venues can be used and logistic problems can be solved. Additionally, Switzerland should focus on hosting a smaller and sustainable mega-event. However, the companies setting the requirements for mega-events, such as the IOC or FIFA, must move away from gigantism. Otherwise, a new bid will fail again in a referendum.

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List of Abbreviations

AFC	Anticipated Final Cost
AFR	Anticipated Final Revenue
APM	Association of Project Management
BBC	British Broadcast Corporation
CBB	Current Baseline Budget
CRM	Customer-Relationship-Management
DFB	Deutscher Fussball-Bund
DP	Delivery Partner
ERM	Enterprise Risk Management
FBI	Federal Bureau of Investigation
FIFA	Fédération Internationale de Football Association
GLA	Greater London Authority
GOE	Government Olympic Executive
IF	International Sports Federation
IOC	International Olympic Committee
KPI	Key Performance Indicator
LOCOG	London Organisation Committee of Olympic Games
NOC	National Olympic Committee
OBB	Original Baseline Budget
OCOG	Organisation Committees of Olympic Games
ODA	Olympic Delivery Authority
OGKM	Olympic Games Knowledge Management
PDO	Project Delivery Office
POCOG	PyeongChang Organisation Committee of Olympic Games
PMI	Project Management Institute
PR	Public Relation
PSFP	Public Sector Funding Package
QRA	Quantitative Risk Analysais

UEFA	Union of European Football Associations
WWF	World Wildlife Fund

1 Introduction

1.1 Initial Situation

Events have always played an important role in societies and people were creative to find reasons for celebrating events. Traditional celebrations mostly contained strict ceremonies and rituals. According to Shone and Parry (2010, p. 4), events were often historically crucial to the social fabric of day-to-day life. In the last years, religious reasons for celebrations have become less important or are used for attracting tourists. Getz (2007, p. 7) believes that there will be a growing need for event planners who must deal with complex issues of events. Furthermore, higher education in the field of event management will be required, and expectations for the next generation will continue to grow.

According to Van der Wagen and White (2010, p. ix), event managers require sophisticated skills in strategic planning, risk analysis, marketing, budgeting and human resource management. Effects such as the impact of events on tourism increase governments' interest in maximising revenues from domestic and international tourism. These trends lead to a development in professional event management and further education in this field. Andersson, Getz and Mykletun (2014, p. 5) mentioned the same perception, and besides the importance of events in tourism, events are even more important in regional areas where sources of income are more limited than in cities.

Today, large events are prevalent in many sports activities. However, some of them stand out, such as the Olympic Games or Football World Cup. When these take place, the whole world is watching and organisational errors arouse the media's interest. An example of this is the headline of a death that occurred during the construction of venues for the 2014 world soccer championship in Brazil (e.g. Neue Zürcher Zeitung, 2014). Other negative news includes budget overruns by management teams. According to Weaver (2014), the Olympic Games in Sochi, Russia, incurred a cost of $51 billion, the highest in Olympic history, and therefore even surpassing the record $40 billion spent by Beijing in 2008.

However, there are also good examples that have shaped the history of event and project management and serve as examples for future events. Especially England is strong when it comes to planning and managing events. According to the webpage Eventbrite (Booker, 2016), 25,000 businesses are operating in England's event sector. The Olympic Games

in London finished construction four months ahead of schedule and at approximately $1 billion below budget (Schönball, 2013). Therefore, these Olympic Games are regarded as best practice example.

Event management and project management have many common denominators, but they still differ. Blair Potter describes on the webpage MPI (2017) the difference between the two management fields as follows: "Early in my genesis to becoming a project manager, I was exposed to event planning and noticed the distinct similarities and differences between the two. With project management, the process is well defined and flows from one step to the next in an ordered manner. Event management on the other hand is a whirlwind of ever-evolving planning and execution." Furthermore, she mentioned working in a team with only project managers and no event planners. As a result, they took over the organisation of an event with learned tools and techniques, and implemented the classic project management processes: Initiate, plan, execute, monitor/control and closing. She listed all procedures and learnings of each phase of the process.

Now the question arises what the differences between these two management disciplines are, and what role project management plays when it comes to planning and executing events. Is good project management knowledge important or even presupposed for success?

Switzerland is host to many big sports events, such as the Spengler Cup in Davos or the International World Class Zurich. However, when it comes to events of the scale of the Olympic Games or Football World Championship, Switzerland is often considered as too small for hosting such events. Switzerland applied as host of the 2026 Olympic Games, proposing the city of Sion. The newspaper 20 Minuten (Krähenbühl, 2017) wrote a critical article about the lack of police and security staff deployable for such an event. Furthermore, in reader comments many readers voiced their criticism of Switzerland hosting such an event, and disapproved of the immense costs that would accrue.

1.2 Problem Statement and Thesis Objectives

Switzerland is considered too small and lacking in resources when applying for a mega sporting event as a host country. The lack of security personnel in Switzerland is criticised in its candidacy for the 2026 Olympic Games (Krähenbühl, 2017). Switzerland had also applied to host the 1998 FIFA World Cup, as Watson, the online news webpage, reminded

in an article (Blunschi, 2017). In this case, the missing and not World Cup suitable infrastructure was criticised. Nevertheless, Switzerland stuck to the plan and wanted to organise a soccer world championship with provisional arrangements to avoid Olympic gigantism. The plan of the Swiss committee was to boost existing stadiums such as Basel, Zurich and Baden. In May 1992, a disaster happened in Corsica, where a steel tube platform collapsed before a soccer match. Seventeen people lost their lives in this accident, and FIFA banned the construction of provisional stadiums. As a result, Switzerland had to withdraw its candidacy.

However, shortcomings of infrastructure could be eliminated by proper planning and organisation. In contrast to other countries, Switzerland has less experience in organising mega sports events. The country can therefore learn a great deal from strong organisational countries such as England, and benefit from their experience.

Therefore, the research question arises: “How should large international events in Switzerland be organised to be successful, and to what extent is project management knowledge important in managing events?”. The purpose of this paper is to show what Switzerland can learn from other countries when it comes to organising mega-events. This paper intends to investigate how mega sporting events can be organised in Switzerland, and what success factors are needed for a successful event.

The thesis consists of the following five research objectives:

1) To analyse two sports mega-events, a best practice one and an event which was not that successful
2) To elaborate the various success factors for a successful event management for mega-events in sport industry.
3) To identify weather mega-events are practicable in Switzerland and what needs to be considered for success.
4) To analyse what differences there are between project management and event management
5) To investigate how important and which role project management knowledge plays in international big events.

As output of this paper and a value contribution, a framework for mega sports events in Switzerland will be developed. This should help to organise and plan future events in the sports sector.

1.3 Demarcation

Nowadays, international mega-events are held in many different industries and subject areas. Therefore, the focus of this work is on international sports events. The reason for this is the availability of information. Many sports events such as the Olympic Games are analysed from an organisational and project perspective. This facilitates easy access to analytically important resources for the theoretical part of this thesis. In addition, Switzerland belongs to the possible guest countries of upcoming sports events, therefore increasing the relevance of the sports industry for this thesis.

1.4 Thesis Structure

The bachelor thesis is divided into three parts: a theoretical part, a practical part and a conclusion in the final chapter.

At the beginning of the thesis' theoretical part, methods and proceeding are defined in chapter 2; followed by chapter 3, where the terms "project management" and "mega-events" are defined, and best and worst practice of large international sports events are analysed. The last section of the chapter consists of various critical success factors for international mega-events.

The practical part, in the form of chapter 4, contains verification of the success factors from the theoretical part, evident differences and potential new success factors by means of interviews. The next part of the chapter focuses on large international events in Switzerland. In addition, the importance of project management for international mega-events will be highlighted. In the final section of this chapter, the identified and compiled data are summarised in a framework for big international events in Switzerland.

The last chapter contains a thesis conclusion and provides a recommendation for future international mega-events in Switzerland.

In the next chapter, it is explained why qualitative as opposed to quantitative research method is used. Furthermore, the qualitative research method, limitations and sampling are described in more detail.

2 Methodology and Proceeding

2.1 Existing Literature and Qualitative Interviews

The qualitative research method was chosen for this bachelor thesis. Although you will find a lot of information investigating the events and books written about event management, surveys with interview partners involved in practice are necessary to establish key factors and the specific organisation of mega-events in Switzerland. In addition, the qualitative research method offers greater openness and flexibility, which provides more detailed answers and thus a deeper level of information (Lancaster University, 2016).

The theoretical part is based on existing literature. The literature research will include case studies, interviews, observations and grounded theories. Some mega sports events have already been analysed. Based on these analyses, important indicators of successful event management are already filtered in the first chapter.

For the practical part, data are collected on the basis of qualitative interviews. Interviews are usually with individual persons and conducted in semi-structured or structured form (Cooper and Schindler, 2011, pp. 168, 169). Semi-structured interviews are preferred for a more individual and deeper perspective of the person interviewed. With this method, specific questions are asked at the beginning and then individually adapted to the interview process and interview partners. Structured interviews ask the questions in a certain order, whereby the questions generally remain open-ended. The advantage of this method is the comparability of the various interviews held. Another advantage in this variant is the neutrality of the interviewer. Nevertheless, semi-structured interviews offer an emerging dialogue between the interviewer and interview partners, and more variability of the data received.

In total, seven interviews were conducted, of which one was an expert and six practitioners. The expert in the event field is not practically involved in event management but has an overview of this topic. Furthermore, practitioners were asked about their past and future events.

The interviews were preferably conducted in person or, if necessary, by phone. Phone can come with difficulties, such as understanding problems. Written answers, on the other hand, are rather inconvenient for structured interviews.

2.2 Limitations

(1) Existing Literature

The search for sources and information has resulted in a lot of writing material. Especially for the Olympic Games in London 2012 there is a lot of information about the project. However, there were some difficulties, as expenditure figures varied according to source. In addition, a cost overrun or less used budget than planned. Therefore, it was difficult to see what was correct in this case.

(2) Interview Partner

There were some difficulties in finding the right interview partners who were keen to be hired for an interview. In addition, the time available by interview partners made it difficult to schedule the time for the interview.

(3) Bias

The investigation includes the so-called bias. This arises from different views influenced, for example, by age, gender, level of knowledge and origin of the examining person. In addition, interviewees' statements and the literature also include bias. As a result, the thesis and the results were influenced and accordingly written in a different way.

(4) Time

The time for the thesis was limited and therefore strongly influenced the investigation and final outcome. As a result, a strict schedule had to be adhered to. In addition, time constraints impacted the number of interview partners, as only a few weeks were available for conducting the interviews.

2.3 Sampling

Due to time constraints and limited scope of the bachelor thesis, the focus was placed on sports events. In addition, the depth of work can be guaranteed by a more focused examination. For this thesis, sports and music events were compared. The reason for

choosing sports is due to existing studies on past mega-events and the greater number of existing literature on the subject.

The next chapter defines possible success factors from the literature and examples of mega-events.

3 Theory

3.1 Definition Event Management and Project Management

The present thesis is based on an understanding of the two concepts of event management and project management. The definition is particularly important for comparing and determining the differences between the two subject areas later. Before a managing model for future mega-events can be created, the success for event needs to be defined.

(1) Event Management

Events in general appear in many different forms; from family celebrations, birthday parties to mega-events such as the Olympic Games (Pielichaty, Els, Reed and Mawer, 2017, p. 2). Van der Wagen and White (2015, p. 5) define events as "generally complex social endeavours characterised by sophisticated planning with a fixed deadline, often involving numerous stakeholders.". Pielichaty, Els, Reed and Mawer (2017, p. 2) define event and event management as follows:

Events can be understood as social occasions that are limited in time, involve an audience and fulfil complex and varied objectives dependent on the stakeholders involved. Event management pulls together the practical tools, resources and expertise needed to bring an event to fruition.

Furthermore, Van der Wagen (2007, p. 4) listed the following characteristics of event management:

- They are unique and a "once in a lifetime" experience for participants
- They are mostly expensive to organise
- They usually run over a short time period
- They require long and careful advance planning
- They usually take place only once. (Some are held annually, usually at the same time of the year)
- They involve a high level of risk, including financial and safety risk
- Much is at stake for the involved parties, including the event management team

"The event manager has a complex role in the staging of an event that necessitates managing a multitude of activities within a changing event environment. In performing

this role, both depth and breadth of knowledge are necessary" (Mallen and Adams, 2013, p. xvi).

For this thesis, events and event management are defined as follows, based on the above definitions:

Events are a unique social endeavour with fixed deadlines and limited time, involving long and careful planning, an audience and high-level risks. Event management is the knowledge required to conduct an event, and includes a variety of activities in a changing event environment.

In this bachelor's thesis, the focus is on international sports events, especially mega-events. Therefore, the general definition of events is followed by a definition of sports events and mega-events.

The general term **sports events** includes local sports competitions as well as the Olympic Games. These kinds of events occur in all shapes and sizes. They can be categorised according to various parameters such as size, financial objectives, sporting characteristics and spatial conditions (Parent and Chappelet, 2015, p. 1). Furthermore, Parent and Chappelet (2015, p. 2) divided sports competitions into three different sizes: very big events, medium-sized events and small events.

Mallen and Adams (2013, p. 1) discuss in their book "Event Management in Sport, Recreation and Tourism", the term "events" specific to traditional sports events which also promote tourism. They define the term "sport events" on the basis of two characteristics: they have a governing body and the activity is recognisable and a time-honoured sport. The former means having a governing body that "sanctions events and establishes and enforces standardized rules and regulations to be followed during the production of the event" (Mallen and Adams, 2013, p. 1). This governing body is structured as an organisation, association or federation which regulates the rules for the competitions, the number of participants and their clothing, as well as the rules for participation. The latter (a recognisable activity) means that in the case of traditional events, changes or rules can be made that are based on a number of factors. These factors can include, for example, the demands of certain cultures, the emergence of new technologies or the urgency of adapting to the participants' age. The traditional events undergo new changes over time, but the changes are limited because the transformations

do not lead to a completely new event. “There is universality in the implementation of rules and regulations” (Mallen and Adams, 2013, p. 2).

The definition of the term sports event is defined for this work according to the above-mentioned characteristics.

Large events are often called **mega-events** and have international reach (Van der Wagen, 2007, p. 5). Examples of such events are the Olympic Games, FIFA World Cup and the Super Bowl. They lead to an increase in tourism, media coverage and economic impact (Van der Wagen, 2007, p. 5). Parent and Chappelet (2015, p. 2) defined very big (sports) events as events which receive extensive media attention, are given international television coverage and attract many spectators.

Van der Wagen (2007, p. 6) distinguished mega-events with their international interest from major events. Major events such as the Olympic Games attract local interest and a large number of participants.

The following definition of Roche (1994, p. 1) is used for this thesis, as he describes the term matching with this thesis:

Mega-events (large-scale leisure and tourism events such as the Olympic Games and World Fairs) are short-term events with long-term consequences for the cities that stage them. They are associated with the creation of infrastructure and event facilities often carry long-term debts and always require long-term use-programming.

Event and project management have many things in common. In order to compare the two management teachings in this work at the end, a definition is also required for project management.

(2) Project Management

Project management involves the monitoring and managing of projects. In addition, it helps individuals and organisations to achieve the goals of a project and its focus is on the end result (Kerzner, 2003, pp. 3-4).

O’Toole and Mikolaitis (2002, p. 21) defined projects based on the following characteristics:

- They are time-based. This means each activity has a time constraint.

- They are unique, that is they differ from past projects in the use of other resources used or their new combination.
- They have start and finish dates.
- They include the possibility of the emergence of unknown and unforeseen risks.
- The level of the different activities varies with the progress of the duration.
- They represent a dynamic system that is subject to changes from internal and external sources.

The PMBOK Guide (2013, p. 4), which is published by the Project Management Institute, also defines projects based on characteristics and summarises them in two sentences: "A Project is a temporary endeavour undertaken to create a unique product or service. The temporary nature of projects indicates that a project has a definite beginning and end." The PMBOK Guide describes this uniqueness as the differentiation of products and services resulting from the project, from all the other products and services. Many companies use projects as a solution for requests that are not within the organisation's normal limits.

These different definitions result in the following definition of project management for this thesis:

Project management helps to achieve the objectives of a project, whose focus is on the end result. A project is a temporary undertaking with a start and end date, and the activities contained therein have a time constraint. The aim of projects is to create a unique product or service.

(3) What is successful event?

Event can be defined as successful in different ways. Some points were defined from the sources Freeman and Beale (1992), Pinto and Slevin (1988), from the webpage meetingsimagined (n.d.) and from an article of the newspaper The Guardian (Niven, 2013). Two of the sources wrote about project success, however, in this case it is assumed, that some of the points can be adapted for events as well.

- Visitors satisfaction
- Media and social media presence
- Safety of all participants
- Covered Costs

- In time
- Sponsors satisfaction and added value

Written literature provides much materials about event management and mega-events. The next sub-chapter describes some important points determined form the literature, which should be considered in event management. Furthermore, the literature is replenished with practical examples from past mega-events.

3.2 Important Points from the Theory that Need to be Considered in Event Management

This chapter discusses the following points:

- Time Management
- Cost and Budget Management
- Scope Management
- Sustainability
- Stakeholder Management
- Risk Management
- Social Benefits and Legacies

3.2.1 The Iron Triangle of Project Management

The theory of triple restrictions describes the balance of the three aspects (time, cost and scope) which stand in conflict in project management (Sousa, Lima and Martins, 2016, p. 34). The three authors mention the theory in connection with mega-events such as the Olympic Games. Furthermore, they write that projects are successful when the delivery of the specified product or service is within the scope, time and budget and within qualities. If it is assumed that in this case project management is equal to event management, then both are, according to PMI (PMBOK Guide, 2000, p. 29), an integrative endeavour which means that an action affects other areas as well (such as the three conflict factors). These interactions often require trade-offs among the objectives. This means when an event or project needs to be done in short time and in good quality or scope, this will affect required costs and vice versa. As defined in the subchapter above, events have fixed deadlines, i.e. when the event needs to take place, which means time is

a fixed factor. Therefore, only cost and quality can be handled freely and individually. According to the mentioned reasons, the aspects cost and scope are described in further detail together with time, as the date and period of time for planning are fixed.

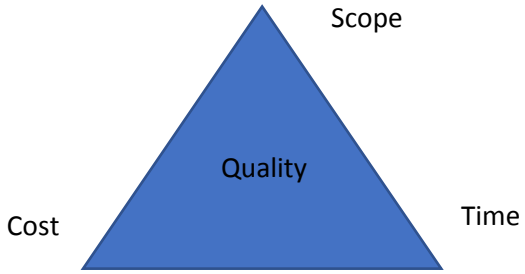

Figure 1: Iron Triangle (Own Illustration Based on PMBOK Guide, 2000, p. 29)

The three aspects occur in all other projects or event management aspects, such as sustainability. Changing an event management activity in favour of sustainability has an impact on all three aspects. Costs and scope can increase, and time can be prolonged with the change of activity.

There is more than the triple constriction or, as it is as well known as the iron triangle. For example, the PMBOK (Rowley, 2013) extended the triangle by the factors risk, resources, quality and customer satisfaction. An example can be found in the appendix.

3.2.2 Time Management

In the International Journal of Economics and Statistics (Sousa, Lima and Martins, 2016, p. 33), the authors of the article "models for project management in 2016 Olympic Games" indicate that for mega-events, timeline is important, especially because of the involved logistics and a large number of individuals and organisations associated with such an event.

During construction for the 2014 FIFA World Cup in Brazil, eight staff died. According to the Newspaper The Guardian (Watts, 2014a), the pressure for building the venues and the lack of safety caused the deaths. The World Cup in Brazil was delayed with construction of the 12 venues and therefore the work pressure intensified. The World Cup was further behind schedule than any other host before (Watts, 2014b).

Therefore, time management is important for meeting a tight schedule and a fixed date. In addition, it is important not to create additional risks such as higher risks for staff

members due to pressure. If the event is behind schedule, higher costs can occur. This phenomenon will be further described under the next factor, cost and budget management.

3.2.3 Cost and Budget Management

It is important for an event to estimate the cost and keep track of the actual expenses (Van der Wagen, 2007, p. 126). Furthermore, every transaction involving money should be documented.

Financial management and control are recognised key factors for a successful delivery of an event (Masterman, 2004, p. 99). The first step is to ensure the feasibility of the event, which ensures that the spending is not wasted. Additionally, assessing the maximisation of finances prior to an event execution needs to be done.

The complementary area of income generation is the revenue potential (Masterman, 2004, p. 91 and pp. 102-116). To generate a competitive advantage, an event needs to exploit its revenue potential. This is achieved at an early stage, where the feasibility of an event is determined. In fact, much must be achieved at this point for a successful event. An early financial underwriting of the event raises the chance of achieving the event's objectives. However, not all events can be declared as feasible and financially confirmed at this early stage. The government typically provides financial support and guarantees for the event (Parent and Chappelet, 2015, p. 51).

According to Müller (2015), there are many factors for underestimating the cost of mega-events:

- Mega-events have, compared to other mega-projects, a fixed deadline. There is no option for postponing the date of the opening ceremony when construction falls behind. Event organisers therefore have to hire additional staff or add night shifts. Furthermore, when there is pressure, the competitive bidding rules are relaxed and this reduces the competition. As a result, prices go up.
- All competitions need to take place within a time schedule. This gives no room for trial and error and therefore high costs are needed.
- If the event organisation is running behind with preparing, contractors can take advantage of this situation. They know that the organising committee is depending on them to finish the work in time. The higher the time pressure, the more likely it becomes that contractors ask for higher premiums to finish the work in time.

- The organisation committee plans with larger contingencies caused by the lack of knowledge about the demand from previous events. For example, venues are built larger than needed because of the uncertainty of the demand.
- Such mega-events have a long implementation period which often takes longer than 10 years from the initial idea to the final execution. During this large time span, many of the previously made assumptions change. For example, external factors such as terrorist attacks can increase security costs. A further complication is that in their contracts with the host cities, event-governing bodies deliberately leave some requirements vague and postpone concrete guidelines to a later date, as in the FIFA host agreement. This makes it difficult for cities to plan and budget reliably, increasing the risk of short-term changes that create costs.
- There are two main reasons for misrepresenting the true cost of an event. Bids must be publicly supported, and the majority of the population supports the event. On the one hand, this is criticised by the management committees of the events, and on the other hand, in many countries the public or the government can—but do not have to—initiate referenda on bids. In addition, host cities compete against other potential hosts within their own country. For this reason, the potential host cities try to present the projects as cost-effectively as possible in order to receive public support.

Furthermore, changes are inevitable in a large event, driven by the following typical problems that can lead to cost changes (Olympic Delivery Authority, 2011, pp. 1-2):

- additional scope proposed, existing scope removed or scope gaps
- main contract awarded above or below budget
- design development
- unforeseen ground or other conditions
- savings or additional costs from sub-contract procurement (depending on form of contract)
- savings or overruns from good/poor contractor performance (depending on form of contract)
- integration to satisfy programme or external stakeholders' schedule requirements
- delays caused by late access to work sites

Cash flow planning is another key point in budget management (Van der Wagen, 2007, p. 126). Some events are able to pay their expenses with their revenues (e.g. ticket selling). However, most events take money for their expenses in the planning and construction phase of existing funds, as their revenues occur only at the time when the event is staged. Therefore, cash flow planning is essential in order to meet up-front expenses from existing funds.

The Sydney 2000 Olympic Games required contingencies to cover risks and sponsorship revenue shortfalls (Masterman, 2004, p. 95). However, although contingencies had been built into each budget revision, it took AUS $70 million from the New South Wales State Treasury to cover the shortfalls in June 2000, and another AUS $70 million to cover expected increased operating costs. The Sydney Organising Committee for the Olympic Games (SOCOG) undertook four formal major budget revisions through the planning phase, reporting them to the New South Wales State Treasury. Furthermore, the SOCOG planned allowances for inflation as the planning period covered a long time; still, this as well as monthly financial reporting and accounting and monthly forecast updates from each department were not enough to prevent the organisers from exceeding the planned budget and funding.

3.2.4 Scope Management

According to O'Toole and Mikolaitis (2002, p. 20), "there is a tendency by some authors to see planning as the panacea for all event problems". Furthermore, poor planning is the main cause of major failures of events.

Long-term planning (Masterman, 2004, pp. 144-145) concerns the use of facilities and equipment and long-term benefits after an event. Any post-event use of facilities needs to be considered in its planning and design. Furthermore, the handover of giving back or assigning to new users' needs to be included in the planning so it can run smoothly. This requires the planning of time and resources for handover or reconstruction of venues.

The Organising Committee of the Olympic Games in Rio 2016 planned venues and facilities to be repurposed. For example, the International Broadcast Centre was planned to be reused as a high-school dormitory, and the 121-hectare Barra Olympic Park was turned into public parks and private development sites (Fister Gale, 2017).

In the next subchapter, the aspect of sustainability and its role in event management are further described. In this subchapter, not only are the effects of sustainability examined from the point of view of the ecological footprint, but also of the constructions built for mega-events and the use afterwards.

3.2.5 Sustainability

Sustainability plays an important role in the planning and execution of events (Bowdin, Allen, O`Toole, Harris and Mc Donnel, 2011, p. 155), and furthermore it includes awareness for the future of the host country (Sousa, Lima and Martins, 2016, p. 35).

In the last three decades, the change towards sustainability has also reached the event industry, and event management is greener than ever before (Bowdin, Allen, O`Toole, Harris and Mc Donnel, 2011, pp. 155-156). Sustainability is the balance in which consumption and renewal of resources are in harmony and the optimal conditions for human survival can be maintained in the long term (Holmes, Hughes, Mair and Carlsen, 2015, p. 3). The Association of Project Management APM chairman believes that success should explicitly support sustainability, especially through the inclusion of "profit, people and planet" (Dodd and Sathasivam, 2010, p. 5).

Pielichaty, Els, Reed and Mawer defined sustainability in relation to event management as “the successful management of event projects in a way that consciously values the current and future economic, social and environmental factors affecting planning, promotion and hosting of events in relation to local, regional, national and international communities” (Pielichaty, Els, Reed and Mawer, 2017, pp. 31-32). According to Getz (2005, p. 123) “sustainable events are those that can endure indefinitely without consuming or spoiling the resources upon which they depend”.

Pielichaty, Els, Reed and Mawer (2017, p. 139) indicate that there is a growing trend towards event participants wanting to know the ecological footprint of the respective event. Therefore, an event manager must make well-considered decisions regarding the use of resources, waste reduction, supply chain and the preservation of nature,
According to the above-mentioned authors, sustainability is considered important for today’s events.

It is important to define venues for uses other than the event and also to use temporary infrastructures (Sousa, Lima and Martins, 2016, p. 34). Furthermore, previous Olympic Games have shown that many venues built for the Games have poor post-Games usage and the financial support for these structures exacerbates the economic crisis in the host countries. A solution to this problem is, according to the authors, found in multi-purpose venues. Olympic Games only last for 16 days, and to reuse such Games venues is a challenge for the host city's authorities in terms of city activity and financial profitability.

Sustainability and environmental management programmes are increasingly important for FIFA and individual World Cups (Hayes and Karamichas, 2012, p. 10). In its bid dossier for the 2006 World Cup, the German Football Association (DFB) outlined an environmental management programme. Its targets are significant cuts in energy and water consumption and improved waste management. Carbon offsetting was first used for this World Cup, meeting the WWF "Gold Standard". The 2006 World Cup Final was the first to leave a green legacy.

The Sydney Summer Olympic Games (Hayes and Karamichas, 2012, p. 114) were the first Games which integrated environmental consideration in their planning. It included the decision to stage some Olympic activities in the Homebush Bay site, which was an industrial area with industrial and toxic waste. This first required remediation work before building facilities.

The 2010 Football World Cup in South Africa measured the largest carbon footprint in FIFA history (Cornelissen, Swart and Bob, 2011, p. 307-318), twice as high as the one caused by the Beijing Olympics. The reason for this high number was primarily the long distance from the central point of the World Cup spectator market and venues which required short air travels, as well as the country's reliance on coal as its main energy source. This case shows that environmental programmes should be integrated into the bid documents, and support for the programmes gained from sports federations such as FIFA. For the 2010 World Cup in South Africa (Cornelissen, Swart and Bob, 2011, p. 307-318), the training venues were upgraded with the aim to leave a lasting positive aspect for the local communities. The government invested heavily in the venue development, despite the considerable lack of local interest in football. The attendance at football matches is, compared to Germany and France, lower in the premier league. Furthermore, costs occur

for maintaining the venues. Therefore, public expenditures for the venues are not reasonable when compared with the likelihood of using such venues after the World Cup.

The PyeongChang 2018 Olympic Games tried to generate carbon responsible Games (The PyeongChang Organizing Committee, 2015, p. 2). The Organising Committee of the Games (POCOG) established a unique and advanced greenhouse gas control system with the purpose of neutralising greenhouse gas emissions.

The next subchapter describes stakeholders and how engaging these is important for the event. Three key stakeholder groups, local stakeholders, media and sponsors, are described in more detail.

3.2.6 Stakeholder Management

The number of stakeholders that need to be involved in planning can be daunting (Van der Wagen, 2007, p. 73). The more complex an event, the more stakeholders are involved.

3.2.6.1 Local Stakeholders

The relationship with those local to the event has an important impact on the success of an event (Pielichaty, Els, Reed and Mawer, 2017, pp. 49-55). Local stakeholders should be informed about the event and satisfied at every stage. The event management should take time to list all local stakeholders and address and maintain a positive local connection.

The 2000 Sydney Olympic Games addressed the problematic stakeholder Greenpeace by involving it in greening the Games (Frawley and Adair, 2013, pp. 27-28). This made it hard to criticise the organising committee. Furthermore, the organising committee of the 2010 Olympic Games in Vancouver turned the groups whose land the Games took place on into Games partners, thus building a relationship with these problematic stakeholders.

The 2014 Football World Cup in Brazil caused protests, strikes and rebellion (Watts, 2014b). Among other things, the president's office was attacked. Furthermore, a protest was held hours before the opening ceremony (Watts, 2014c). The reason for this protest was the cost of the event that the country had to pay for. Some strikes by the staff called

for better payment and working conditions (Watts, 2014d). Possibly, this situation could have been improved with better stakeholder management.

Emery (2010, pp. 158-170) found, after analysing 178 major sports events in 11 countries, that the most important factors in determining the success are sponsors, sporting authorities and media. For this reason, the following sections describe the aspects sponsoring and media. Based on the assumption that as event manager the sports authorities cannot be influenced, this point is no longer taken into account.

3.2.6.2 Sponsoring

Sponsorship (Van der Wagen, 2007, p. 113) can be defined as a business partnership between an organisation and another organisation or event which offers commercial rights and association that can be used for commercial advantage. The sponsor publicly endorses an activity and ties its reputation with that of the organisation or event being sponsored.

Sponsoring can be an important factor in the event planning process in terms of feasibility of the event (Masterman, 2004, p. 204) because sponsorship is one of the most common funding sources for events (Van der Wagen, 2007, p. 99).

Sponsorship has become a highly developed communication tool, with most of the spending flowing into sports events. For an event manager to achieve competitive advantage, it is important to know and focus on sponsors' expectations. According to Masterman (2004, p. 192) and Van der Wagen (2007, p. 115), there are five key areas that sponsors' aims fit into:

- To increase product or corporate awareness
- To develop product or corporate image
- To drive sales
- To develop market position
- To achieve competitive advantage
- To provide corporate hospitality

According to Masterman (2004, p. 204), successful events are those whose managers have researched and identified their target markets. This research leads to better marketing decisions, which again lead to a development of an event sponsorship

programme. Sponsors want to address their target market and therefore, they are looking for sponsoring an event with the same target market. This is why the fit between sponsor and event is critical (Van der Wagen, 2009, p. 111).

Sponsors expect a return on their investment (Van der Wagen, 2007, p. 99). This makes it essential to evaluate the sponsors' objectives to ensure that the sponsorship was successful and the relationship between event management and sponsor will continue (Van der Wagen, 2007, p. 99). Any failure published in the press, such as a cancellation or ticketing problems, causes consternation. Therefore, a good risk management plan is essential in dealing with sponsors (Van der Wagen, 2007, p. 119). Furthermore, every opportunity should be taken to enhance the sponsor's value and success, and every effort must be made to keep the sponsors involved and informed (Van der Wagen, 2007, p. 123).

In addition to the nine Worldwide Olympic Partners such as Coca-Cola and McDonald's, there were more than 50 additional sponsors and suppliers involved in the sponsorship programme of the 2010 Vancouver Olympic Games (International Olympic Committee, 2010, p. 47). Therefore, a good sponsorship management is required in order to meet all sponsors' expectations.

3.2.6.3 Media or Public Relations

The role of the media during an event is to function as an important vehicle to transfer information to others before, during and after an event (Masterman, 2004, p. 23) and to provide financial resources by purchasing the right to broadcast the event (Parent and Chappelet, 2015, p. 51).

The media needs to be used for targeting event stakeholders (Masterman, 2004, pp. 173-174). First, an event management needs to identify the stakeholders and the form of communication. Stakeholders of an event could be the following:

- Customers who buy tickets
- Participants/Competitors
- Sponsors
- Partners
- Financial provider
- Suppliers

- Staff
- Community

It is not always possible to reach all these stakeholders, therefore a PR plan with all possible stakeholders, including prioritisation, scheduling and costing should be made(Masterman, 2004, pp. 173-174). Wenner and Billings (2017, chapter 2) giving discourses about event-management.

Mega-events discourses - spoken by planners, architects, engineers. policy makers, journalists and academic social scientists - tend to be technocratic or critical, top-down or bottom-up. In the case of sports mega-events "boosters" and “supporters" (legitimizers and revisers) tend to have greater resources and influence over media coverage, such as the Organizing Committee for the Olympic Games (OCOG), the IOC, politicians and athletes but they still need to manage public opinion and potential threats to reputation from "skeptics" and "activists" (deleitimizers and transformers) and thus try to manage reputational risks.

The mass media often informs regularly about mega-events such as Olympic Games and World Cup. Not only do newspapers and magazines write articles about the tournament itself, but they also inform regularly about planning and construction. As already mentioned in the Time Management part, eight staff members died in the construction for the 2014 World Cup in Brazil (e.g. The Guardian, 2013). This caused the organising committee and the country a bad reputation.

Corruption (Kulczycki and Koenigstorfer, 2016) is considered a mega-sport event syndrome. The perceived corruption of the event management has a negative effect on the attitude of the host population towards taking over the costs of the event. The media can reveal such corruption and therefore shed a bad light on all people and organisations involved. For example, the BBC News informed that the FBI claimed that the South African government had promised to pay $10 million to former FIFA vice president Jack Warner and his co-conspirators in exchange for the right to win the bid (BBC, 2015).

Next, the aspect risk management is described. First, the importance for the analysis of an event’s feasibility is discussed. Furthermore, there are all types of risks that can occur in an event. At sports events, the main focus is on the athletes' risks.

3.2.7 Risk Management

Risks are equated with hazards and dangers but also prejudiced negative and positive deviations from the expected result (Power, 2015, p. 14).

Risk management is the process of identifying, assessing and treating risks (Van der Wagen, 2007, p. 147) and the likelihood of their occurrence and their impacts on the event (Pielichaty, Els, Reed and Mawer, 2017, p. 197). Additionally, risk management is an iterative process which requires continual improvement and is undertaken in sequence (Van der Wagen, 2007, p. 147). Strategic and operational risk management help to prevent damage to an event's financial status and reputation (Van der Wagen, 2007, p. 160).

Many events are cancelled as a result of too many risks (Van der Wagen, 2007, pp. 31-32). As a first step towards a detailed analysis of the event and its risks, the event should be determined as feasible. Before going ahead with an event, the keys to success developed by Ernst and Young (Catherwood and Van Kirk, 1992, p. 4) should be able to be answered to guarantee the feasibility and go-ahead of the event. These questions were adapted and specified for mega-events by Van der Wagen (2007, pp. 31-32):

1. Does the event represent a good idea?
2. Do we have the skills required to plan and run the event?
3. Is the host community supportive?
4. Do we have the infrastructure in the country?
5. Can we get a venue at a price we can afford?
6. Will the event attract an audience?
7. Will it attract media support?
8. Is it financially viable?
9. Are the success criteria reasonable?

Furthermore, a well-conducted feasibility study helps with applying for funding and gaining stakeholder support (Pielichaty, Els, Reed and Mawer, 2017, p. 9).

In addition to this list, Van der Wagen suggests answering one additional question: "What are the risks?". Risk management is one of the most important concerns of an event manager (Van der Wagen, 2007, p. 32) and it reduces the probability of a failure of an event (Ceil, 2015, p. 3). Mega-events have a wide range of associated risks and therefore,

a comprehensive analysis of all risks is required (Ceil, 2015, p. 3). Furthermore, potential risk mitigation measures the needs to be developed and adopted. Risk associated with events can be security risk, financial risks, food safety risks and environmental and safety risks.

Risk at sports events also includes danger to the sportsmen and women involved (Van der Wagen, 2007, p. 149). The challenge for organisers is to reduce risk, including for the audience and staff, to an acceptable level by carefully planning and introducing new procedures and technologies available. The development and implementation of plans, procedures and control mechanisms are important to help the event management to be seen in a good light if a charge of negligence were laid.

The causes of the deaths during the construction for the 2014 World Cup in Brazil were not clear. However, The Guardian (2013) published an article describing that supervisors put pressure on construction to finish the roof, despite a warning of the engineer that the rain-soaked soil did not seem stable enough for work to be continued. Later, a crane collapsed, but the construction company responsible for the venues' construction denied the claims.

The 2010 Vancouver Winter Games were, among other things, one of the largest operations of risk management with its audit and internal controls of the Olympic Games (Jennings, 2012, Abstract, p. 117). Enterprise Risk Management (ERM) spread across the entire organisation and influenced the activities of supply partners and sponsors.

In the next subchapter, the benefits and legacies of an event are described. These can have an impact in many areas.

3.2.8 Social Benefits and Legacies

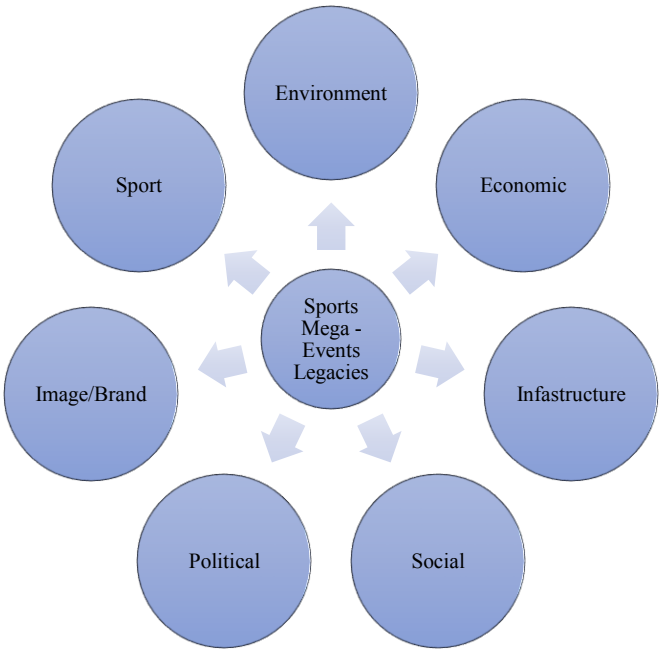

Figure 2: Sports Mega-Event Legacies (Own Illustration based on Cornelissen, Swart and Bob, 2011, pp. 307-318)

Events have an impact on their immediate and wider environment, which can be either positive or negative (Masterman, 2004, pp. 68-85). Possible heirs are shown in the figure 2; further details on the individual points are listed in the appendix.

This chapter focuses on the aspects infrastructure, environment, sport and economy of the figure 2. It is examined to what extent these four aspects, together with other aspects, can have a positive influence. At the end of this chapter, some practical examples are used for practical visualisation.

The aim of event management is to minimise the negative impacts and achieve potentially positive ones. Therefore, influences need to be managed and strategies elaborated in order to achieve positive impacts. Examples of impacts and legacies with a positive outcome can be (Masterman, 2004, pp. 69-80):

- Land regeneration – Development of unused land by leaving physical legacies for future social, cultural and economic benefits
- Facilities and services – Buildings which are newly erected and redeveloped
- Social regeneration – Creation of a new focus on social activities with new sports facilities or provision of employment opportunities for planning and executing the event

- Political development – Improved government profile at national and international level and enhanced political image
- Cultural development – Provide wider programmes seen as culturally and socially beneficial
- Sports development – Developing a sport as a result of showcasing it in major events
- Environmental development – Events can help incorporate operational policies for future environmental legacies for the host city
- Economic development – Can bring important revenue to strengthen municipal budgets
- Tourism – Events can be catalysts for driving tourism for host cities and therefore have an economic impact

New sporting venues provide an increase in comfort, improved view and better atmosphere (Cornelissen, Swart and Bob, 2011, pp. 307- 318). This can lead to higher spectator numbers for clubs and sports. Furthermore, new venues can improve the skyline and the character of a city, leading to an enhancement of a city's image. This can additionally be a catalyst for future urban development. In addition, mega-events are opportunities for learning from experience and better planning of future events. Hosting a mega-event leads to media interest and therefore to international and national recognition (Frawley and Adair, 2013, p. 9). This opportunity can be used to generate publicity and reinforce political values and ambitions by the government.

However, the bid proposal sometimes promises benefits and economic impacts of the outcomes of an event. Some of them are not realistic (Müller, 2015). For example, the Chicago bid for hosting the 2015 Olympic Games promised the hosting would create 315,000 new jobs. The forecast was more than four times higher than the estimate for the 1996 Olympics in Atlanta and dismissed as unrealistic by sports economist Victor Matheson (Pletz, 2009).

Furthermore, venues and facilities created for the event often do not reflect the post-event needs (Müller, 2015). The organising committee must fulfil the requirements of the event-governing bodies and must tailor the size of the venues to requirements for the event's peak demand. This demand is often too high for the post-event use. The event-governing bodies set the requirements for the infrastructure; however, they do not have to bear the

cost and therefore have an incentive to demand excessively large venues. For example, the airport in Lviv, Ukraine, was upgraded to meet the requirements of the UEFA, the event-governing body of the European Football Championship. The upgraded airport now has a capacity of 20,000 passengers daily. However, it was running at 10% of its capacity in 2013, one year after hosting the championship. Another example is Sydney, which built a transit system for the 2000 Olympic Summer Games that is too large for post-event use.

Hosting the 2000 Olympic Games in Sydney led to the development of a large-scale water recycling system (Olympic, 2016). Australia now saves approximately 850 million litres of drinking water every year. In addition, the Sydney Olympic Park was restored from badly degraded land. The local community now benefits from the largest urban park in the country with 35 km of cycle paths and walking trails, family picnic facilities and playgrounds. Furthermore, the sporting venues are still in use and the city is able to host major sporting events such as the 2003 Rugby World Cup Final.

Despite the scepticism and protest among Brazilians, the 2016 Summer Olympic Games provided material for new primary schools and a community swimming centre by planning and building the venues not only for the Games but also for reuse (Fister Gale, 2017).

The Olympic venues of the 2018 Games in South Korea are envisioned to become a top destination for winter sports across East Asia by 2032 (Fister Gale, 2017).

The next chapter examines the important factors which made the 2012 London Olympics best practice. Furthermore, the example of the 2014 Sochi Olympic Games is examined for those aspects responsible for making this event less successful than the London Olympic Games.

3.3 Theoretical Examples of Past International Big Events Worldwide

This subchapter describes a good and a rather bad example of international mega-events. Possible success factors can be deduced by the best practice. In the case of failed event, possible factors that contributed to the cause of the bad result can be derived. The factors of successful and failed events are analysed again in the last part of this chapter and processed into possible success factors.

3.3.1 Best Practices - London Olympic Summer Games 2012

The Olympic Games in London 2012 won the APM Project Management Award in the category programme of the year 2012 for its success (Association for Project Management, 2012, p. 1) in terms of time, budget, and other factors such as sustainability (Mackenzie and Davies, 2011, p. 3). The mega-event took place from 27 July to 12 August and included a total of 302 subevents (Olympic, 2018e).

The mission of the London 2012 Olympic and Paralympic Games was to deliver facilities, infrastructure and transport on time and in a way that maximises the provision of a sustainable legacy within the available budget. At an early stage, the six priority themes were identified (Mackenzie and Davies, 2011, p. 5):

- Health and Safety
- Design and Inclusion
- Legacy
- Employment and Skills
- Sustainability
- Equity and Inclusion

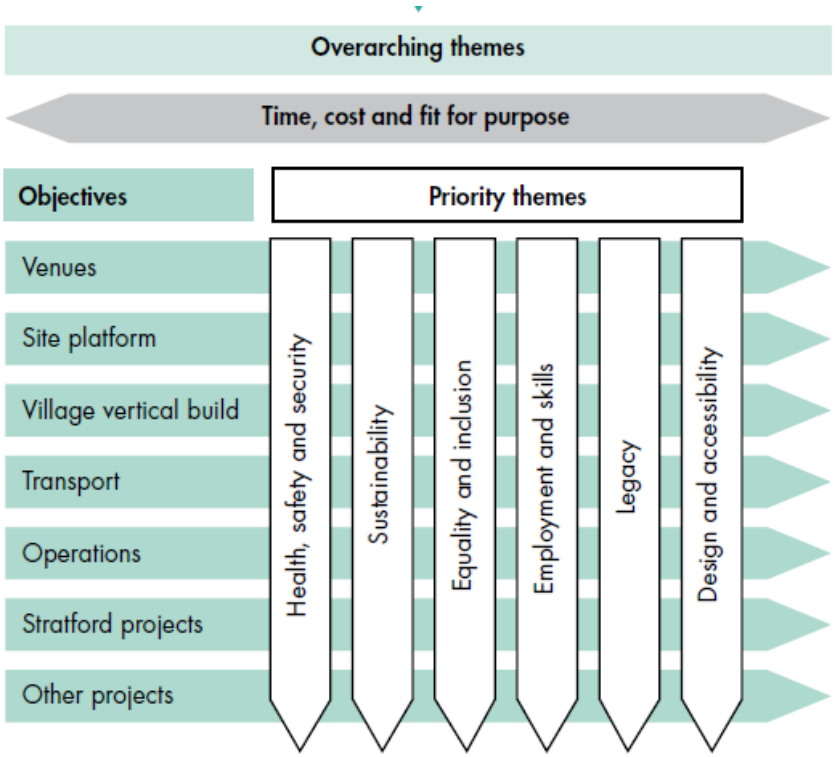

Figure 3: Priority themes (Mackenzie and Davies, 2011, p. 5)

This success was achieved by concentrating on a clear delivery strategy, a high degree of transparency with all stakeholders, a clear definition of the scope and targeted delivery (Association for Project Management, 2012, p. 3).

For a closer look at the project and its success factors, the structure of the organisation must be understood.

The International Olympic Committee (**IOC**) (Olympic, 2018a) is a non-profit independent international organisation consisting of volunteers. The IOC President directs all its activities, while the IOC Session and the IOC Executive Board take the most important decisions for the organisation. The IOC adopts the Olympic Charter (Olympic, b., 2018), which is the codification of the fundamental principles, rules and by-laws. It regulates the organisation and implementation of the Olympic Movement and determines the conditions for the celebration of the Olympic Games. The Olympic Movement includes organisations, athletes and others who are guided by the Olympic Charter principles.

The International Sports Federations (**IFs**) (Olympic, 2018c) are international non-governmental organisations, recognised by the IOC, that administer one or more sports at global level and organisations that practice such sports at national level. They are responsible for the integrity of their sport at international level. Furthermore, the IFs have the responsibility and duty to manage and supervise the day-to-day running of the world's various sports disciplines, including the practical organisation of events during the Games. The IFs must also monitor the development of athletes practising these sports at all levels.

The task of the National Olympic Committees (**NOCs**) (Olympic, 2018d) is to develop, promote and protect the Olympic Movement in their respective countries. The NOCs are the only organisations that can select and nominate the city to apply to host the Olympic Games in their respective countries. In addition, they alone can send the athletes to the Games.

The London Organising Committee of the Olympic and Paralympic Games (LOCOG) was responsible for planning, funding and staging the Games in London 2012 (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2013, p. 10).

The Olympic Delivery Authority (**ODA**) (Association for Project Management, 2012, p. 1) was a new, publicly funded body established by an Act of Parliament in April 2006. It was in charge of turning the vision of the Olympic bid of London into reality.

A table in the appendix helps to understand and have a better overview of the organisations involved in the London 2012 Olympic Games and their responsibilities.

Literature suggests that the components budget, time, risk and integration management, change management, sustainability, health and safety, contractors and staffing are the key issues for a successful organisation of the Games. In addition, the IOC has an Olympic Games Knowledge Management programme, which is explained in more detail later in this chapter, with advantages and disadvantages of the programme being discussed.

Budget (funding, planning and expenditures)

Since 1960, all Olympic Games up until the London Games had faced cost overruns with an average overrun of 179% (Flyvbjerg and Stewart, 2012, Abstract). The London Olympic and Paralympic Games allocated total expenses of £8.1 billion.

The budget had been set at £9.325 billion in March 2007, therefore resulting in an approximate cost saving of £1.2 billion (Knight and Ruscoe, 2012, p. 19).

About £587 million of LOCOG's core operating budget was raised from the sale of 11.3 million tickets for the Olympic and Paralympic Games (The London Organising Committee of the Olympic Games and Paralympic Games Limited 2012, p. 38). Figure 4 on the next page (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 52) shows the different percentages constituting the budget for the mega-project. The rest of the lifetime budget was funded from sponsorship, IOC Contribution, Paralympic subsidy, licensing and retail, and others. The majority of the revenue was sponsored through domestic sponsors.

LOCOG 's core budget excluded revenues and expenses for grants to expand its original company size (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 54). The Government Olympic Executive (GOE), a unit within the UK Department for Culture, Media and Sport, pledged £842 million in public funding on behalf of the government for LOCOG's work, in addition to a further £147 million in core income for the Paralympic funding commitment and the relocation

and redesign of venues. This results in a combined Public Sector Funding Package (PSFP) of £989 million.

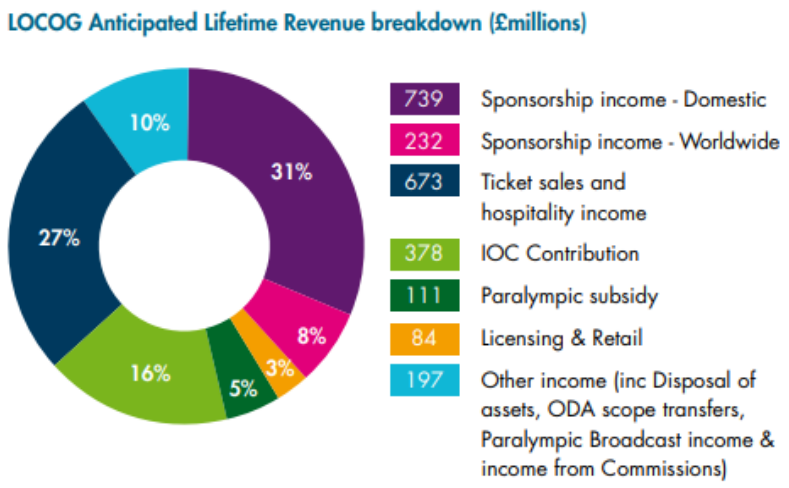

Figure 4: LOCOG Anticipated Lifetime Revenue breakdown (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 54)

In its report, the LOCOG shows (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 55) how it was able to maintain control of expenditure and revenues, stay within the set budget and thereby deliver its objectives on time: In order to keep the essential transactions, payments or receipts of the company under control, the company worked together with four core committees, that is the Games Operations Committee, the Communications and Engagement Committee, the Organisation Committee, and the Ceremonies Committee, controlling all of the company's major activities. In addition, the values of payments and receipts were reviewed and approved. This process was an effective mechanism for a good expenditure overview and control.

The company set its focus on controlling expenditure to achieve the lifetime budget (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 55). Furthermore, the company regularly produced its Anticipated Final Cost (AFC) and Anticipated Final Revenue (AFR) and set it in relation to the lifetime budget. With this data, it was possible to identify potential budget pressures. The AFC and AFR were additionally reviewed and monitored by senior executive management and the Audit Committee in order to minimise and control the risks of cost overruns and revenue shortfalls.

The AFC was updated monthly to ensure the ODA kept an overview of the projected outturn cost (Olympic Delivery Authority, 2011, p. 1). The AFC included number cost centres such as construction contracts, design contracts, project management and assurance costs and project contingency. The Original Baseline Budget (OBB) was assigned to each cost centre as the starting point for the entire cost reporting. Changes approved by the Program Change Board changed the OBB to maintain the Current Baseline Budget (CBB). This was compared with the AFC performance to determine the budget performance of the projects.

When the OBB was first prepared, a project contingency value was determined based on a Quantitative Risk Analysis (QRA) of the probable project risks evaluated at that time (Olympic Delivery Authority, 2011, p. 2). In the further course of the project, the risk component of the AFC performance was reassessed once per quarter through QRA implementation. Over time, some risks matured into trends, while others either did not materialise or were successfully mitigated. Provisioning was reviewed regularly to ensure that it represented a realistic value for the remaining work, and that issues maturing into trends were not repeated. The programme cost report was used to present the total cost, including all projects and other programme-wide costs such as contributions, interest and taxes. This also included programme contingency, which, like the projects, was evaluated once a quarter using QRA.

Time Management

The LOCOG team used a comprehensive readiness programme (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 40), which was crucial to the smooth running of the Games in a particularly dense, risky and complex environment within the host city. The aim was to implement a continual improvement process, providing test results which could be fed back into planning. “The challenging stakeholder landscape meant the approach needed to be evidence-based and collaborative, with a single structure bringing together readiness activities (test events, table-top testing and exercising), resilience (contingency planning) and command control communication.” The project delivery office integrated the partner across company through the planning of functions and venues. Furthermore, the Paralympic readiness was included in all planning activity.

Additionally, the ODA used a “tight-loose” management (Mackenzie and Davies, 2011, p. 6), where some aspects were tightly controlled and others were loosely managed. Tightly controlled aspects were, among other things, priority areas such as Health and Safety from figure 3. This important target was achieved through to a highly consistent approach across the programme and to reinforce the importance of process or target. The loosely managed aspects included how contractors implemented principles, achieved targets (such as priority themes), or the contract approach used for each project. Reasons for this procedure were that contractors often have their own ways of working, and it can be beneficial to set some objectives and let contractors find their own approach. Furthermore, a loose management provides more flexibility.

Risk Management

The Head of Risk Assurance was appointed in 2009 (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 84). From that time on, risk management was further developed and its approach to risk protection improved. Working closely with the Programme Management team (and Project Delivery Office, PDO) prior to the Games, enabled an integrated approach to manage and mitigate operational risks related to short and long-term programme milestones. The company's relationship with Deloitte LLP as an official provider of professional services also involved supporting the implementation of running Programme Management and project implementation activities.

According to The London Organising Committee of the Olympic Games and Paralympic Games Limited (2012, p. 84), the main focus of risk assurance activities was on continuous monitoring of priority risks. It was also important to maintain "a robust assurance process appropriate to its mission and capable of adjustment in accordance with increased and then reduced operational size and complexity" (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 84).

Over time, the internal audit charter was further refined to adapt to the growing size of the company (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 84). Programme and risk management activities were further coordinated and internally improved. In addition, the PDO, which had previously been set up internally, continued to be responsible for project and risk management in connection with the operational implementation. The Head of PDO, the Head of

Programme Management and the Director of Readiness all were in close contact and collaborated with the Head of Risk Assurance in identifying risks and managing the internal control environment.

The ARD Committee (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 19) monitored the company's risk-avoiding function and programme as well as risk management reporting to ensure that the detailed risk assessment and hedging focused on the main business areas and the identified business risks.

Change Management and Problem Resolution Process

The goal of change management (Mackenzie and Davies, 2011, p. 4) was to identify problems at an early stage. Additionally, it involved fully documented changes and their impact. Any significant change had to be reviewed by a “change board”. This procedure was essential for resolving issues on a continuous basis before they became confrontational. The strict documentation also meant that disagreements over ex-post payments were quickly resolved. For a successful problem resolution process, the Delivery Partner (DP) worked closely with the relevant contractor, taking time to identify, explore and evaluate the best options during planning or in response to an unforeseen problem.

Sustainability

The London 2012 Summer Olympics were “the greenest” Games (London 2012, 2010, p. 5) in modern times. They met the Sustainable Sport Event Standard BS 8901. BS 8901 “is a new standard that has been designed specifically for the events industry with a purpose to assist the industry to operate in a more sustainable manner” (Sustainable Event Alliance, n.d.). London was the first host who integrated sustainability in every phase of the Games. London 2012’s (2010, p. 5) plan for environmental and sustainability issues was to be the first Summer Games to document its complete carbon footprint over the entire project.

The four key aims of the 2012 Summer Games were “to avoid and eliminate emissions at source; to reduce inefficiency in energy use, transport and work practices; to replace inefficiency systems with low-carbon technology alternatives; and to compensate for

unavoidable emissions by influencing behavioural change and standards so that others follow suit" (London 2012, 2010, p. 5).

According to authors Carris, Epstein, Thornback, Storer and Bonfield (2012, p. 9) and Dodd and Sathasivam (2010, p. 25), the most notable sustainability achievements include:

- More than 50% of construction materials were delivered by rail or water
- Waterless urinals, water efficient fittings and rainwater harvesting reduced the use of water significantly
- Materials and products with low embodied carbon were used, reducing carbon emissions by about 42%
- Through sustainable design and construction, more than 90% of construction waste was diverted from landfill
- A timber supplier panel was implemented, which helped to deliver 100% legal and sustainable timber
- A wind turbine was created to produce energy and reduce carbon emissions

The authors mention that the ODA's approach to sustainable development has influenced the industry and has left a lasting legacy.

The venues for the Olympic Games are often just built for the Games only. Business Insider (Davis, 2018) published an article about the phenomenon of unused and abandoned venues once the Games are over. Examples are Sarajevo, Athens and Beijing which all have venues suffering from this fate. In fact, even the buildings constructed for Rio 2016 are already falling apart.

However, the venues in London were not used for the Games only. The ODA built the Olympic Park in less than three years, and it now serves as a place for new homes, schools, sport facilities and a community medical centre inside a stunning urban park (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 11). Furthermore, the White-Water Canoe Centre at Broxbourne had been used by the public before the Games started (Dodd and Sathasivam, 2010, p. 5).

The goal of ODA Chief Executive David Higgins (Dodd and Sathasivam, 2010, p. 9) was to create "Public Transport Games" with best connections – with the vision of 100% of spectators using public transport, walking or cycling to the locations. For reducing car

usage to an absolute minimum, new trails, rail lines, platforms, enhanced stations, walks and cycling routes were created.

Integration Management

Integration Management's (Mackenzie and Davies, 2011, pp. 3-5) main task was to identify how changes impacted on others. The mega-event's construction programme alone amounted to 70 separate projects with very significant interdependencies. "Integration committees were operated in both design and construction phases" (Mackenzie and Davies, p. 5). Integration between each project interface and throughout the overall mega-event was important, especially as the Olympic park was divided into two main venues. It also required careful integration between the various elements of the infrastructure (e.g. utilities) that followed and overlapped.

Health and Safety

Ensuring a safe environment was a particular challenge in London, where the threat was greater than in any other host city. The LOCOG's security strategy (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 43) in this climate was risk- and intelligence-based, moving away from a single approach based on different threats and full integration with external law enforcement agencies. To integrate security into every aspect of game planning, security management worked throughout the organisation to ensure security measures were implemented in all areas, from ticket design and distribution to catering, cleaning and, above all, the Games' time logistics.

For the first time, a "design-in-security" concept was introduced in London (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 43), which included anti-terrorism and anti-crime measures in the planning of events right from the start. This should not only help to boost self-confidence during the Games, but would also benefit future residents of the Olympic Park; for example, anti-crime lighting, sidewalks and safely designed apartments were included in the construction plans.

LOCOG (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 43) put in place effective and discreet security, which included the unique security check of visitors to the Olympic Park and other venues. At the

Paralympic Games, only a percentage 'mag and bag' control was performed due to the lower estimated risk. Additionally, a basic security training was provided to all members of the Games workforce, including the 70,000 "Games Makers".

The LOCOG (The London Organising Committee of the Olympic Games and Paralympic Games Limited, 2012, p. 43) provided safe Games even though its commercial partner G4S was unable to deliver the contractually agreed amount of security personnel for the season. The robust emergency measures and the friendliness and professionalism of the British Armed Forces and police ensured that the security operation was one of London 2012's great successes.

A "Park Health" facility (Mackenzie and Davies, 2011, p. 6) was installed so everyone in the Park could get health care on site. Furthermore, a safety and leadership committee was set up; as a result, the Games were exemplary with no fatalities or major injuries.

Supplier and Supply Chain

The ODA preferred NEC contracts for Tier One contractors. NEC contracts empower users to deliver projects on time, on budget and on high standards (NEC, 2018) "Each contract is supported by associated guidance notes and flow charts, detailing exactly what procedures should be followed by whom and when" (NEC, 2018). Most importantly, the requirement was to provide transparency of progress, bring problems and issues to light as soon as possible and work closely with DP and others in order to find solutions (Mackenzie and Davies, 2011, p. 8).

The ODA's and DP's contract was structured in two aspects (Mackenzie and Davies, 2011, p. 8): The DP bid on periodic work packages, which means that the ODA specified the overall, top-down requirements for the period. Therefore, the ODA left the DP to work the details and prepare a bottom-up proposal, which was then examined and negotiated. "This approach ensured that the DP had a high ownership of the resulting work packages which reflected bottom-up knowledge" (Mackenzie and Davies, 2011, p. 8). The contract between the two parties also involved incentives. "The DP opted to put 90 per cent of its margin 'at risk', linked to meeting multiple key performance indicators (KPIs)" (Mackenzie and Davies, 2011, p. 8). This KPI approach offered the flexibility to reconcile incentives between the DP and Tier One contractors. Mackenzie and Davies cite the

Athletes' Village as an example. The relationship between DP and Lend Lease improved when it became clear that a positive result would benefit both.

A supportive culture (Mackenzie and Davies, 2011, p. 9), crucial for open and cooperative behaviour, is a key success factor in dealing with suppliers. The following four important aspects (Mackenzie and Davies, 2011, p. 9, and Carris, Epstein, Thornback, Storer and Bonfield, 2012, p. 4) helped the Management, ODA, DP and Tier One contractors to implement a supportive and sustainable culture in the ODA's supply chain:

- The believe that failure was not an option and that everything possible should be done to generate success
- The commitment that problems should be brought to light at an early stage and that a collaborative solution should be found for these problems
- A strong attention to health and safety aspects
- The sustainability commitment was communicated to the industry at an early stage. Additionally, sustainability was integrated into the business case, procurement plans and related contracts.

The priority themes in figure 3 were non-negotiable. However, each contractor was to implement them in their own way (Mackenzie and Davies, 2011, p. 5).

The ODA improved collaboration with delivery partners and contractors by organising Industry Sector Days and an Olympic Liaison Group (Carris, Epstein, Thornback, Storer and Bonfield, 2012, p. 7). The former was set up at the beginning of the planning phase with the goal of providing suppliers with information, among other things, about sustainability and its possibilities and difficulties. Afterwards, the suppliers were invited to outline their ideas to meet such challenges. These Industry Sector Days provided more information, with ODA requirements becoming clearer to the suppliers. The ODA, in turn, received more information and knowledge about current and forthcoming innovations. The Olympic Liaison Group was for suppliers to receive regular updates about the mega-event. It was started immediately after the bid had been won, with three meetings held every year. Several speakers from the ODA and contractors informed the industry of the progress and further contract opportunities. According to the authors, contractors' feedback about these days was positive, and it was a good way to inform and share knowledge.

The Olympic Effect (Mackenzie and Davies, 2011, p. 9) had a positive impact on the contractors. The Olympics are generally seen as a prestigious and high-profile event, and there is a widespread belief that the Olympic Games must be a success and cannot fail. This helped to create a collaborative culture and high productivity across the programme, with contractors and staff working harder than they would have normally done.

Staffing

At peak times, DP had 600 employees. According to Mackenzie and Davies (2011, p. 8), the overall Programme Management cost, including the 200 staff from the ODA, was approximately ten percent of the overall cost spent on the programme. Furthermore, Mackenzie and Davies assume that the minimum staffing for the programme would have been five percent of the overall programme cost. This assumption now requires the question whether the additional five percent was valuable. The authors are of the opinion that in view of the result, the additional percentage was worth spending.

The already mentioned Olympic Effect also impacted the possibility of recruiting of highly experienced managers (Mackenzie and Davies, 2011, p. 10). Having an experienced and innovative employee working on the programme impacted the success and positive outcome of the Games.

The ODA put a lot of emphasis on health and safety and thus created a feeling of security among employees. Furthermore, employees felt that management cared about them (Mackenzie and Davis, 2011, p. 10). This increased employee commitment and productivity, leading to important consequences for future construction management practice.

Olympic Games knowledge management programme (OGKM)

According to IOC Executive Director Gilbert Felli, the Olympic Games Knowledge Management (OGKM) programme, constituted by the IOC, is an essential resource for organising committees of the Olympic Games (Olympic, 2014). The OGKM is a “socio-technical system which manages and shares knowledge to support Games Management goals” (International Olympic Committee, 2016, p. 1).

The purpose of the OGKM (International Olympic Committee, 2016, p. 1) is to:

- encourage Organising Committees (OCOG) to share their knowledge amongst each other
- understand the specific context and timing of each OCOG
- educate OCOG through learning opportunities

The OGKM (Olympic, 2014) provides an integrated platform of services and documentation, such as experience and knowledge of previous OCOGs. It assists Games organisers with learning from each other. The programme was created during the preparations for the 2000 Olympic Games in Sydney.

The programme contains three main sources: information, services and personal experience (Olympic, 2014). The source information includes elements such as the Games Official Report, technical manuals and knowledge reports. OGKM services provide workshops, seminars and a network of experts with experience with the Games. This enables the OCOG to include these experts throughout their event lifecycle. Furthermore, the programme provides a Games-time Observer Programme which allows staff members from future OCOGs to work in the current Olympic Games. This helps the new OCOG to gain first-hand experience for organising their own Games. During the 2014 Sochi Games, 370 staff members from the three Organising Committees Rio (2016), PyeongChang (2018) and Tokyo (2020) as well as from five applicant cities for the 2022 Olympic Games (Almaty, Beijing, Krakow, Lviv, and Oslo) were observing the Games-time operations and activities in different functional areas.

However, Allison Stewart (2012), an Associated Fellow at the Saïd Business School, questions the success of the programme. She believes that improved knowledge transfer is a false idol. As justification for this statement, she cites the following reasons:

- As the games only occur every four years (winter and summer Games differ in terms of the relevant knowledge), it is difficult to draw firm conclusions about how much a particular practice or decision has contributed to its success. Some context can change in a few years, such as availability of new technologies.
- Linguistic barriers make it difficult for the information provided by the previous organisation committees to be written in an unknown language for the new committee.

- Although many would like to see a development of the Olympic Games, organisers and host cities are still in competition with the previous Games. While the previous Games are often a useful source of information, they are also the Organising Committee's most direct competitors for the following event.
- Overconfidence of the new hosts that they can do it better. They see room for improvement and assume the thoughts behind the ideas were inadequate. Ironically, they mostly end up doing the same thing that they had criticised before.
- The Government investing in the Games has an incentive to make things appear in the best light. When problems arise, leaders under intense political scrutiny are inclined to downplay them. The actual number of required people, time or investment is not communicated between the Games. However, these problems that need to be solved are the best sources for learning.
- The Knowledge Management programme turned into policy, so that knowledge capture is formally required by the IOC. It is possible that the OCOGs are now less enthusiastic about the task. This is a well-known phenomenon when it comes to contracting.

At the end of the article, Stewart writes that in her opinion, more transparency and accountability should be sought instead of knowledge transfer. Because secrecy clouds aspects of the sporting event, lessons can instead be learnt from any effective accounting.

Stewart and her colleagues Flyvbjerg and Budzier (2016, pp. 17-18) compared the cost overruns of the Games before 1999 and the Games after 1999 (i.e. with the OGKM in place) with each other. Table 1 shows that there is a significant difference of 115% in cost overrun before (median = 166%) and after (median = 51%). It seems that cost overruns were significantly reduced after the introduction of Knowledge Management.

Pre-1999 Games	% cost overrun	Post-1999 Games	% cost overrun
Grenoble 1968	181	Sydney 2000	90
Montreal 1976	720	Salt Lake City 2002	24
Lake Placid 1980	324	Athens 2004	49
Sarajevo 1984	118	Torino 2006	80
Calgary 1988	65	Beijing 2008	2
Albertville 1992	137	Vancouver 2010	13
Barcelona 1992	266	London 2012	76
Lillehammer 1994	277	Sochi 2014	289
Atlanta 1996	151	Rio 2016*	51
Nagano 1998	56	-	-
Average	***230***	***Average***	***75***
Median	***166***	***Median***	***51***

**) Projected final Rio 2016 costs have been used.*

Table 1: Cost Overruns of the Past Olympic Games (Flyvbjerg, Stewart and Budzier,2016, p. 18)

Knowledge Management plays a major role, but there are many factors that influence costs (De Jong, 2017, p. 9). Yet Flyvbjerg, Stewart and Budzier (2016, p. 18) believe that the table shows that the OGKM programme is successful in reducing cost risks for the Olympic Games. The literature and further research did not show how helpful this program was to LOCOG and ODA.

There are some contradictions between the references with regard to the actual cost of the London Olympic Games. Furthermore, the statements vary from a cost overrun to a below budget level.

To summarise, the London 2012 Olympic Games involve many positive aspects of event management. Above all, time and cost management approaches and a strong focus on sustainability stand out. Furthermore, the good cooperation and relationship with contractors and employees contributed to the good result.

The next sub chapter analyses the Sochi Winter Olympic Games in 2014. This example was less successful compared to the London Games. These Games are analysed for the reasons which prevented the games from being successful.

3.3.2 Failed Event – Sochi Olympic Winter Games 2014

The Olympic Games in Sochi took place from 7 to 23 February 2014 (Müller, 2014, p. 628). The event reached the largest number of participants, athletes and subevents of any Winter Games before. Furthermore, the mega-event generated a revenue of $1.26 billion, the highest in the Games' history.

Most Olympic Games are managed by an OCOG, which is accountable to the IOC (Orttung and Zhemukhov, 2017, p. 28). In the case of the Sochi Games, however, President Putin put the control under less accountable and opaque state company than an OCOG. This method provided opportunities for corruption.

The Sochi Organising Committee started with planning and organising the Games in October 2007, after the bid had been won in the same year (SportsFeatures.com, 2014).

The organisations IFs and NOC, described in the chapter above, remained in the same role.

Cost

The total cost of the event was $55 billion, the largest recorded expense for any Olympic Games before (Müller, 2014, pp. 628-634). However, the Organising Committee and state officials maintained that the true cost was only $7.1 billion, as high expenditures should only be related to the modernisation of the larger Sochi region and hence the long-term benefit development of the region. Russia had launched a Federal Target Program for the development of the Sochi region as a winter sport resort before it won the bid for hosting the Winter Games. However, the author has doubts about the statement by the Organising Committee and state officials. In his opinion, $7.1 billion is too low, and some aspects such as cost for supporting infrastructure site preparations for sports venues (e.g. water and electricity supplies) were ignored. 96.5 percent of funding came from public money, the highest proportion for any Olympic Games recorded before.

There was a 289-percent cost overrun (Flyvbjerg, Budzier and Stewart, 2016, p. 18) compared to the planned cost in the bid. This makes Sochi the Games with the second highest cost overrun behind the 1976 Montreal Games with 720 percent. Some overruns can be explained with the change of the scope of the projects (Müller, 2014, p. 635). For example, the biathlon and cross-country complex had to be relocated and therefore to become a separate village because of the elevation differences with the Mountain Olympic Village. On the other hand, some scope aspects were downgraded compared to the bid, such as the road-rail link which was changed from a four-lane to a two-lane road.

The high costs of the Games can be justified with the fact that all venues and facilities had to be constructed from scratch. Usually, at least some venues exist already but need

to be upgraded. However, compared to a new construction, expenses for upgrades and renovation are normally significantly lower (Müller, 2014, p. 637).

The security budget was twice that of the previous Winter Games in Vancouver 2010 (Müller, 2014, p. 634). Furthermore it was higher than the security budget of the larger Summer Games in London 2012. Reasons for the high budget were the rising threat of terrorist attacks and the organising team which was threatened by some attacks near the Olympic area, for instance in Volgograd in December 2013, just weeks before the Games. According to Müller, this situation is called “hyper-insecurity”, in which money for security is not based on the probability of attacks, but rather on the very possibility. Therefore, during the Games, the military was present in addition to regular security forces.

However, Chechen rebel leader Doku Umarov and his fighters vowed to attack the Games, as these were hosted on the ground where many of their ancestors and dead Muslims are buried (Weaver, 2014). Two men attacked the city of Volgograd near Sochi and killed 32 people. Therefore, security personnel were additionally strengthened, turning this into one of the largest security operations in Olympic history.

Another reason for the cost overrun and the high expenses is Russia’s non-partial political system. Compared to other Games, the cost for the venues was 42 percent higher, which may indicate nepotism and corruption (Müller, 2014, p. 637). Former Deputy Prime Minister and opposition leader Boris Nemtsov claims that contractors, many of them Putin supporters, enriched themselves with about $26 billion in false costs. The new railroad and road to Sochi cost a total of about $8.7 billion, more than the whole 2010 Vancouver Olympic Games. According to Nemtsov, this sum is far too high (Weaver, 2014).

Time Management

Some buildings were ready just days before the Games started (Walker, 2014). Blocks and room fixtures were still put in place and the rooms for journalists were still under construction the week the Games started. The high spending could not ensure that hotels were built in time. However, the delays did not affect athletes' accommodation and the airport, train station and main venues.

Weather Condition Problems

The lower slopes of the area have no snow guarantee in February (Weaver, 2014). Swamps had to be drained, the previous year's snow stored and 400 snowmaking systems installed.

At the start of the Games, the temperature rose and there was no fresh snow (Gibson, 2014). The emergency plan, under which 450,000 cubic metres of snow were stored under special ceilings from earlier winters, was activated. The slalom track was sprayed with water overnight to obtain a harder surface. In addition, areas were treated with chemicals to harden the soft snow. The snow cannons could not be used at first because the weather was too warm and these can only be used with minus degrees.

Nevertheless, the organisers had to cancel the women's downhill training run due to poor conditions (Gibson, 2014). Some riders of the halfpipe snowboarding event complained about the condition of the pipe.

According to IOC spokesman Mark Adams, Sochi was not the only Winter Games experiencing problems with lack of snow (Gibson, 2014). The previous Winter Games in Vancouver had to ship in snow by helicopter and trucks to deal with a lack of snow. These problems are generally not unusual.

Staff

More than 70,000 staff were working for about $500 a month and seven days a week. Many staff were migrant workers and shipped in (Weaver, 2014). The staff were poorly paid and overworked, and without safety training or insurance. Dozens of staff members died in accidents (Benedictus, 2014).

Furthermore, Russia was held responsible for the failure to pay and accept passports on arrival for an alleged registration (Pabst, 2012). Without a passport, the workers of the companies were at the mercy of arbitrariness and had to do their work free of charge.

Sponsoring

Less than a year before the Games opening ceremony, the Russian President Vladimir Putin signed into law legislation banning any behaviour that promotes homosexuality (Bowring, 2014). This law caused much controversy internationally. It also led to a

withdrawal of Coca-Cola's sponsorship. Furthermore, several world leaders announced they would not be attending the Sochi Games.

Local Residents

The residents of Sochi were affected by the effects of the major event. London, for example, was able to complete the buildings without disturbing residents (Pabst, 2012).

Sustainability

During construction, rivers were polluted with construction waste, and previously protected forests were chopped down (Benedictus, 2014). The Organising Committee was audited by the IOC on the ecological sustainability of the construction projects (Pabst, 2012). However, the environmental organisation EcoWatch criticised that agreements were not observed. For example, an urban waste disposal system should have been developed, but instead the rubbish dump in the northern part of the city was enlarged, and access for the media became more difficult.

No coherent plan for the post-Games use of venues was in place. Most of the built venues are used as training sites for future Olympic athletes (Müller, 2014, p. 643). However, it has not been decided yet how to use the six stadiums and the main centre of the coastal cluster. Furthermore, venues are often not used for what they were built. The speed skating oval is now used by a tennis academy, and the figure skating stadium is considered to become a velodrome. The Olympic Stadium, which only hosted the opening and closing ceremonies, is used for the 2018 Soccer World Cup in Russia. It will be hosting several matches and for this had to be expanded by another 5,000 seats. This expansion cost an additional $52 million.

The venues often conform to the highest standards for efficient use of resources such as electricity and water. However, as venues are not in use after the Olympic Games, they fail to be sustainable in the long run (Müller, 2014, p. 643).

After the Games and Legacies

The Russians' goal for hosting the mega-event was to turn Sochi with state-of-the-art infrastructure into the league of world-class resorts, such as Zermatt and Whistler (Müller, 2014, p. 642). Furthermore, they wanted to push regional development.

However, European tourists are not very interested in Sochi's ski area (Müller, 2014, p. 642). Compared to international standards, Sochi's ski area is small and the trails are short. The four ski resorts do not have a single management and they each act alone. Linking them up would create a larger ski resort worth staying longer than two days. Furthermore, it is time consuming to get to the Sochi ski area from outside Russia. It requires a one-day travel as most flights require a transfer in Moscow. Additionally, most Russians cannot afford such holidays.

The railway connection from the airport to Sochi is slow and a branch line (Müller, 2014, pp. 644-645). With a frequency of less than one train an hour and a non-synchronised schedule of connecting trains, this causes a long waiting time.

The second goal was to present Russia as an open and modern country (Müller, pp. 646-648). To gain international recognition as a great power was one of Russia's principal driving forces behind Sochi. However, the image gain failed as soon as the media started to inform about possible corruption and delays. Furthermore, the issue with the legislation against homosexuality continued to worsen the international opinion of Russia.

Russia won 13 gold medals and 33 medals in total, which put Russia on top of the medal count of the Sochi Games ahead of the United States (Orttung and Zhemukhov, 2017, p. 12). However, it was later discovered that Russian athletes had been doping, and many tainted urine samples in the test cups had been changed with clean urine. More than 1,000 athletes profited from these cheats which were carefully planned and continually improved (Geisser, 2016). Putin was allegedly informed about the doping cheat (Wagner, 2018). As a result, the IOC excluded the Russian Olympic team and the National Olympic Committee from the 2018 Olympic Games in PyeongChang (Germann, 2017). Nevertheless, the IOC allowed the clean Russian athletes to participate under the Olympic flag and the name "Olympic Athlete from Russia".

Compared to the London Games, Sochi had to deal with several difficulties. Especially the high cost overrun, corruption, the sustainability of the venues and environment, the non-existent benefits and other factors all led to a bad reputation of the Games and Russia itself. Some of these factors can be addressed and improved in the planning and executing of the event.

In the next sub-chapter, the different factors for event management are drafted in success factors for events and recapped in subpoints. These factors are identified in literature and the London Games as a best practice example and the Sochi Games with its problems.

3.4 Critical Success Factors

The following points are possible success factors for event management, identified in literature and the examples:

Time Management:

- Time Management is important because of the logistics involved and the large number of individuals and organisations associated with the event.
- If the event is delayed, high pressure on the management and staff occurs, which can lead to health and safety problems. For example, deaths can occur due to a decrease in concentration and resulting carelessness; also, long working shifts impact the health of the staff.
- Delayed events can lead to higher costs when contractors ask for higher premiums.
- A comprehensive readiness programme can improve the smooth running of the Games along with the implementation of a continual improvement process, as for example with the London Games.
- The use of a tight-loose management can either reinforce the importance of a process or target of an aspect and provide flexibility to another aspect.

Cost and Budget Management:

- Ensuring the feasibility at the beginning of the event planning process can prevent wasting money on an impossible event.
- Exploiting the revenue potential.
- Delayed events must hire extra staff or add night shifts. Therefore, delivering an event on time is crucial. Furthermore, the impact on health and safety can affect the cost of an event.
- Higher cost can occur when the event is delayed. Contractors can take advantage and ask for higher premiums in order to finish the work on time.

- Planning with larger contingencies than needed raises the cost for an event. Therefore, knowledge about the actually needed contingencies can save costs.
- A change of assumptions made at the beginning of the planning phase of a mega-event makes it difficult to plan and to calculate budget.
- The competition between cities in a country and internationally can lead to an incentive to misrepresent the true cost of a bid.
- Changes such as in scope, additional cost from a contractor or poor contractor performance can lead to cost changes.
- Cash flow planning, including the timing of sponsorships and revenues from ticket sales or selling venues, is crucial. This can help to plan the expenses from existing funds.
- Corruption will lead to higher cost.
- To keep costs on track, the event management can take the London Games' method as an example, that is collaborating with four core committees which control all major activities.
- Regularly producing the AFC and AFR, with additional review and monitoring by senior executive management and a committee, can minimise and control the risks of cost overruns and revenue shortfalls.
- Reusing and upgrading existing venues can save cost.

Scope Management:

- The post-event use of built venues needs to be considered in the planning and design phase, which helps to create a social benefit for the host city.

Sustainability:

- There is a growing trend towards event participants wanting to know the ecological footprint of the respective event.
- Considering the reuse of venues based on the actual needs of the local population.
- Working with a sustainability and environmental management programme can help to meet the sustainable goals.
- Considering environmentally friendly transportation between the different places of an event.

- Integrating environmental consideration in planning can help target a host city's environmental issues, which can be turned into a social benefit for the local population.
- Usage of new, possible environmental technology, such as the greenhouse gas control system of the 2018 PyeongChang Olympic Games.

Stakeholder Management:

- A good relationship with local stakeholders can help towards a successful event.
- Sponsorship is one of the most common funding sources for events and has become a highly developed communication tool. Therefore, the target market should be identified to in turn identify sponsors with the same target market. A good fit between sponsor and event is critical.
- As sponsors expect a return on investment, it is essential to evaluate the sponsors' objectives to ensure that the sponsorship was successful and the relationship between sponsor and event will continue.
- A good risk management plan can help towards a positive reputation of an event with no published failures. This ensures good relations with sponsors, as the reputation of both parties are affected. However, a negative reputation can lead to a withdrawal of sponsorships.
- Every effort should be made to satisfy the sponsor and enhance its value.
- The Media provides financial resources by purchasing the right to broadcast the event.
- The Media often informs about the planning and construction of the event. Bad news can lead to a negative reputation of an event.
- The Media can reveal corruption which further leads to a negative reputation.
- Good competing conditions such as competition tracks and solid infrastructure can lead to positive reputation. Poor conditions are often commented on by athletes, with the Media spreading the news around the world.

Risk Management:

- Strategic and operational risk management help to prevent damage to an event's financial status and reputation.
- Risk management reduces the probability of a failed event.

- Risk management for the athletes and audience can reduce the risk to an acceptable level.
- Integrating security into every aspect of event planning ensures that security measures are implemented in all areas.
- "Design-in-security" concepts for venues can benefit both the event and the post-event users of venues and places.
- A health facility helps to deal with injuries and provides health care on site.
- Procedures and control mechanisms place the event in a good light if a charge of negligence were laid. If these do not exist, this can lead to a negative reputation.
- Having the risk assurance team work closely with the programme management from the start enables an integrated approach towards managing and mitigating operational risks related to short and long-term programme milestones.
- Head and Directors of different departments should be in close contact and cooperation with the Head of Risk Assurance to identify risks and manage the internal environment.
- Having emergency plans can improve the reaction to occurring risks.

Change Management and Problem Resolution Process:

- Problems should be identified at an early stage.
- Document changes and their impact can help to resolve disagreements over ex-post payments.
- Having changes reviewed by a change board can resolve issues continuously and before they become confrontational.
- Working closely with relevant contractors and taking time to identify, explore and evaluate options can lead to a better result.

Social Benefits and Legacies:

- It is essential to minimise an event's negative impacts on the immediate and wider environment and instead to achieve positive ones. There are many different types of possible impacts on the environment and host city.
- Positive impacts and legacies can lead to a positive reputation.

Structure of the Organisation:

- A delivery committee responsible for new venues and infrastructure can help turn the planned vision into reality.
- The structure should be created in such a way that corruption is disabled.

Integration Management:

- Integration between each interface and throughout the overall mega-event is important as events of this size involve a large number of sub-projects, sub-events and overlapping elements of infrastructure.

Supplier and Supply Chain:

- Solid contracts help to ensure good quality and on-time deliveries by contractors.
- Bottom-up knowledge can be achieved with proposals from delivery partners.
- A supportive culture is a key success factor in dealing with suppliers.
- Industry Sector Days and Liaison Group improve the collaboration with contractors.
- If contracts involve incentives, a KPI approach offers flexibility to reconcile incentives between contractors.

Staffing:

- Having experienced and innovative employees work on the event can impact the success of an event.
- Good health and safety increases employee commitment and productivity. Furthermore, this helps to create a positive reputation.

Knowledge Management Programme:

- Knowledge management programmes help to share knowledge and personal experience between project or event managers.

In the next chapter, the above success factors are compared with the success factors identified in the interviews. Are there any similarities from between the theory and the practical experience? Are some success factors different or less important? Can new success factors be identified?

4 Practical Part

4.1 Interview Partners

The following list shows the interview partners, type of sport event, date and how the interview was conducted. The interview partners and the title of the event are not mentioned by name in this thesis.

Interviewee	Practitioner A in horseraces	Practitioner B in ice hockey	Practitioner C in ski racing	Practitioner D in triathlon	Expert	Practitioner E in cycling	Practitioner F in athletics
Date	16.04.2018	23.04.2018	23.04.2018	24.04.2018	24.04.2018	27.04.2018	02.05.2018
Execution	Face to face	Face to face	phone	Face to face	Face to face	Face to face	Face to face

The decision to request an interview with representatives from the above-mentioned events was based on the fact that these events are some of the most popular sports events in Switzerland. It was possible to get a wide range of different sports and event types, leading to a good diversity. A list of the interview questions asked can be found in the appendix.

4.2 Examine the Validity of Defined Success Factors

The aims of an event can differ, depending also on the shape and size of the event. Many different aims could be derived from the interviews:

- Added value (tourism, assignment of projects and jobs)
- Sustainability
- Make a profit to pay all wages
- Create a unique experience for athletes, create emotions, and provide a once in a lifetime experience
- Provide an exciting competition with the world's best athletes
- Maintain a high level of the event
- Visitors should not forget the evening anymore and go home fascinated and positively surprised
- Continue great traditions

In the next sub-chapter, similarly important aspects for events from the literature are further described with the interview partners' opinions and quotes.

4.2.1 Similarities with Already Defined Success Factors

The following factors could be identified from the literature and interviews:

- Safety
- Sustainability
- Stakeholders
- Sponsoring
- Staffing
- Knowledge Management Programme
- Organisation
- Risk Management
- Change Management and Problem Resolution Process

Safety

Practitioner A thinks safety is important, not only for athletes but also for spectators. At one event there was a serious accident at the racetrack, and the jockey had to be transported away with the air-rescue service Rega while the horse had to be euthanised at the racetrack. There are efforts to make everything at horse races even safer for visitors, especially in today's time. The cantonal police work well with the security company, thus guaranteeing a safe event.

This point was, among others, also mentioned by practitioner F. Furthermore, in the theory chapter, this factor was combined with risk management. But because of its importance in practice, this factor is specified as a stand-alone factor.

Sustainability

Sustainability is taken into account at all events and is generally considered important.

Some sports events take place in nature, such as the horse race. According to practitioner A, many guests are not aware of where they are at that moment. Loudspeakers therefore draw attention to the fact that no waste should be left behind to protect nature.

The triathlon event is always trying to become more sustainable, even if there are no strict requirements yet. Nevertheless, these will come at some point, but by then the triathlon event will already be more sustainable. In addition, this discipline can be a role model for other events. People always think about what they could do and what is not worthwhile.

Sustainability and the preservation of nature in the mountains are also important for ski racing. Without the mountains, the product of the ski race event is worth nothing.

According to practitioner B, sustainability is also a sympathy issue. Nevertheless, one should think about what makes sense. A good example of this are reusable cups. These must be washed in a special washing plant with special rinsing agent. The transport from the event to the wash station is done by truck. However, since these stations are too far away from the ice hockey match, this does not make any ecological sense. For the organisation's reputation, it is also important not to simply install something sustainable that has not been analysed in detail. If the media pays attention to the not really improved sustainability, this could damage the reputation. But sustainability can also happen in the social sector, for example by involving young people; one example are children who have the chance to enter the stadium with the big stars of the sport.

The expert finds sustainability a fashion phenomenon. Nevertheless, sustainability is underestimated and can be divided into different categories.

Stakeholders

Practitioner E believes support from all stakeholders is important.

Practitioner D mentioned that it is important to be able to involve all stakeholders so that everyone goes home satisfied at the end of the day and comes back the following year. All the different stakeholders need to be taken into account.

Sponsoring

This was mentioned by all interview partners as an important point. Therefore, sponsoring is separated from stakeholders, unlike in the theory chapter.

The horse race event has three main sponsors who want to see a budget plan at the beginning of event planning. This allows them to control what the money is spent on. In general, reputational problems in connection with sponsors are bad, as sponsors are dragged in. Budget tracking is therefore important because bankruptcy or to cease

payment can cause bad reputation. Good reputation is important to make money, also for the coming years. The horse race event wanted to enter into cooperation with Turkey. However, the sponsors did not want to be associated with Turkey, as their reputation could suffer as a result. Reputation is also built based on appearance, for example through the image of an event. Organisers have now separated the racing area and the event area and appear as a team, whereas before it used to look more like a one-man show. In addition, the event is also better received, and competences are better distributed.

Practitioner B believes that sponsors also demand that one remains innovative again and again and develops new concepts. Therefore, product development, staying up to date and maintaining the high level of the event are important.

The main sponsors of the cycling race need to match with the sponsors of the local organisation committees.

For the expert it is important to meet all the sponsors' needs. These differ individually depending on the sponsor.

Staffing

Practitioner A is of the opinion that the cluster risk should be taken into account. Therefore, specific aspects of the event should not only be known to individuals, but knowledge should be broadly based. The wider your support, the better. This way you will be prepared in case of an employee resignation or accident.

Good communication and overview are important due to the many different organising committees at the bike race. But the people behind an event are also important. They must have the necessary expertise and skills. For example, the person responsible for the races at the bike race is a former professional cyclist who knows how to make a race exciting.

Knowledge Management Programme

The horse racing event is associated with other events. They meet four to five times a year and exchange information. Practitioner A finds this very valuable. In addition, the association of events can be used for advertising agreements that cannot be settled individually. The events are from different areas and are not in competition with each other.

Practitioner F is also involved in the athletics event and, in addition to event management, is working for the organisation of the association of the events. She is also of the opinion that these meetings and the mutual exchange are very useful. This way, a solution to a problem can be found together or experiences exchanged.

Organisation

Practitioner D considers a good exchange between all parties involved in the various departments, such as marketing, sponsorship and sales, important. Communication also plays a key role, so that the right information is taken to the right place and everyone knows what to do.

For practitioner C, trust in long-term partnerships and employees as well as giving clear orders are important for success.

Risk Management

There are always things that go wrong, says practitioner E; for example, when equipment cannot be delivered in advance and then a last-minute solution has to be found. It's important to offer an apology to guests and stakeholders if something went wrong, and communicating this correctly is also essential. Basically, it is important to have manuals for everything that could go wrong while also maintaining a certain openness and flexibility as an event manager.

Change Management and Problem Resolution Process

Practitioner C is of the opinion that there is always the question of how to deal with mistakes – stand by them and learn from them. But sometimes, making mistakes is also important so that it is possible to learn from them. The appropriate measures should be taken for prevention, and the framework conditions adapted.

Practitioner F agrees that it is important to learn from mistakes. For example, the sponsor tent could not be opened due to bad weather. The tent entrances had to be closed so that the wind would not destroy the interior design, including the decoration. Because of this incident, the decoration is now supposed to be weatherproof and stable.

The next sub-chapter describes the newly identified success factors from the interviews.

4.2.2 Newly Determined Success Factors

From the interviews, the following new success factors could be identified:

- Programme
- Social Media and New Technologies
- Animal Protection
- Volunteers

Programme

For practitioner A it is important to meet the requirements of the guests. The demands, however, change frequently. The event consists of two main groups, VIP visitors and regular visitors who like the folk festival-like atmosphere. The first group's expectations are more difficult to live up to. This is due to the financial strength of the company and the fact that it attends many events during the year. This clientele is used to luxuries such as oysters and caviar, so it is important to think about how to attract them. After the event you always try to follow up on what visitors liked and what they didn't like. Thus, the needs can be picked up better.

Compared to other events, sports events are very dynamic and short-lived, says practitioner C. The race or a football match takes place at a fixed time, and one day later you already know the results and don't necessarily want to watch the race or match. At an art exhibition, however, a painting is just as beautiful and impressive the following day. Therefore, such exhibitions often last longer. Due to its short lifespan, there is also a great interest to watch the sports event.

The athletes are an important factor in the athletics event. Their popularity attracts visitors. It is therefore important to ensure that the right athletes take part and that they make the long journey to Switzerland. Taking care of the athletes is a challenge. So that they can get acclimatised before the event, they already arrive several days before the competition. Their regular daily routine with training and food must nevertheless be adhered to. Therefore, training facilities, equipment and food must be provided. The diet can vary according to athlete and his or her origin. In addition, the opening show is important, as is the farewell ceremony and its emotional touch so that spectators do not forget the event so quickly. The audience must always be offered something new. After

the event, it is customary to follow up on what visitors liked and what they didn't like. Therefore, the needs and wishes of visitors can be better met.

Good teams at the ice hockey tournament are also important for practitioner B to create sporting excitement. In addition, it is important to provide entertainment and food for spectators.

Volunteers

Each horse race event has 200 volunteers. Practitioner A is of the opinion that without volunteers, today's events could no longer be financed at the box office or at the grandstand. Reputation is also important here. Without earning anything, the helpers come to be a part of the event. In case the event suffers a reputational damage, they will not be volunteering anymore and do not want to be connected to the event.

The aspect ‘volunteers’ can also be found in the literature about event management. One of the key management problems is an event’s dependence on the community and volunteers (Masterman, 2004, p. 139). Masterman indicates that the latter depend on the former, which means the size of the community in which the event is hosted affects the number of volunteers. Furthermore, volunteers are crucial for an event and its success (Pielichaty, Els, Reed and Mawer, 2017, p. 70). In his study, Wakelin found 495 reasons for volunteering. According to Treuen (2014, pp. 61-62), event volunteers can be segmented in six categories based on their motivation for volunteering:

- The volunteer is motivated by freebies
- The volunteer feels like getting involved in volunteering
- The volunteer loves the event and wants to volunteer again next year
- The volunteer thinks it will be good for his career and his curriculum vitae
- The volunteer wants to support her colleagues
- The volunteer has been helping over a long time but has no strong connection to the event itself.

The event management should know the motivation of volunteers. If volunteers are value driven, the event management needs to ensure that these values are met (Pielichaty, Els, Reed and Mawer, 2017, p. 71). This aspect is interesting as the terms ‘volunteer’ and ‘value’ disagree. Everyone follows their personal interests, and true volunteers are hard to find. Furthermore, the event management should consider these segments in order to

allocate the right activity to each volunteer. For example, it can be beneficial for the event if the volunteer is interested in the competitor or team involved. They will be enthusiastic and will present a welcoming face. However, volunteers may be distracted at work, and their professionalism may drop when faced with their favourite competitor or team.

Animal Protection

If animals are involved, as for example with horse racing, measures for animal protection are offered. For the race the newest stables were built for the horses. In addition, organisers wanted to introduce a ban on whips, which, however, could not fully assert itself. However, today you can only use the whip three times per race. In addition, only healthy horses are allowed to compete. If a horse is paralysed, it will be suspended from the race by the vet present.

There are not many sports involving animals. For the generalisation of the success factors of events, this point is not considered in the model described in chapter 4.4.

Social Media and New Trends

Practitioner A finds social media very interesting in terms of number of clicks and the demographics of followers. It also provides insight into the types of guests and their interests. Social media must be observed constantly.

Starting this year, the athletics event also has a very strong focus on building up the event's social media presence. Practitioner F thinks that for too long, this has not been taken into account.

The hockey tournament is also considering focusing more on new internet trends. Practitioner B is considering whether to enter the online sport and to participate in a hockey game channel. This is also a new platform for generating new sponsors and potential guests among the younger generation.

Planning

The installation of the sponsoring village at the athletics event must be completed within two weeks, mentioned practitioner F. This requires a schedule that shows who must do what and when in a 10-minute cycle. In the event of a delay, this can affect the entire subsequent planning.

For the expert, good project management with a clean plan and structure is an important success factor.

Is it possible to host mega-events such as the Olympic Games in Switzerland? This question is tried to be answered in the next sub-chapter.

4.3 Mega-Events in Switzerland

Legacies from Past Olympic Games in Switzerland

Switzerland hosted the Olympic Games twice in the past, in 1928 and 1948. Both times, St. Moritz was host to the mega-event.

The Games in 1928 were the first Winter Games, which have been declared as winter games in advance. The 1948 Games symbolised the peace agreement after the end of the Second World War.

The Olympic Games provided impetus for the development of winter tourism, and they helped to make St. Moritz one of the world's leading winter sports destinations. Before that, the winter sports resort was mainly geared towards thermal treatments in summer. The heritage is still visible in terms of the impact of the Games on tourism and winter sports in this region (Lacotte, Kiuri and Stricker, 2017, p. 23). The competition venues of St. Moritz, such as the Olympia Bob and Cresta Run, have survived to this day and have a high symbolic value (Lacotte, Kiuri and Stricker, 2017, p. 27).

Past Candidacies

A total of 47 bidding projects for the Olympic Games have been launched in Switzerland, 40 of which were for the Winter Games alone. Seven official candidatures were submitted to the IOC for the Winter Games and two for the Summer Games. Only the United States have submitted more candidatures for the Winter Games than Switzerland (Lacotte, Kiuri and Stricker, 2017, p. 23).

Six out of ten cantonal Olympic proposals were rejected by the people (Lacotte, Kiuri and Stricker, 2017, pp. 23-24). Three candidatures had to be withdrawn because the entire population did not support them.

For a successful candidacy concept, athletes and coaches must be able to live together, the requirements imposed by the IOC considered and the Olympic objectives met

(Lacotte, Kiuri and Stricker, 2017, p. 25). In addition, it must be possible to stage the competitions in an Olympic environment and meet the requirements for the size of the stadiums as well as the transport systems.

Requirements of the IOC

In the framework of its "Agenda 2022" reform programme, the IOC announced that the sustainability aspect of the Olympic projects was to be given greater weight. Therefore, future candidacies should undergo fundamental discussions (Lacotte, Kiuri and Stricker, 2017, p. 26).

According to the reform programme, the Olympic heritage should require that venues continue to be used and maintained. Heritage can also be recognised as cultural heritage, as in the case of Stockholm, Amsterdam or Melbourne. These cities have preserved their heritage and integrated it as part of their culture and identity (Lacotte, Kiuri and Stricker, 2017, p. 27).

Comparison of past and present requirements:

The requirements for the earlier Games (1924-1948) and today's Games (2014 onwards) have changed with the reform "Agenda 2020". The size of the Games has also changed. For example, the total number of athletes competing in the 1928 edition in St. Moritz was 464 (Lacotte, Kiuri and Stricker, 2017, p. 59), which is low compared to the 2,800 athletes participating in the 2014 Sochi Winter Games (Statista, 2018). Pictures in the appendix provide a comparison of the opening ceremonies of both events.

Earlier: (1924-48) In those days, the Winter Games were held in places with a lot of snow. The locations also had to have sufficient hotel capacity. The interests of spectators and the participating athletes were manageable, requiring small investments in buildings with not very high requirements (Lacotte, Kiuri and Stricker, 2017, p. 43).

Today: (from 2014 with "Agenda 2020") Existing infrastructures are to be used instead of new buildings. Decentralisation of the individual disciplines is possible and accepted if this is done for reasons of geography or sustainability. Temporary structures are also approved but must meet the high standards of the IOC and offer the best competition conditions for athletes. The aim of the IOC (Lacotte, Kiuri and Stricker, 2017, p. 55) is an attractive programme with no further growth.

Opinion of the Interview Partners

A mega-event in Switzerland is feasible for all interview partners. The challenge is usually seen in the infrastructure and support by the population.

Practitioner A believes a mega-event like an Olympic Games can only be sustainable if it is distributed throughout Switzerland and not just in one canton. For example, Davos has hockey stadiums and St. Moritz has a bobsleigh track. The distances between the places in Switzerland are no greater than with other hosts. Furthermore, the IOC's reputation is bad due to corruption and poor sustainability. This would have to change for the population to support such a project. The 2017 World Ski Championships in St. Moritz went well and there are now no buildings that are no longer in use. Thanks to this event, St. Moritz has a better train connection to Zurich. Therefore, the benefits and added value of such an event should be communicated, and the added value has to be of overall and long-term use.

Practitioner D shares the opinion that all of Switzerland must be included in hosting an Olympic Games. It is also important to get away from gigantism and make everything smaller and more sustainable. In this way, support can be won from the population. It will be difficult to win the public over to a mega-event if the public has to spend a lot of money. For practitioner D, however, we are still a long way from departing from this gigantism.

Practitioner C adds that only in a merger of several regions are the political opinions in favour of an Olympics. Therefore, every winter sports region could benefit from it.

If Switzerland attempted to make the Games a little more sustainable and smaller, it would be possible to host the event, says practitioner A. Nevertheless, the IOC must at some point give up its gigantism. In addition, the competitions must not follow each other too quickly. This does not go down well with the population. It is also the enthusiasm of those responsible for planning the applications that shapes the image projected to the outside world. You must be able to see that they are passionate about it.

Practitioner E believes that the population must be satisfied in that the Games can be justified with a sustainable benefit that will last for several years. Otherwise, dissatisfaction and financial holes will arise after the event. Therefore, a mega-event must not only bring benefits on day X.

Another big question is how to deal with all the environmental associations, says the expert. Also, it is a question of effort and yield, and how much one is willing to spend.

To sum up, it is possible for Switzerland to host a mega-event, as other, smaller examples such as the 2017 World Ski Championships in St. Moritz have shown. However, some points must be considered in order to gain the acceptance by the population and politics. It is more advantageous to include more regions in Switzerland or the whole country. This way, existing venues can be used and therefore cost for building new venues can be saved. Furthermore, benefits from such a mega-event need to be planned in advance and communicated clearly to the population in order to gain their support. Nevertheless, the IOC must minimise its requirements, otherwise Switzerland's bid will be defeated again in a public referendum. Sharing the mega-event, such as Switzerland did with Austria for the Soccer European Championship 2008 (e.g. Neue Zürcher Zeitung, 2002), can be another option for Switzerland hosting an event of such a size.

In the following chapter the differences between event management and project management are identified, and it will be further discussed if project management knowledge is required for a successful event.

4.4 Event Management Versus Project Management

4.4.1 Differences

There are many discussions on whether event management is project management. In fact, opinions differ greatly. Some opinions about this topic are listed from the literature and interviews.

Bladen, Kennell, Abson and Wilde (2012, p. 23) are of the opinion that projects differ from a company's daily processes. Furthermore, they argue that events are projects because of the partly same characteristics such as life cycle, budget and unique tasks. Cserháti and Szabó (2014) share their opinion and even go a step further by not distinguishing between the two fields. In their study of success factors in event management, they analyse World and European Championships from the project management perspective.

Bowdin, Allen, O'Toole, Harris and McDonnell (2011, p. 257) state that creating an event or festival is a project and that project management tools ensure the successful completion of an event.

Practitioner A believes that event management has more to do with emotions, because it is about arousing the emotions of visitors. In addition, more interest groups, such as stakeholders and tourist groups and active participants, are involved. Project management is more structured, and it usually only concerns the implementation of the planned project and usually only one target group. Events are less predictable and depend on the human factor and also on factors that cannot be influenced.

For practitioner D, events and projects are the same and an event is a project. There are also projects that are comprehensive. Practitioner C believes that event management processes are repetitive and have a similar pattern every year. A project is completed at some point and a new project is started. For practitioner F, project management is broader than event management. In addition, planning should not be overly rigid in event management; the event management profession requires a certain flexibility and fast decision-making.

For practitioner B, event management is more the implementation, while project management is more needed at the beginning of planning and after the event for completion. Project management is the central point for coordinating and networking everything.

The authors Pielichaty, Els, Reed and Mawer (2017, p. 15) showed the relationship of the two managements with a Venn diagram.

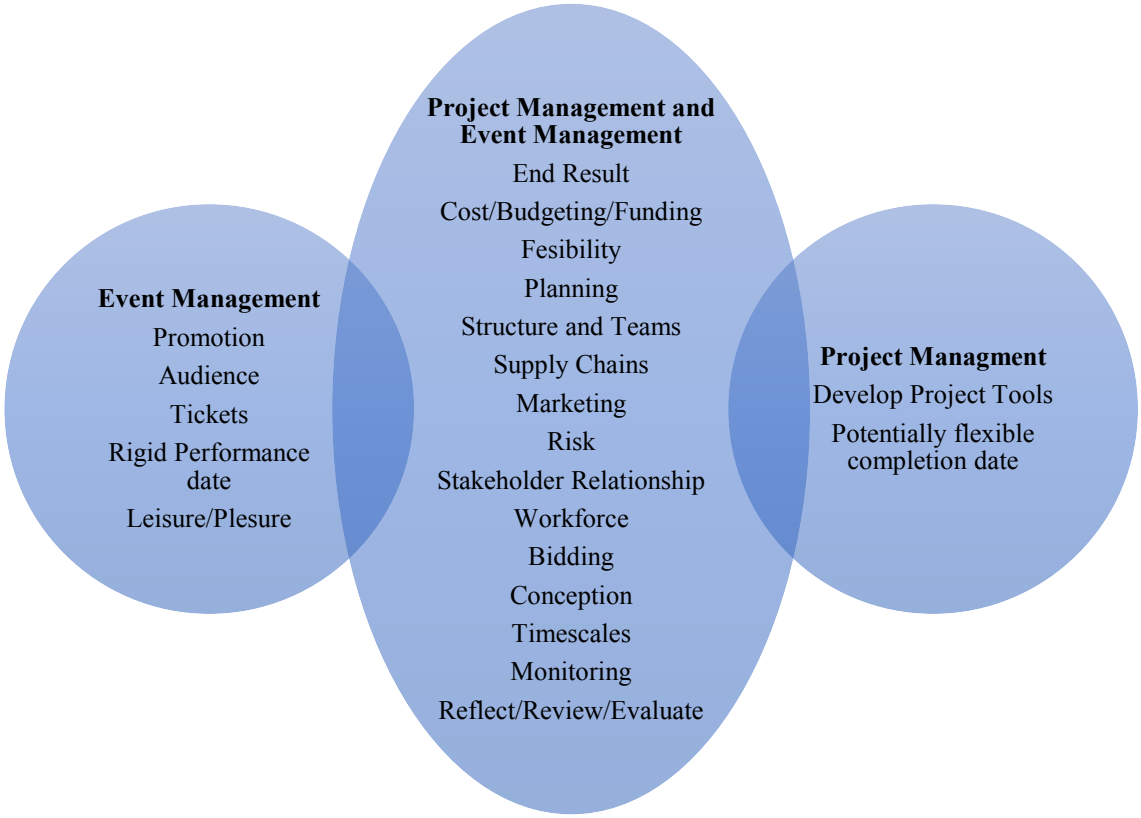

Figure 5: Differences and Similarities between Event Management and Project Management (Own Illustration based on Pielichaty, Els, Reed and Mawer, 2017, p. 15)

The differences between event management and project management from the theory, the diagram and the interviews are summarised in the table below.

Event Management	**Project Management**
Rigid performance date	Potentially flexible completion date
Awake emotions	Implementation of the planned project
More target groups	Fewer target groups
Repeating processes in a recurring event	Project is unique and after completion a new project is started
Many factors influencing the event	Broadly diversified
Requires flexibility	Does not require flexibility
Includes Promotion, Audience and Tickets	

Table 2: Differences between Event Management and Project Management

There are some exceptions of the point "Rigid performance date". For example, the soccer World Cup in 2022 (The Guardian, 2015) which will take place in Qatar, is changed from

July to the month of December. Reasons for this change are the high temperature in summer months in this region, as they can rise up to 50C. The duration is shortened from 32 days to 28 days due to the reason that less national soccer tournaments are impacted by the World Cup. Another example is the exposition in Switzerland (Büchi, 2010), which was panned for 2001 but was implemented one year later. One of the reasons for this delay was that no canton took over the leadership, until the federal council had to lead.

Although some differences were identified between the two, the connection of project and event management is complex and there is no universal answer. If we assume that there are differences, the question arises if project management knowledge is needed for planning a successful event. The next chapter tries to identify an answer from the theory and interviews.

4.4.2 Is Project Management Knowledge Needed for Successfully Planning an Event?

However, Cserháti and Szabó (2014, p. 623) think that project management tools and techniques are important for the definition and planning phases of an event. Later during the implementation phase, however, soft skills, relationships and appropriate communication are crucial for a successful event.

Ceil (2015, p. 2) writes that the most critical techniques of project management are budgeting, review and cost control. Therefore, with large projects, these project management techniques help to control the project or event and achieve its objectives.

Van der Wagen (2007, p. 181) writes in her book that a clear illustration, planning and organisation of an event determine its success. Furthermore, project management tools such as organisation charts, maps and models, Gantt charts and checklists are useful tools for gathering material and information for the event's clients, staff members and stakeholders (Van der Wagen, 2007, p. 186).

Planning (Masterman, 2004, p. 137) an event is a complicated process that becomes more sophisticated as the event gets larger. Therefore, systems and methodology are required to ensure an effective planning. According to Masterman (2004, p. 137), project management is indispensable.

In general, the interviewed events do not work with a project management model. Many work with Excel lists, which contain the tasks and the time by when they must be

completed. Nevertheless, models or tools are occasionally used to support planning. Furthermore, all interview partners shared the opinion that project management knowledge is important for a successful event.

Horse racing, for example, uses a programme for the budget and its control to check the costs and this calculates whether the event is above or below the planned budget. Practitioner A believes it makes sense to work with a project management teaching such as PMI or Hermes when organising a new event. Over time, however, you can use your experience and benefit from events that have already taken place. Nevertheless, even traditional events should not solely rely on their data from previous events as that could lead to business blindness.

Practitioner D thinks that although project management is needed, there is still a lot of common sense involved. At the beginning it is important to have the right guidelines, defining where you want to go and what the goal is. Each department uses different tools for organising the triathlons, such as Smart Sheets and Outlook. A comprehensive tool is not used.

According to practitioner C, project management knowledge can be used as a basis, but it is more process-oriented. To meet aspects such as meeting tight deadlines and reviewing orders, project management is a good basis for success. However, only a few different tools are used in the ski race, such as CRM.

Practitioner F also thinks that project management knowledge is needed. Above all, it is important in planning, but with more experience this is no longer done in detail. Nevertheless, one must ask in each case whether the methods and schemes defined in previous years are still current and still make sense.

The opinion of practitioner E is that the depth of project management knowledge necessary depends on the position. Especially as a project manager you need a lot of knowledge to keep track of the whole project.

Based on the literature and interviews, the unanimous statement that project management knowledge is important for a successful event can be identified. However, studying project management methods such as PMI or Hermes is not essential. However, they can be helpful when planning a new event.

In the next sub-chapter, all the learnings from the literature and interviews are processed in a model, which can help to organise and stage a mega-event in Switzerland

4.5 International Big Events in Switzerland; Model

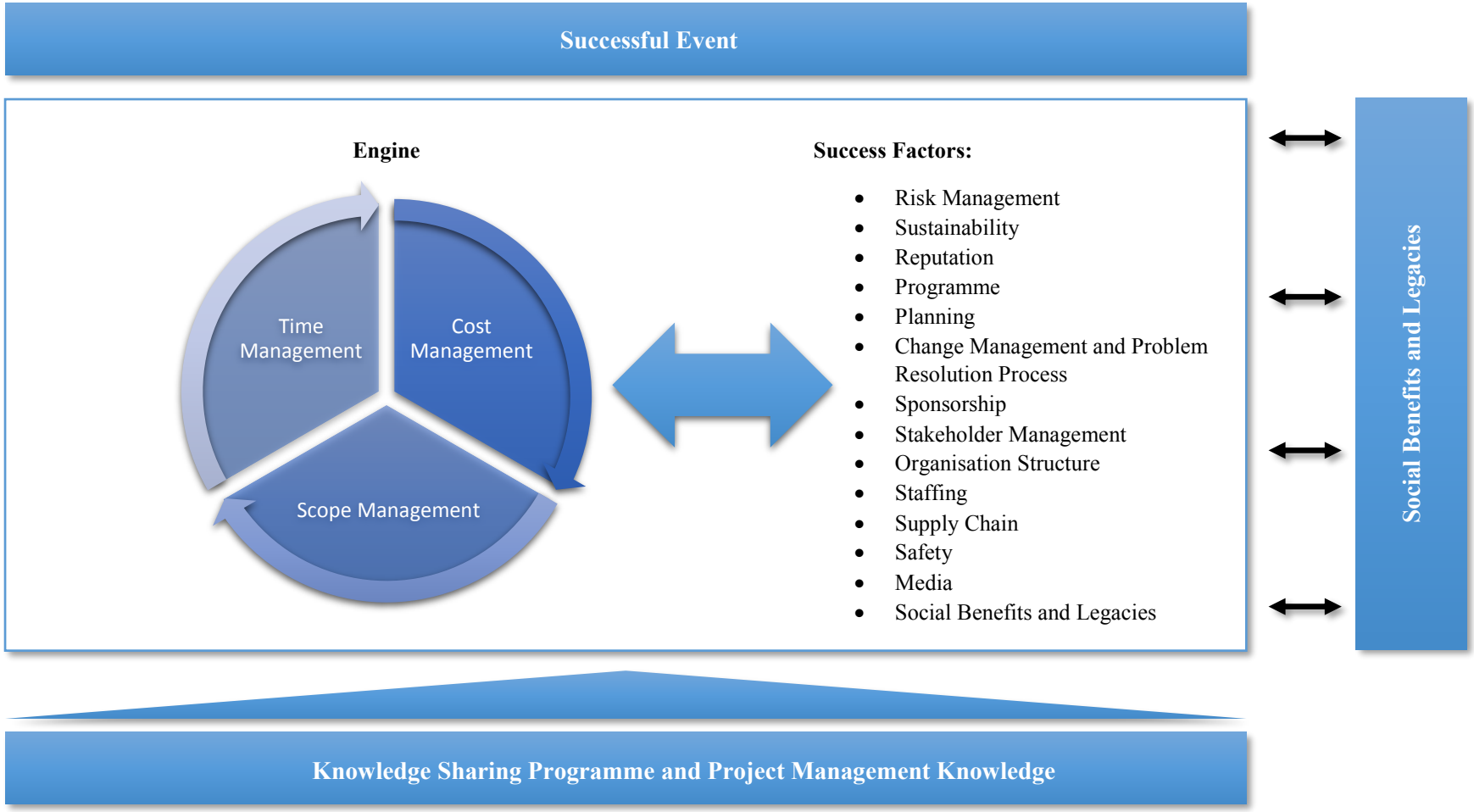

Figure 6: Model for Successful Event Management

The model above shows what needs to be considered and what factors influence events to be successful. The main part is the engine with the three iron triangle factors scope, cost and time management and the 14 success factors next to the "wheel". From the bottom, event management is supported by knowledge sharing programme and project management knowledge. Furthermore, the planning is impacted by social benefits and legacies, which are required after the event for it to be successful. The result, that is the successful event, is illustrated above the model. All parts of the model are further described and explained.

The three iron aspects are illustrated as an engine or an ongoing process. The aspects scope, time and cost management are directly related and dependent on each other. Therefore, if a success factor such as risk management is planned or changed, this will have a direct impact on at least one of the three aspects. Since a balance between the three aspects is required, the impacted aspect(s) from the planning or change will impact the other iron aspect. Therefore, the engine is constantly turning during the event management in order to keep the balance between the three aspects. Additionally, the three aspects play an important role when it comes to the success of an event. A successful event needs to be in time, on schedule and within budget. Therefore, a tight management of all three aspects is required.

The 14 success factors require attention while managing the event. These factors are essential for a successful event and for a better end result. Some success factors can affect each other in a negative or positive way, therefore focusing on these factors can improve other success factors. Some connections between the factors are illustrated and described in the appendix.

Risk Management

Risk management helps to reduce the probability of failure of an event and helps to deal with uncertain or unexpected situations. The head of risk management should be in close contact with the heads of the different departments to identify risks and create an action plan if they do occur. Risk management helps to not exceed the set budget and keep the reputation positive. In addition, it is important to have manuals for everything that might go wrong in order to better react to unforeseen issues.

Sustainability

There is a growing trend towards focusing on sustainability in event management. Sustainability is a wide term and can include anything from using reusable dishes and supporting the young generation, to reusing venues after the event. Environmental consideration should be integrated in planning. Therefore, to improve sustainability, all possible aspects should be taken into account; however, they need to demonstrably improve sustainability, otherwise the reputation can be harmed. On the other hand, reputation can be positively upheld by creating a sustainable event as this topic is a sympathy issue. Reusing venues is an important point in mega-event management. All venues required for such an event should be reused after the event or built from renovated and already existing venues. This can positively affect the factor 'social benefits and legacies'. Additionally, sports events, especially winter sports, take place in nature; therefore, creating awareness among visitors helps to keep nature clean. These events depend on nature which makes caring about nature essential.

Reputation

The reputation of an event is crucial especially for sponsoring and staffing. A positive reputation means that no or almost no negative news has been shared about the event. With a good reputation, new or existing sponsors will collaborate with an event, and volunteers or potential employees with a lot of experience are interested in working for an event. Furthermore, a positive reputation makes participating in an event more attractive for both spectators and athletes.

Programme

The programme is important for an event in order to impress and create emotions with athletes and especially with visitors. They should still remember an event years later. Therefore, new ideas and concepts are required every year. Furthermore, an interesting and high-level sports match, game or race creates a positive experience for the audience and athletes. Additionally, famous sports athletes attract more attention and more visitors. An important point, therefore, is to organise top athletes and conditions for the match, game or race. A new and creative programme with top athletes positively influences an event's reputation. In addition, addressing and satisfying all visitor groups, such as families, VIPs and the young generation, creates a positive experience for all visitors.

After the event, following up on what visitors liked and what could be done better, helps to address their expectations and wishes.

Planning

A strict and detailed planning helps to meet all the requirements of an event. Furthermore, some aspects, such as the post-event use of venues, should be included in the planning. This enables organisers to create positive social benefits and legacies. Furthermore, a detailed planning helps to meet the three aspects of the iron triangle.

Change Management and Problem Resolution Process

Problems should be identified at an early stage as addressing these early saves time and money. Changes reviewed by a change board can resolve issues continuously and before they become confrontational. Failures occur often in event management and therefore require a certain flexibility on the event manager's part. Furthermore, failures are important for creating learnings for future events and helping to adapt the framework. In addition, a change management and problem resolution process improves the reputation by ensuring a smooth event. If, however, failures or problems occur which cannot be resolved, an apology and communicating it correctly to the stakeholders is important for getting their understanding and keeping a positive reputation.

Sponsorship

Sponsors are important for the feasibility of events and their financing. In return, sponsors demand innovation and a positive reputation of an event. Furthermore, all sponsors, main and local sponsors, should fit together. It is important to identify and meet all the sponsors' needs and expectations.

Stakeholder Management

Mega-events involve many different stakeholders. Managing all the requirements and creating a good relationship with them can improve the outcome of an event. Additionally, getting support from all stakeholders is important for an event.

Organisation Structure

The structure of an event's organisation has an impact on the quality of the internal communication and on corruption. A well-functioning communication is essential for a successful event, especially for events with more than one department and organisation

committee. On the day of the event, every staff member and volunteer should know what they have to do and at what time. Some organisational forms increase the possibility of corruption. Corruption, however, affects the reputation of the event and organisation if it becomes public and raises the cost of an event. In addition, the cluster risk must be considered in the organisation structure. Therefore, at least two employees in the organisation should have the knowledge in case a person is unable to work or retires.

Staffing

Highly skilled staff members help to achieve the event objectives. The staff's knowledge and skills should meet the requirements of their activities and role for the event. In this model, volunteers are integrated into staffing, as they are staff members, as well. Volunteers are required for making an event financially viable. They are willing to work in their free time without pay. To successfully find a large number of volunteers, a positive reputation and understanding the motivation for volunteering are helpful. Furthermore, if volunteers are value driven, the event management needs to ensure that these values are met. This way, volunteers are satisfied and potentially offer their help again in the next event. The understanding of the volunteers' motivation also supports allocating the best activity for them.

Supply Chain

Good contractors help to ensure a good quality and on-time delivery. Therefore, trusting worthy partners is key for success and a positive reputation.

Safety

Considering the safety of athletes and spectators is essential for a successful event. Anything that helps to minimise the risk of injuries should be done. Especially at a time when many attacks occur, safety and security are important. Therefore, a well-constructed safety strategy and collaboration with security companies are beneficial. Furthermore, a health facility near the event helps to deal with injuries and health problems of spectators and athletes. A safe event without any issues supports a positive reputation.

Media

The media provides financial resources by purchasing the right to broadcast the event. Furthermore, across the globe, it informs about the planning and construction of events. Social media can be used as a measurement tool based on the click and like numbers.

Additionally, it provides insight into the target group's demographic and interests. Social media is considered an important point in today's promotion and in gaining the new generation as potential visitors or participants. New internet trends and technologies can further help with creating new sponsorship or promotion concepts. Furthermore, the media and new trends help to create a positive reputation of an event if the event management provides material for positive and not negative news.

Social Benefits and Legacies

Social benefits and legacies need to be planned and elaborated in the planning to meet the expectations of the population. The event management needs to minimise any negative impact and achieve a maximum of positive ones. Furthermore, the aspect of whether the venues are really useful after the Games should be considered. In addition, elaborate, long-lasting and sustainable benefits and legacies contribute to a positive reputation, the support of stakeholders and the securing of new sponsorships.

The knowledge sharing programme is already included in the Olympic Games. It helps to share knowledge and personal experience between event managers and find solutions to a problem together. Furthermore, in the interviews, such a sharing programme was identified as helpful. Therefore, such a programme can support the event management in trying to be successful. However, this should be enjoyed with caution when different event management and their events are in competition, as seen in the Olympic Games.

Project management knowledge also supports event management together with the knowledge sharing programme. Project management teachings, such as PMI and Hermes, are not necessarily required, however, these can be helpful for planning a newly created event the first time around. Tools and techniques from project management can be inserted in the planning to support management. They help management to achieve its objectives and gather material and information for stakeholders and sponsors. Mega-events are complicated due to their size; therefore, a system and methodology of project management ensure an effective planning.

Social benefits and legacies are required to justify the spending for a mega-event. Therefore, these influence the event management from an outside perspective. As already mentioned above, this aspect is mentioned as a success factor. The benefits can be included in the planning and can be further developed. However, the necessity of creating them comes from outside as well as from the population. As written in chapter 4.2, social

benefits are essential for successfully submitting a bid without risking failure in a referendum.

This model should support a mega-event's event management in achieving its objectives and becoming a success. However, there can be other factors which are important and influence an event. These factors can vary with the shape and size of events.

In the last chapter of this thesis, the conclusion answers the five research objectives determined in the first chapter. Furthermore, a recommendation for event management in Switzerland is made.

5 Conclusion

(1) Objectives Verification

Two Olympic Games, London and Sochi, were analysed in chapter 3 for their success and failure factors. As the 2012 London Olympic Summer Games are seen as a best practice example, its success factors were identified and analysed. Especially time and budget management and sustainability helped the Games to their success, as the Games were ahead of schedule and under the set budget. Additionally, the Games provided several social benefits and legacies which are still in use. Other aspects supported the success of the Games, such as risk management, health and safety, supply chain and staffing. Furthermore, it was identified that Olympic Games Committees are supported by the OGKM. Its improvement on the Games however, remains unapproved, as opinions differ and the research on this topic cannot be seen as valid. The Sochi Winter Games in 2014 are an example which shows that mega-events can be less successful than the London Games. Many factors led to a bad reputation and less successful event. Examples of such factors are time and cost management, as the Games were behind schedule and had a high cost overrun; corruption and negative legacies further contributed to the negative reputation of the Games. Especially the negative legacies have been criticised. Numerous venues and hotels are not used or visited, as Sochi has not become a famous ski area as was originally planned. Both Games provided information to determine possible success factors.

Various success factors were identified from the literature and interviews. In total, 14 factors were found together with the aspects of the iron triangle, scope, time and cost management, and knowledge sharing programme. These factors were recapitulated in a model which should support event management especially for a mega-event. Furthermore, some of these factors are connected and impact each other. Therefore, addressing a factor can improve another one.

The third objective was to identify if mega-events are practicable in Switzerland and what needs to be considered for them to be a success. This small country has already twice been host to the Olympic Games, in 1928 and 1948. Both Games were successful and brought positive legacies. However, the size of the Games has changed and grown much bigger since then. All interview partners were of the opinion that hosting a mega-event,

especially the Olympic Winter Games, was practicable in Switzerland. Nevertheless, some aspects would have to be considered when creating a bid in order to be successful and get the support of the political system and population. Support is essential for turning in a bid, as most bids have failed in a referendum. Currently, most Swiss people are against hosting, as it comes with many negative aspects. Such a mega-event needs to be justified with social benefits and legacies. Therefore, planning and integrating such social benefits and communicating them to the public is important. Furthermore, mega-events of the size of the Olympic Games need to be shared by more than one region and distributed across the whole country. This way, not only one region can profit from hosting, and more existing facilities can be used. Besides that, the logistic problem of handling a large number of visitors in one region would be solved. The travelling distances in Switzerland are not longer than the distances between venues in other host countries. The final important point is that organisations which set the requirements for such an event, such as the IOC and FIFA, have to agree to a smaller and sustainable event and move away from the gigantism. Otherwise, the population will not support such an event.

Is event management the same as project management? This question was the fourth objective to be investigated in this paper. There is no general answer to that question, as opinions differ. However, some differences were identified from the literature and interviews. The main differences are that event management has a more rigid performance date compared to project management. Furthermore, event management has the objective to awake emotions among participants and spectators, while the objective of project management is to implement the planned project. Event management can involve repetitive processes when an event is recurring. Projects, however, are unique and after closing a project, a new one is started.

The last objective of this thesis was to investigate if project management is important for a successful event. Project management knowledge is important for event management, especially for planning. Additionally, it helps to control the event and achieve its objectives. Project management contains some useful tools for gathering material and information which are useful for the event management and its stakeholders. All interview partners believe that project management is important and some of them are using its tools. However, none of them are using a project management teaching such as PMI or Hermes, and most work with Excel lists. Planning becomes sophisticated as an event gets

larger; therefore, it requires a system and methodology which are provided with project management to ensure effective planning. Furthermore, project management knowledge and learnings can be helpful for planning an event for the first time. Project management knowledge becomes less important for returning events, which can use information and learnings from past events. However, to only rely on data from past events is not helpful when trying to be innovative and up to date as it may lead to business blindness. Therefore, checking methods for improvements is essential.

(2) Recommendations and Outlook

The model created from the various factors which impact the success of an event can help an event management achieve its objectives and be successful. This model is especially created for mega-events in Switzerland. Using the model and gaining an understanding of the factors and their impact on each other can be helpful for targeting the important points. Nevertheless, these factors are generalised, and success factors can differ depending on the size and shape of an event; in this case, some other factors need to be addressed, as well. Therefore, the event management must identify its own success factors in order to achieve its objectives. The model created in this thesis can be used to support the event management.

Politics is an important point in relation to mega-events, which has not been taken into account in this thesis for obvious reasons.

It is possible that Switzerland may one day host a mega-event such as the Olympic Games or Football World Cup again. However, the IOC and FIFA must move away from gigantism, otherwise the Swiss population and politicians are not likely to support such an event. However, it may take years for the world population to stand up against gigantism, with the result of losing those bids to Asia in the meantime. Additionally, Switzerland should consider submitting a bid as a country and not as a single region; this will help to address the problem of logistics and sustainability of venues. Another solution is sharing the host of such an event as Switzerland did 2008 with Austria.

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Appendix

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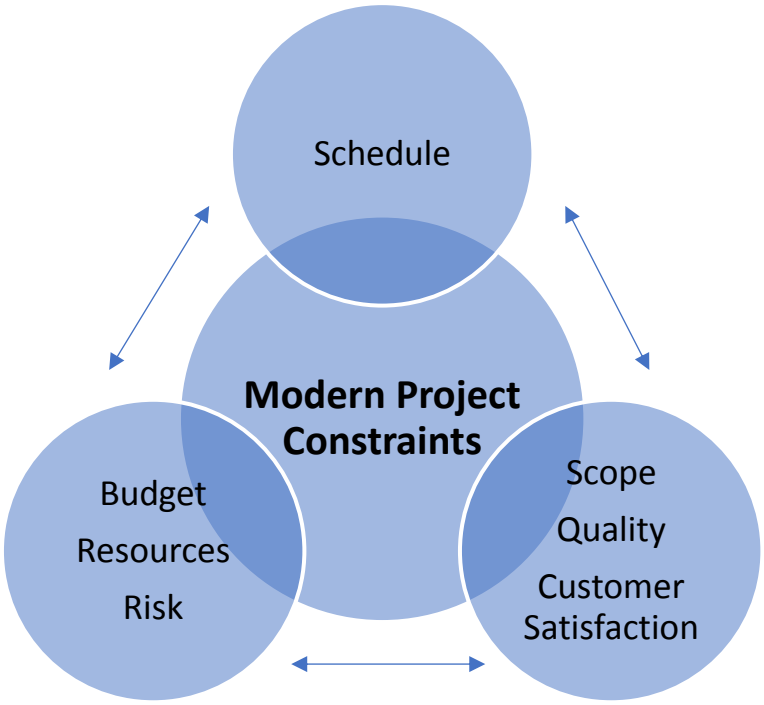
Modern Project Constraints



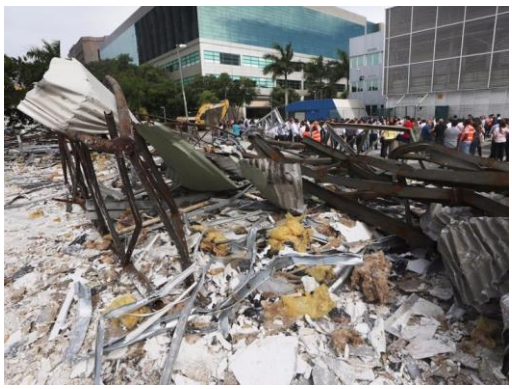
Appendix - Figure 1: The Modern Project Constraints (Own Illustration Based on Rowley, 2013)

Past Mega-Event Venues Today

Appendix - Figure 2: Bejing Olympic Summer Games 2008 (Davis, 2018)

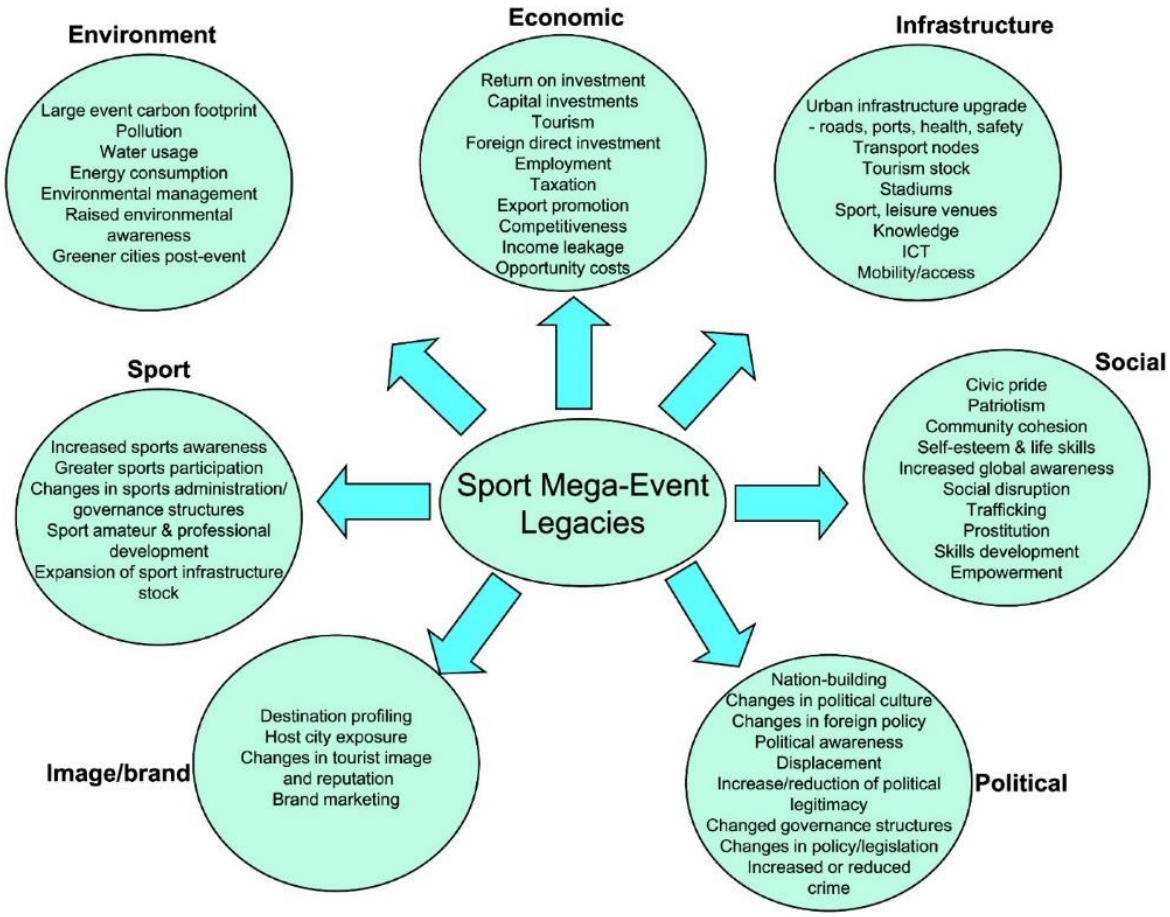
Appendix - Figure 3: Sarejevo Winter Olympics 1984 (Davis, 2018)

Appendix – Figure 4: Rio Olympic Summer Games 2016 (Davis, 2018)



Appendix - Figure 5: Rio Olympic Summer Games 2016 (Davis, 2018)

Sport Mega-Event Legacies



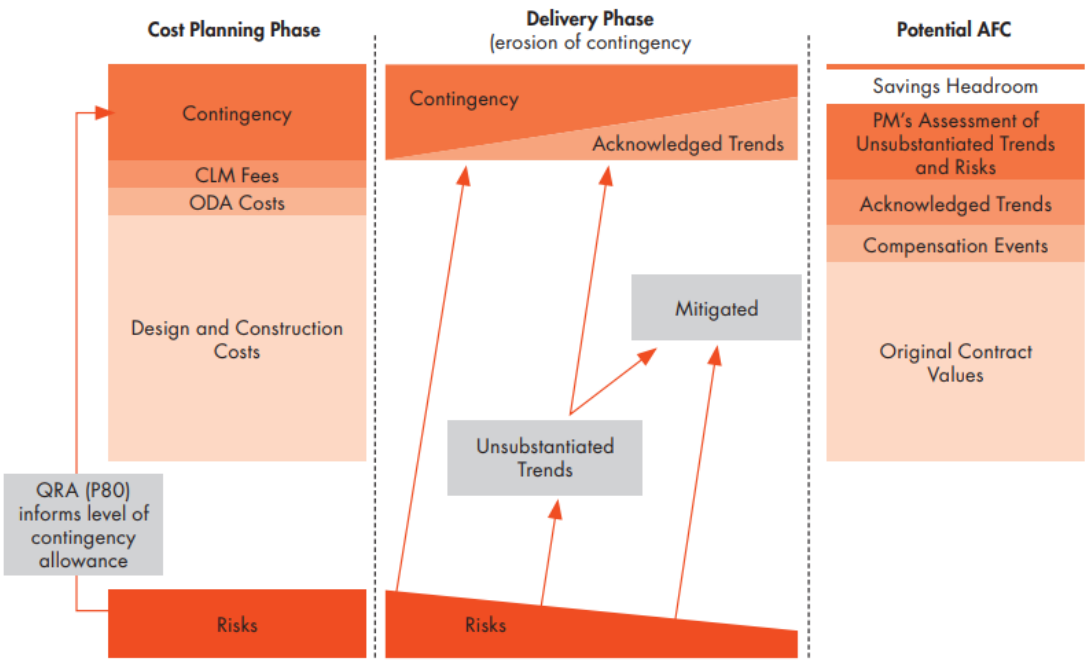
Appendix – Figure 6: Sport Mega-Event Legacies (Cornelissen, Stewart and Bob, 2011, pp. 307-318)

Organisations of the London Olympic Games 2012

Organisation	Responsibility
International Olympic Committee (IOC)	• takes decisions for the organisation • determines the conditions for the celebration of the Games
International Sports Federations (IFs)	• ensure the integrity of their sport at international level
National Olympic Committees (NOCs)	• develop, promote and protect the Olympic Movement • can select/nominate the city to apply to host
London Organising Committee of the Olympic and Paralympic Games (LOCOG)	• prepared and staged the Games in London 2012
Olympic Delivery Authority (ODA)	• ensured delivery of new venues and infrastructure for the Games in London 2012
Greater London Authority (GLA)	• responsible for regeneration, environment and legacy of the Games (Dodd and Sathasivam, 2010, p. 9)

Appendix - Table 1: Organisations and Responsibilities of the Olympic Games London 2012

Approach to Anticipated Final Cost



Appendix – Figure 7: Risk, Contingency and Trends (Olympic Delivery Authority, 2011, p. 1)

Appendix to Chapter 4 Practical Part

Interview Questions

1. What is the aim of your event?
2. What is the general procedure for your event?
3. What are good procedures/modules for a successful event?
4. What do you think are the most important factors for a successful event?
5. What are the biggest challenges in event management, organizing an event?
6. What went wrong or failed at your event? What can you do better next time to stop that from happening?
7. Are there any special points for sports events that need to be considered?
8. Has sustainability become more important at events?
9. Which PM model did you use? PMI? Hermes?
10. Is event management the same as project management for you? Where do they differ?
11. Is project management knowledge necessary for a successful event?
12. What is important for a big sports event in Switzerland?
13. Is an Olympics in Switzerland feasible? If so, what needs to be considered for a successful event?

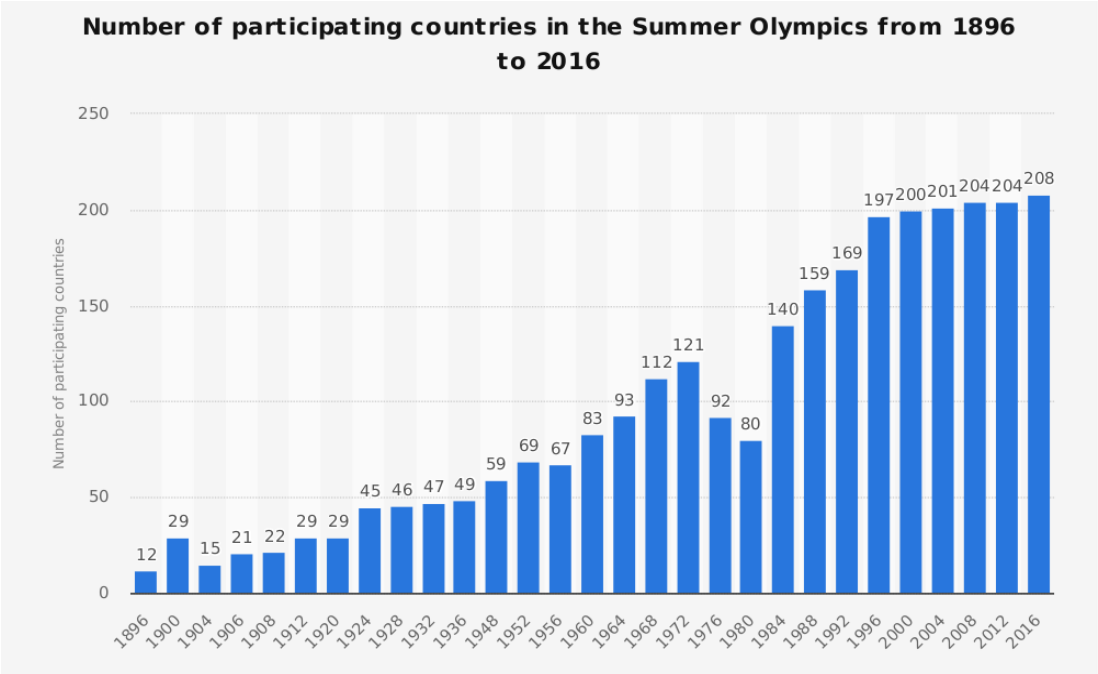
Mega-Events in Switzerland

Appendix - Figure 8: Opening Ceremony Sochi 2014 (Osipova, 2014)

Appendix – Figure 9: Opening Ceremony Sochi 2014 (Depositphotos, 2014)

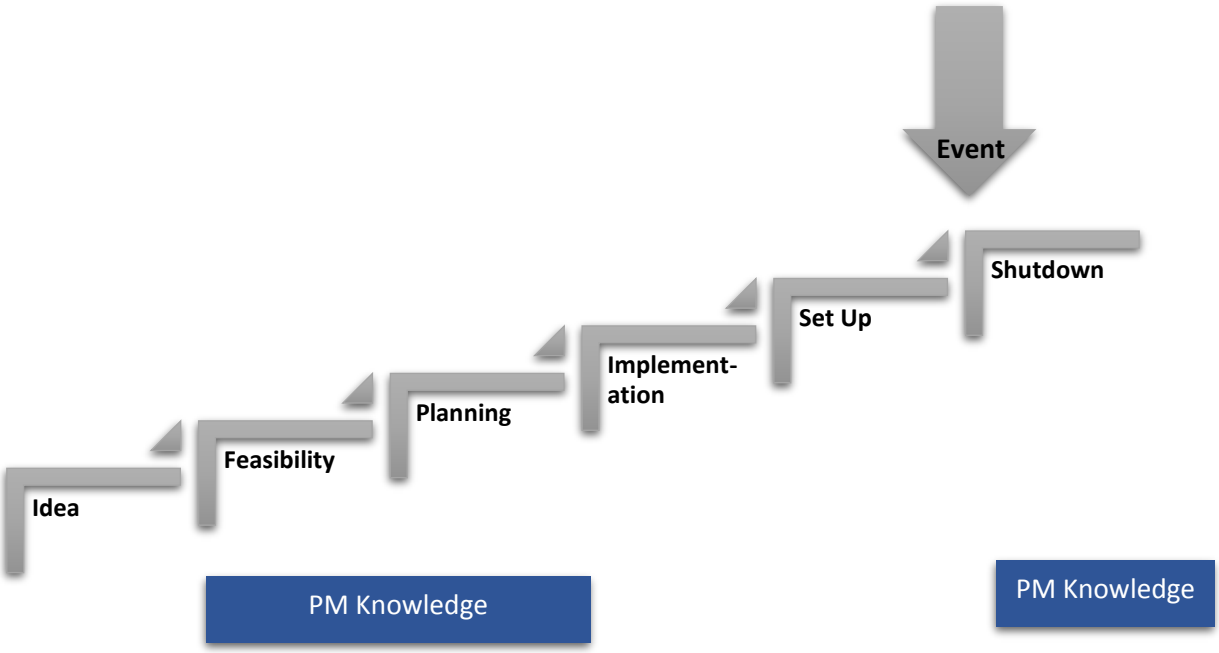
Appendix – Figure 10: Opening Ceremony St Moritz 1928 (Alamy. n.d.)

Appendix – Figure 11: Opening Ceremony St. Moritz 1928 (Alamy. n.d.)



Appendix - Figure 124: Number of Participating Countries in the Summer Olympics (Statista 2018)

Event Management Life Cycle Extended with Project Management Knowledge



Appendix - Figure 13: Event Management Life Cycle Extended with Project Management Knowledge (Own Illustration based on O`Toole And Mikolaitis, 2002, p.43)

The event project life cycle of the book "Corporate Event Project Management" (O`Toole and Mikolaitis, 2002, p. 43) was taken as one example for a event lifecycle. This cycle has been extended with the project management knowledge, so that it can be shown in which phases knowledge is most needed, identified by interviews and literature. Therefore, it is evident that project management knowledge is most important in the feasibility and planning phases, as well as in the shutdown phase. Additionally, the phases idea, feasibility, planning, implementation and set up are overlapping each other.

Interdepends Between the Success Factors

Appendix - Figure 5: Interdependencies between the Success Factors

The model is based on the literature, the interviews and the subjective evaluation.

Reputation is related to all factors. The media contribute to the reputation, and with good media management, it can be improved. Workers and volunteers are attracted by good reputation and are easier to recruit. Risk management and safety helps to avoid risks, failures and accidents and to improve reactions of the management to them. This is also where the change management and problem resolution process are needed in order to implement changes and finding solutions for occurred failures and risks. Therefore, a

better reputation can be achieved. Good planning also helps to achieve a good reputation. Sponsors only want to be associated with events with a good reputation. Therefore, a good reputation is important to keep sponsors and to get new sponsors and thus to get money. The organisational structure also influences the reputation, as practitioner A mentioned in the interview, and impacts the appearance of an event to the outside. Reliable partners and suppliers with a good reputation automatically give the company a positive reputation but can also worsen it if they have a bad reputation. Taking care of the environment and sustainability helps to achieve a good reputation. If the programme is exciting and impressive, it will have a positive reputation. Stakeholders must be satisfied. If they are not satisfied, they can damage the reputation of the event.

Risk management safety helps to avoid and deal with risks, failures and accidents. Therefore, risk management has an influence on the sponsors. Failures must be corrected, and well communicated, so that the sponsors and the bad reputation suffer. Change management and problem resolution process additionally support sponsor`s reputation. Many and generous sponsors help to make the event a good program, as this will allow larger expenses for it. But the sponsors are also happy to support a good program. Sustainability is also usually important for sponsors and would like to be associated with them. Good planning helps sponsors understand what their money is spent on. Therefore, they can be sure that this will be invested in the right place. A clear and good organisational structure also helps new sponsors and often have the right to voice in changes of the supply chain, as practitioner mentioned in the interview. A positively communicated event in the media draws the attention of new potential sponsors to the event.

A good planning helps to reduce risks and safety and therefore influences the risk management, safety and change management and problem resolution process. Risk management helps to achieve objectives of stakeholders and minimise changes and problems.

Sustainability must already be integrated into planning and is therefore important for sustainability. Furthermore, good planning helps to design and execute a good program without failures and thus fewer changes and problems have to be solved. Stakeholder requirements must also be included in the planning process so that they can be implemented.

Change management influences the organisational structure which can be shaped differently by changes. The organisational structure also influences stakeholder management and potential new employees, as the outward appearance plays a role here.

Supply chain influences risk management by minimising punctual and high-quality delivery of supplier risks and thus enabling a good program. Sustainability should be integrated into the entire supply chain so that the materials supplied also include sustainability.

Media reports and the occurrence of the event in the social media help to recruit new employees and visitors. Therefore, the program can work better for many visitors if there is an atmosphere at the event.

Sustainability influences the programme, which must be changed or needs to find a solution in order to achieve the requirements. Therefore, this also influences the change management and problem resolution process. With sustainability, stakeholders, such as WWF and Greenpeace, can also be made positive and their concerns can be realised.

The program must be adapted through changes and solutions to problems. Depending on the program, it may require more volunteers and staff. The program can also affect safety, for example fireworks can cause accidents.

Safety and risk management affects the safety and health of employees. Therefore, with good safety and risk management, good working conditions and suitable employees can be created for them.

The model also shows that individual factors can indirectly influence other factors. It may be possible to identify other contexts that have not yet been identified.

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