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Olympic and Paralympic Games Project Structure and Governance: The case of Olympic and Paralympic Games

Abstract

The Olympic and Paralympic Games is a megaproject that involves huge investment and time effort from public and private entities to take place, which has been facing issues to find host candidate cities recently. This paper focus on the private side of the megaproject and discuss the Organizing Committee for Olympic Games (OCOG) project governance and structure taking advantage of Rio2016 case to detail project phases, reporting and governance structures. The paper presents the OCOG as a single purpose entity (SPE) and uses Rio2016 as a case study. A multi-method qualitative research was conducted to understand OCOG project environment and particularities. The role and participation of International Olympic Committee (IOC) in OCOG daily life could be improved to support the pressure for Games cost reduction, as well as, to increase the Games hosting attractiveness. This work contributes for the Olympic Games project environment understanding by future OCOGs

Keywords: megaprojects; Olympic Games; Paralympic Games; project management; sport management; project governance; project structure; Rio2016

1 Introduction

The Olympic Games staging is a megaproject that lasts 7 years starting from the announcement of the International Olympic Committee (IOC) about the next host city that involves and integrates many entities and resources from public and private sectors, costs more than one billion US dollars, and which demands a well-defined project structure and governance. The Organizing Committee for Olympic Games (OCOG) has a main role on the Olympics being primarily responsible for the megaproject delivery and success. There are some papers covering Olympic Games topic, however the focus are on public participation, project cost, sports, tourism and hospitality. Due to the gap in the literature regarding Olympic Games project management coverage and discussion

focusing on the private side of this megaproject, this paper aims to present the Organizing Committee for Olympic Games (OCOG) project structure and governance approaching the most important stakeholders involved in the Olympics hosting. For the purpose of this paper Rio2016 Olympic and Paralympic Summer Games will be analyzed to demonstrate how it works the OCOG project governance and structure during the project lifecycle.

2 Research Methodology

The methodological approach of this cross-sectional exploratory research were single case study, complemented by action research (as one of the authors took part in Rio2016 OCOG as Cluster Venue Technology Manager), and the techniques to collect and analyze data were Rio2016 documents review and content analysis from the literature review of papers talking about project management, project governance, project structure, Rio2016 and Olympic Games. It was used a systematic analysis to identify keywords contained in papers selected from the scientific databases. The search of articles was based on the keywords "project management", "project governance", "project structure", "megaproject", "Rio2016" and "Olympic Games" and the period considered was the last 6 years, exception only for older papers considered crucial for the research.

The other technique of data collection was observation and participation of researcher and interview of games gypsies with experience in project management and Rio2016 Organizing Committee for the Olympic Games to understand the project structure and governance in place for Rio2016 and the common project structure and governance for Olympic Games in general.

3 Literature Review

3.1 Olympic Games

Olympic Games are the most important multi-sport event in the world, which are divided in summer and winter editions. There are adults and youth Games, both of them have summer and winter editions. Summer and Winter Games happen every four years, which means that every 2 years an Olympic event is performed.

International Olympic Committee (IOC) is the owner of Olympic Games rights. To host one edition of The Olympics, cities have to participate of the bidding process. The host city election takes place seven years before the Games, but the actual candidature process is launched 10 years before and lasts for a period of approximately three years (International Olympic Committee, 2016). Olympic and Paralympic Games happen in the same city, one after another. For example, in summer Games, Olympic Games happen in August and Paralympic in September. Olympic Games in general must demand a huge investment from the host city to build venues according to the Olympics requirements (The London Organising Committee of the Olympic Games and Paralympic Games, 2013).

Olympic Games as a megaproject are complex and demand an extensive usage of project management since bid process (GARGALIANOS, et al., 2015).

At least, time, cost, scope, and quality must be managed in Olympic Games project in utmost professional manner (EAGER, 1997).

Olympic Games have been increasing every edition in cost, size, and complexity (CHAPPELET, 2014), which increases the demand for professional management including project management, human resources management, facilities management, decision making, transparency.

Promptly after the selection of the host city an Organizing Committee for Olympic Games entity is established to manage the event. In the course of its function, OCOG develops many different functional areas to oversee specific subjects and externally states thousands of contractual relationships at local, state, national, and international levels, which increases a lot the organizational complexity of the event (GARGALIANOS, et al., 2015).

Olympics staging is a project, and must be managed as such by the Organizing Committee for Olympic Games, which is a specific purpose organization that has to be managed with high level of transparency and professionalism to deliver the most important and seeing multi-sport event in the world. To deliver the Olympics in the high-level standard as required by stakeholders entails a huge effort, engagement, and commitment for the entire OCOG.

3.2 Paralympic Games

Paralympic Games are the most important multi-sport Paralympic event in the world, as well as, the most complex one.

International Paralympic Committee (IPC) was founded in 22 September 1989, as an international non-profit organization in Dusseldorf, Germany to act as the global governing body of the Paralympic Movement.

Before IPC foundation, the Paralympic Games were organized by International Sport Organization for the Disabled (IOSD), Cerebral Palsy International Sports and Recreation Association (CPISRA) and International Blind Sports Federation (IBSA).

International Co-coordinating Committee Sports for the Disabled in the World (ICC) founded in 1982 was the predecessor of IPC. ICC was originally composed of the four presidents of CPISRA, IBSA, ISMGF and ISOD (International Paralympic Committee, 2019).

International Paralympic Committee (IPC) is the owner of Paralympic Games rights.

The first edition of Paralympic Games took place in Rome 1960, Italy in 1960 featuring 400 athletes from 23 countries. Since then they have taken place every four years. In 1976 the first Winter Games in Paralympics history were held in Sweden, and as with the Summer Games, have taken place every four years, and include a Paralympics Opening Ceremony and Paralympics Closing Ceremony (International Paralympic Committee, 2019).

Paralympic Games also have summer and winter editions that since 1988 in Seoul Summer Games in South Korea and 1992 Albertville Winter Games in France have taken part in the same cities and venues of the Olympics due to an agreement between IOC and IPC.

3.3 Organizing Committee for Olympic Games (OCOG)

Organizing Committee for Olympic Games (OCOG) is a single purpose organization/entity (SPO/SPE) created specifically to organize the Olympic and Paralympic Games, which is disbanded usually no more than one after the Paralympics end date. OCOG traditionally is linked to the host city country National Olympic Committee (NOC) and National Paralympic Committee (NPC).

In the case of Rio2016, the OCOG was linked to Brazilian Olympic Committee (BOC) and Brazilian Paralympic Committee (BPC). The OCOG president was the same president of Brazilian Olympic Committee. OCOG orchestrates the whole Olympics staging and in the end is responsible for success or failure of the Games. A well established and structure OCOG is vital for the Olympics success. Usually OCOG is

composed by ex-athletes professionals responsible for the sports piece of the project, and experienced professionals with and without previous Games experience. Games gypsies are common in OCOGs depending on how attractive is the job offer and conditions (duration of the contract, relocation package, bonus, salary currency, etc.), as well as, the location attractiveness.

3.4 Megaproject

According to (FLYVBJERG, 2014) megaproject is a type of project that cost at least 1 billion dollars, takes many years to be developed, involves many stakeholders, and affects many people. Olympic Games project fits 100 percent on this concept.

Megaproject demands a huge investment, is risky, scope changes significantly over time, usually has public and private entities participation, and, often creates legacy, such as venues, bridges, airports, seaports, and others.

Megaprojects are well known as infrastructure projects, complex projects are another possible name, and its planning process is complex and tough to do.

Megaprojects usually become extremely complex due to the quantity of stakeholders involved in and as a result there a lot of challenges, surprises, issues, and problems to deal with (GIEZEN, et al., 2015).

Many projects managers have tried to keep megaproject planning as much as simple, understanding that this strategy creates a good advantage for them (GIEZEN, 2012).

Projects and megaprojects exist and operate in environments that might have an influence on them. This influence may have positive or negative impact on the project. The two major types of influences are enterprise environmental factors (EEFs) and organizational process assets (OPAs). Enterprise environmental factors could be internal or external of the organization, and usually are originated from outside of the project organization. Organizational process assets are internal to the organization (PROJECT MANAGEMENT INSTITUTE, 2017).

Projects run in an environment with its distinctiveness and might be impacted by it (government rules, legislation, taxation, labor law, climate, culture, time zone, infrastructure, etc.) positively or negatively.

3.5 Project Management

Project management is the application of knowledge, skills, tools, and techniques to project activities and tasks to meet the project requirements (PROJECT MANAGEMENT INSTITUTE, 2017).

Currently, project management knowledge and skills has been more expected and demanded from professionals especially in Information Technology field.

At least, the content of project management published by Project Management Institute via Project Management Body of Knowledge is expected to be used to manage projects. Project management has been widely applied worldwide. Information Technology and its professionals are one of the biggest areas that invested a lot of money on tools, training, and, methodologies to improve their project management competencies. There is a specific body of knowledge for event management called Event Management Body of Knowledge (EMBOK), which is not used in Olympics context. EMBOK is more applicable for festivals or other types of events. Multi-sports events like as Olympics are usually managed based on well-known guides and methodologies likewise PMBOK, IPMA, and Prince2.

3.6 Rio2016

For the first time, South America hosts an edition of Olympics. Rio de Janeiro was chosen in 2009 to host the 2016 Olympics edition, and since there the city and Organizing Committee created by plan the Games started its work.

Rio2016 Olympic and Paralympic Games were performed in four regions of the city: Barra da Tijuca, Copacabana, Maracanã, and Deodoro. In these regions competitions will be performed. Main Press Center, International Broadcast Center and Athletes Olympic Village are located in Barra da Tijuca region (Rio2016 Organising Committee of Olympic and Paralympic Games, 2016).

Rio de Janeiro city is responsible to provide the public infrastructure to the Games, such as transportation. City is also responsible to build some Games venues in a legacy mode.

Rio2016 Olympic Games were performed from 5 to 21 August, and Paralympic Games were performed from 7 to 18 September 2016.

According to (Rio2016 Organizing Committee of Olympic and Paralympic Games, 2016), Rio2016 numbers show the magnitude of the project, as given below:

- 10,500 athletes from 206 countries, 42 sports, 32 competition venues spread across for regions of the city, 39 test events, 2 technical rehearsals, 7.5 million tickets, 100,000 chairs, 11 million meals, 60,000 clothing hangers, 34,000 beds, 45,000 volunteers, 6,500 employees, 85,000 outsourced staff.

4 Olympic and Paralympic Games Stakeholders

The most important Olympic and Paralympic stakeholders are listed in the **Erro! A origem da referência não foi encontrada.** below.

Name
International Olympic Committee (IOC)
International Paralympic Committee (IPC)
Organizing Committee for Olympic Games (OCOG)
National Olympic Committee (NOC)
National Paralympic Committee (NPC)
Olympic Broadcasting Services (OBS)
Venue Owner
International Sport Federation (IF)
Referees
Athletes
Spectators
International Olympic Committee Partners
Airport operator
Host city transportation department
Host city energy company
Host city telecommunication provider
Host city policy forces
Broadcasting companies
Press
Olympic family
Volunteers
International Olympic Committee consultants
Contractors (food and beverage, cleaning and waste, technology, energy, transportation)
Host city radio frequency controller
Hotels
Host city citizens
OCOG sponsors

Name
OCOG partners
OCOG vendors
Host city customhouse
Host city fire department

Figure 1 - The most important Olympic and Paralympic stakeholders

Organizing Committee for Olympic Games has to interact with all the stakeholders listed in the **Erro! A origem da referência não foi encontrada.** in order to proper planning the Games. The frequency of interaction depends on the needs of information, the participation on requirements definition, and plans validation and acceptance. International Sport Federation for example has to approve the sports competition format, the field of play and test events format, which makes the frequency of interaction between OCOG and IFs more intense. Another good example of the importance of stakeholders is regarding the radio frequency definition, which should be approved and follow local entity rules.

Stakeholder management is vital for the games success, especially the management of expectations and the timely engagement. Not all the stakeholders have the same understanding of the games importance and also give the required priority to the OCOG demands.

5 Rio2016 Project Structure and Governance

5.1 General Olympic Games Project Structure and Governance

As the owner of Olympics, International Olympic Committee (IOC) dictates some governance rituals such as, Project Review, Energy Project Review, Technology Project Review, and Venue Infrastructure Group sessions, which are held, based on the games starting date proximity. The review sessions with IOC, in the beginning, happen once a year, moves to twice a year, and culminates in a monthly basis, until IOC teams start working in OCOG premises conducting daily meetings to evaluate the games readiness. OCOG has to report the readiness status per venue to IOC periodically, presenting how far each venue is from the required readiness level, and also risks and issues to achieve it.

IOC also requires to OCOG that some events like as Technology Technical Rehearsals and Test Events be performed to evaluate the readiness of the venues and teams.

OCOG is not free to scope and plan the Olympics on its way. OCOG is obliged to use the services of IOC partners like as ATOS, OMEGA, PANASONIC, and GE. IOC partners are trusted to perform some services and supply products to Olympic Games assuming this as a strategy to standardize the minimal level of quality required by the event. The obligation of using IOC partners has a direct impact on the project budget.

OCOG must also comply with technical requirements placed by Olympic Broadcasting Services, International Sports Federation, and IOC partners. OCOG is obliged by law to comply with local laws and regulations related to premises usage and human resources management. Some laws and regulations have direct impact on OCOG staff planning, such as daily work hours, which impact on venues shift plans elaboration.

The governance structure that applies on OCOG from the beginning till the end of the games time, is illustrated by the figure 2 below:

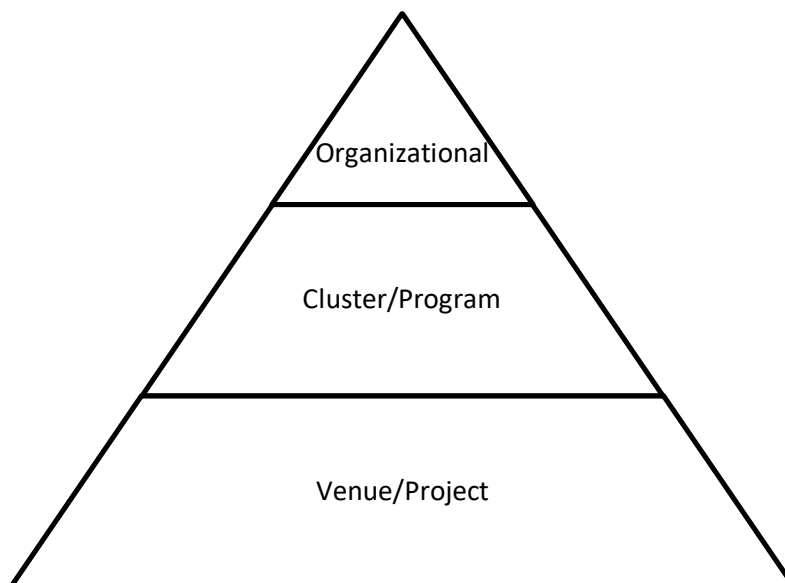


Figure 2 - Governance structure

Olympic Games governance is composed by a board of entities that makes strategic decisions. The entities that have a seat on the board are OCOG, IOC, IPC, Local government, security force, and federal government.

Within the OCOG, a board of directors composes the governance structure which drives the planning and organization in the strategic level. Decisions regarding budget reduction, replacement of competition and non-competition venues, staff resizing, test events, and reduction of services come from the OCOG Executive Committee.

OCOG sets policies and procedures for games and non-games time, which guides the organization, as another component of the governance.

As stated by (Project Management Institute, 2016) governance usually focuses on who makes the decisions, how decisions are made, and collaboration enablers defining the governance framework within which decisions are made and decisions makers are held accountable for them. Considering this statement OCOG has established governance on the organization level, as well as, in portfolio, program and project levels.

Olympics, as such, is a mega-project, but within the OCOG there are many projects running simultaneously by venue, cross-venues, and cross-functions that requires a proper level of governance aiming to deliver the Olympics.

The first important point of the OCOG governance is the split of a mega-project in portfolios, programs and projects to be manageable. OCOG as a company is organized by business functions, like as Technology, Logistics, Marketing, Accounting, Finance, Human Resources, Sports, Transport, Security, and etc. Functional areas are grouped in directories, which have a portfolio of projects and programs to be managed. The decision about having or not a project management office established usually is a directory decision. Commonly, at least, a central project management office exists to track the portfolios and report the general project progress to the executive board, IOC, and IPC.

The Olympics is breakdown in Olympic Games and Paralympic Games on the first level, by competition and non-competition venues on the second level, by clusters on the third level and finally by venues on the fourth level. Every venue is considered a project; every cluster is considered a program. The basic mega-project breakdown for games time is illustrated by figure 3 below:

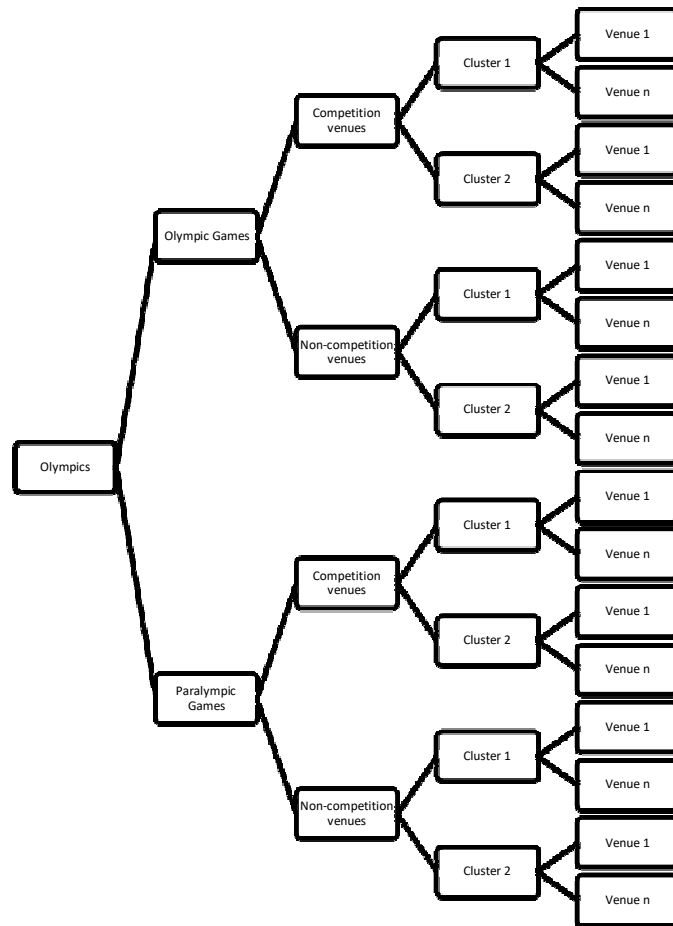


Figure 3 - Olympics games time project breakdown

The first levels of megaproject breakdown are shown in the figure 3 below:

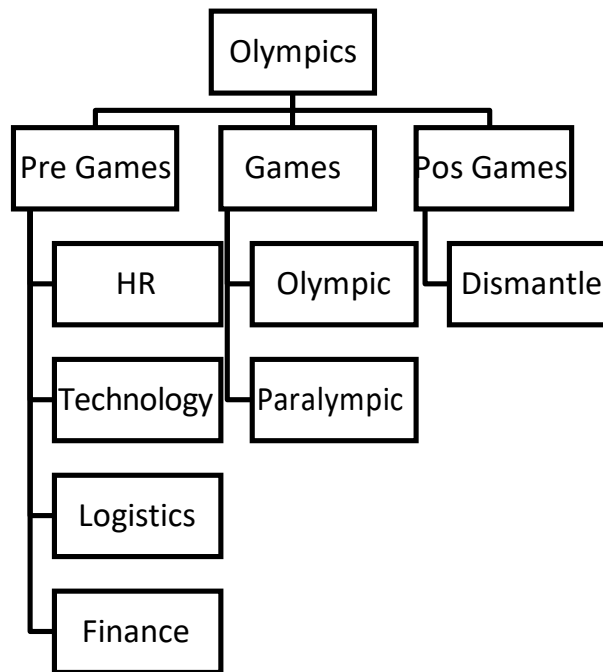


Figure 4 - First levels of megaproject breakdown

The basic split of the Olympics megaproject is done by pre-games, games time, post-games. During pre-games the breakdown is organized by services, such as human resources, technology, logistics, finance, transport, food and beverage, cleaning and waste, security, venue management, venue development, press, look and feel, energy, etc. During games time the breakdown is organized by type of event, such as Olympic Games, Paralympic Games, Test Events, and one level down by cluster, after that by venues. Finally, on post-games the breakdown is done by services again.

Olympic megaproject is a real exercise of organizational structure transformation. The project and OCOG mixed up in a functional manner, later on the starts the matrix time going from weak to strong matrix, culminating in a project-oriented organization during the games time and returning to a functional organization on post-games.

The project structure works as demonstrated in the figure 5 below.

Stage	Gate	Stage	Gate	Stage
Functional		Matrix (from weak to strong)		Project-oriented/Games
Teams are organized in departments like as Venue Technology Services (VTS), Venue Development (VED),	Venuization	Teams are organized per venue. Teams are located in OCOG headquarter, but rearranged to	Move in	Teams move to their specific venues and occupy its respectively

Venue Management (VEM), and Logistics (LOG). Teams are located in OCOG headquarter split by functional departments. People report to functional managers		sit in cluster/venue teams. People report to functional managers and to venue manager for specific topics regarding venue operation		spaces/rooms People report to venue manager and to their specific operation centres
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Figure 5 - Project structure

The figure 6 shows an example of technology organizational chart for the functional stage.

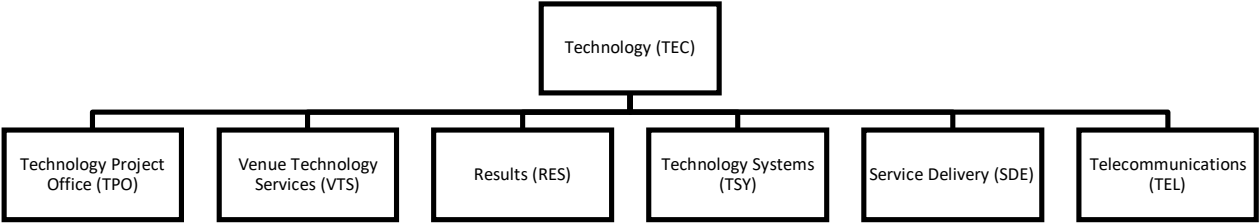


Figure 6 - Organization chart for functional stage

During the functional stage every functional area develops its functional operational plan named FAOP, on the other hand starting from venuization stage the venues develop their venue operational plan (VOP) that comprises which spaces will be occupied by whom, and how every functional area will operate during games time. Venue operational plan includes, at least, opening and closing times, services provided within the venue, accreditation rules, security rules, zones, operation days, shifts, policies and procedures, reporting rules and chain, and decision making structure and authorities.

During the games time, the governance structure changes a lot from organizational to venue. The governance is on the venue level, which reports and responds to specific operation centres and main operation centre.

The operation centres usually found in Olympic Games are listed in the figure 7 below:

Main Operation Centre (MOC)
Technology Operation Centre (TOC)
Sport Operation Centre (SOC)

Figure 7 - Usual operation centres found in Olympic Games

It is necessary to highlight that specific operation centres, like as Technology Operation Centre (TOC) and Sport Operation Centre (SOC) are directly connected to Main Operation Centre (MOC) and responds to it. MOC is the highest level of problems escalations and decision making.

On Games time period, every venue as a project has its governance structure. In a daily basis, every venue and their functional areas representatives must communicate with specific operation centres and with main operation centre to reports the starts and closing of the operation, as well as, to report and escalate issues. Operation centres are responsible for venues operation monitoring and coordination. An example of venue structure and governance chain is given in the figure 8, below:

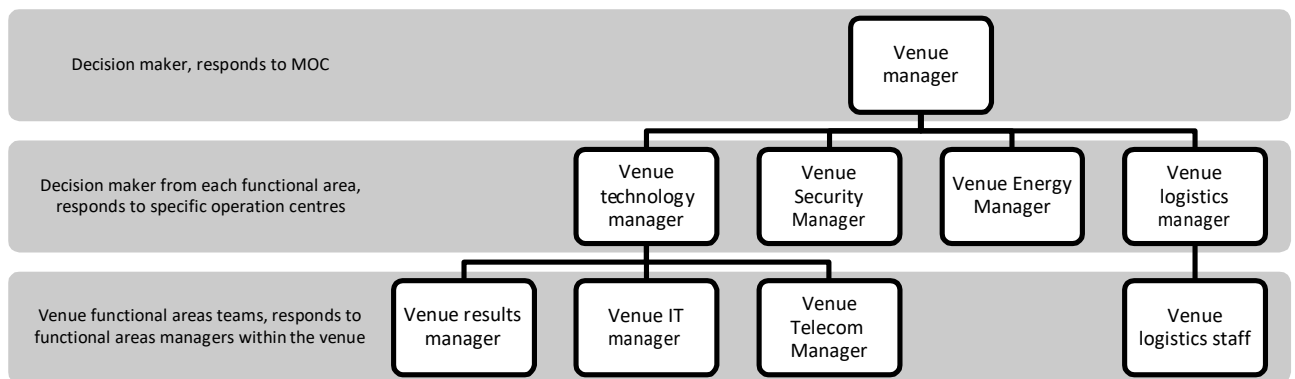


Figure 8 - Venue governance structure example

From the venuization till post-games time some phases are applicable to venues projects, as shown in the figure 9, below:



Figure 9 - Venue project phases

5.2 Rio2016 Specific Program and Project Structure and Governance

Rio2016 applied largely the Project Management Institute references such as PMBOK, and program and portfolio management standards. The reason of PMI standards usage is that in Brazil the project management community follows PMI and its standards. Brazil has a huge community of PMI chapters, as well as, certified professionals, which affects directly on the decision about following PMI standards.

Rio2016 defined some project management structures per streams, like in technology, where was established a Technology Project Office (TPO), a central planning functional area, and others PMO structures within the functional areas. There were no formal PMO structures for all Rio2016 functional areas (FAs), but in all functional areas people with previous project management experience able to manage projects professionally. Rio2016 attracted high-skilled professionals from the Brazilian job market, for example people from Vale, Shell, and other big companies with presence in Rio de Janeiro, which enriched and contributed a lot with the high level of maturity in project management, as well as, with the professionalism in managing projects. Another important asset regarding people in Rio2016 was the former Rio2007 Pan

American Games employees that took part in the OCOG bringing the lessons learned regarding how to deal with public entities, transportation, logistics and security. The mix of people with previous Olympic Games background (games gypsies), ex-Rio2007 and people from the market makes Rio2016 unique.

Due to the experience of former Rio2007 employees, Rio2016 decided to not use public money to finance its operations, which implied in budget constraints, frequent budget review sessions to reduce costs, distribution of the budget among functional areas and project priorities, as well as, in huge constraints on project team hiring and duration of the cooperation (entry as late as possible, and leave as soon as possible)

Rio2016 committee structure is shown in the figure 10, below:

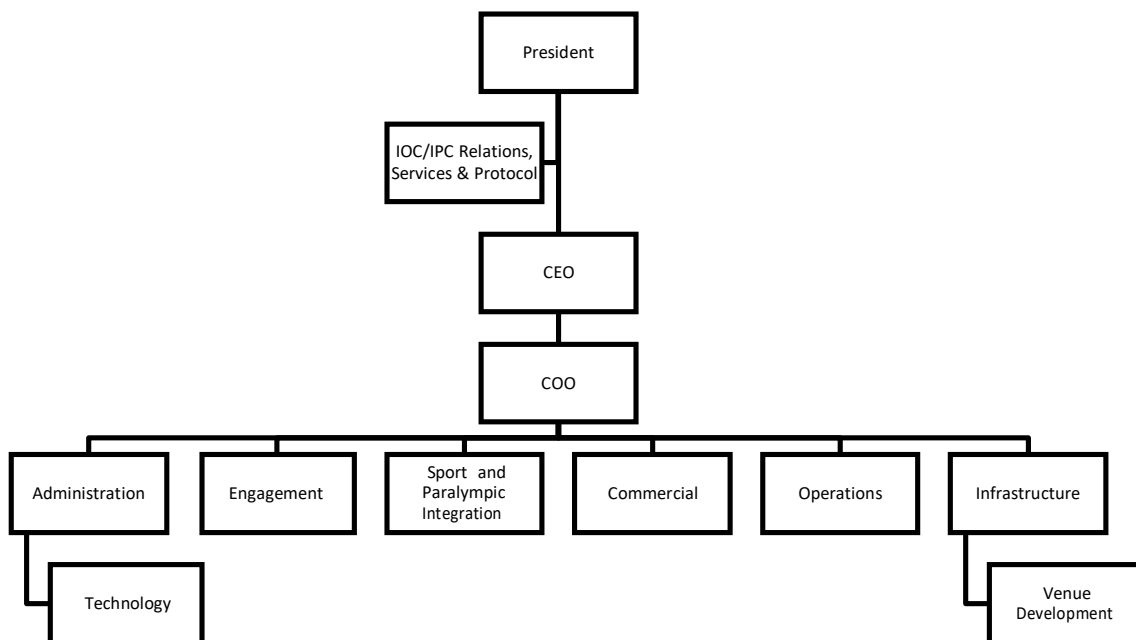


Figure 10 - Rio2016 Committee Structure

6 Results and Findings

The research demonstrated that Organizing Committee for Olympic Games (OCOG) is a real example of project structure transformation, OCOG starts as a functional structure, moving to weak matrix, evolving to strong matrix and culminating as a project structure, after games realization, the organization returns to functional structure.

Based on the analysis of the documents, interviews and observations it is possible to state that Olympic Games is an actual example of organization transformation, as the enterprise starts as a normal company organized by functions, and gradually changes to project oriented organization. This transformation is expected, planned and managed along the way by different levels of governance. The governance and project structure are responsible to orient and guide the whole enterprise during this journey ensuring that the commitments made with IOC, local governments and other stakeholders will be achieved.

OCOGs are companies that evolve quickly to adjust themselves for the new phase or structure required, which is completely different from the IOC perspective. IOC for example does not change its structure because of OCOG, city, country or any other variable in the Olympics environment. OCOG on the other hand, must adapt its facilities, job titles, people duties, operational locations, time shifts, hiring policies, employee contracts based on the project phase, always supported by the established project structure and governance.

In regards of the governance, OCOG has some levels of governance depending on the project stage, but it is important to highlight that at least two levels of governance happen during the whole project, being one internal and another external comprising International Olympic Committee (IOC). Command and control structures are in place usually from 3 months before Games Time until the venues dismantle.

OCOGs like Rio2016 since the beginning have well defined project phases, roles, and milestones to be accomplished, which shows the level governance and project structure in place.

The OCOG has well-defined governance and project structure in all stages, however there is a space for more involvement and participation from the International Olympic Committee in order to state a common framework to be used for all OCOGs, especially regarding reporting tools and project management outputs.

Being a single purpose entity (SPE), OCOGs always start from the scratch in regards of governance, organization structure, tooling and reporting tools, which could be improved by International Olympic Committee knowledge, expertise and experience, impacting on project budget and cost effectiveness.

As a whole OCOGs exemplified by Rio2016, have a good governance and project structure established, but nevertheless there is space for improvements on IOC role, acting more as a driver than as Games rightholder.

There was no central planning area since the beginning of Rio2016 OCOG to orchestrate the whole OCOG planning, this must be part of the governance and project structure to ensure that constraints and assumptions are considered for all involved areas, as well as, dependencies among functional areas, which have a direct impact on budget development.

OCOG is service oriented, as functional areas demand services from one to another, and this service chain must be captured, understood and considered in the plans, which is part of governance and project structure roles.

7 Limitations

The specific project structure and governance analyzed concerns of partners, service providers and Organizing Committee for Olympic Games (OCOG) in place in Rio2016 Olympic and Paralympic Summer Games, this may limit the possibility to extrapolate the results for other OCOGs. Another limitation is the use of single case study, which could be resolved with a multiple case study approach, considering Summer and Winter Games editions.

8 Conclusion

The paper presented the Organizing Committee for Olympic Games (OCOG) project structure and governance usually found in all OCOGs and took advantage of Rio2016 case to detail and exemplified some Olympic Games requirements and specifications that implies on governance and project structure definitions.

The most important stakeholders were described in the paper, as well as, the changes on the organization structure during the Game stages. The paper clarified the understanding of Organizing Committees of Olympic Games governance and project structure what was its aim. On the results and findings it was discussed the research outputs and some suggestions for International Olympic Committee participation improvement on OCOGs daily life.

The paper contributes to academic community showing how a megaproject like Olympic Games defines its governance and project structure focusing on the Organizing Committee for Olympic Games (OCOG) entity, which was not covered by literature.

Although the OCOG has a governance and project structure established, improvements could be done, to increase the efficiency, effectiveness and agility, as well as, to reduce costs.

This paper could also be a support for future OCOGs and interested cities in hosting Olympic Games.

9 Future Research

Compare the project structure and governance in place in Rio2016 Olympic and Paralympic Summer Games with another Organizing Committee for Olympic Games (OCOG) must be done in order to generalize the research findings.

As identified in the paper, there is a need for a central planning role since the beginning of the Games preparation within the OCOG, which should be covered by future researches.

As a megaproject, Olympic Games project and knowledge management specifications should be studied.

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