



Department of Impresa & Management

Management Master's degree, *Innovation & Entrepreneurship* course

Rome2024 Olympic Games:
A megaproject management case

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ACCADEMIC YEAR 2015/2016

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Summary of the thesis

Introduction

Megaprojects are vast, complex and large-scale endeavors that involves private and public stakeholders within a several years' development and building and with a range of cost that exceeds the billion unit. The same name origins from the Greek and indicates the huge scale of the size, as the word "Mega" indicates something large and imposing. Recent literature focused on the impact of such projects and their ability to change the structure of the society, differently from conventional projects that are tailored to fit into already developed patterns. Henceforth, Megaprojects must not be confused with standard project in a larger unit of measurement. They represent a one of a kind plan specifically settled to deal with high complexity levels, hard lead-times, and deep stakeholders involvement. The most characterizing aspect of megaproject is the difficulty in management. Even though their diffusion is strongly increasing across different business, from airports to megaevents and cross-rails (as we will see in next chapters), they have to deal with the transfer of goods/services model to a completely changed economic environment. Due to their social nature, and the purpose of improving the community's life quality, they have several weak points to overcome in order to not fail in managing. These are, according to Bent Flyvbjerg (2003, *Megaprojects and Risk: An Anatomy of Ambition*):

- ❖ Planning risks due to long horizons and complex boundaries;
- ❖ Lack of planners and managers experience leading to poor leadership;
- ❖ Multi-actors' decision-making and planning processes involving stakeholders and shareholders through conflict interest resolution;
- ❖ Uniqueness of technology and design leading to hard application of previous knowledge and know-how;
- ❖ Early over commitment that reduces chance to switch the project;
- ❖ Change of the project scope;
- ❖ Risk of missing delays or underestimating costs.

Success in this kind of projects sometimes goes even beyond the further list. Managers have always to be prepared to reorganizations (or refinancing) to overcome problems in deliveries or in reaching schedule milestones. Also, the project has to be deployed on time, respecting the budget, and creating tangible benefits.

Early strong effort in planning and forecasting prevents most of the problems, setting the strong basis on which the whole project will be developed. The better way to success is to be smart about deliveries, contract boundaries, and strategies from the very beginning of the final deployment: the bidding phase. Indeed, also putting appropriate management controls over the main phases reduce or, at least, moderate higher risks of failing. This mechanism, we will see, that creates not only a full-project point of view, but also a strong knowledge available to be transferred across different but similar projects. Increasing, in this way, the ability of efficiently use resources and timing, by creating a deep managerial know-how.

Inside each economic definition of project, we would find the involvement of planning. The word itself, coming from Latin and meaning “before an action”, indicates the need of planning as prerequisites to deal with a project. Indeed, the purpose of a project is to accomplish and to reach one or more objectives, determining the creation of precise benefits. The lead of a project, is the *Project Manager* (PM). Its role is not a mere technical supervision, but, to ensure the overall success and the real creation of benefits, the PM has to develop a complete and fully comprehensive approach to the management of the project. Hence, it becomes vital for the project to have access to a wide range of managerial skills due to the presence of the PM inside each part of the development. The project manager is in charge not only for the quality and financial management, he has to deal with risks, resources (whether they are tangible or intangible), human resources, and all the external entities involved into main processes defining the project. Moreover, besides from technical and managerial skills, he (or she) has to deal with stakeholders and top management as conjunction ring, and has to negotiate with

both suppliers and customers. Therefore, we can define the role of the PM as the formal manager of the whole project, which ensures the end result respecting the boundaries, and as the professional figure that deals with all relevant entities or people around the project. The main objectives that this actor must implement, according to the Project Management community (projectmanagers.org/ 2016), are:

- ❖ Reach the final purpose of the project;
- ❖ Respect financial boundaries and achieve financial goals;
- ❖ Use communication of issues to sort out any issue;
- ❖ Have a well-developed decision process to reach milestones;
- ❖ Understand as soon as possible if the purpose cannot be achieved.

Hence, becoming a PM is not an easy task. It takes to demonstrate whether the figure has all the above abilities and if they actually fit for the project in assignment. Most of the times, he will be assessed on an end result basis with a constant attention on the financial side.



Fig. 0.1: Characteristic of the Project Manager. Source: <https://www.clearvision-cm.com/blog/the-future-of-project-management/>

In order to receive the total delegation by the top management, he has to meet a wide range of skills in management, planning and control. Indeed, this role is responsible for the management of all interfaces of a project (customers, managers,

suppliers, partners, team, etc.), and, as the figure above shows, he needs all the *Managerial, Relational* and *Personal* abilities to reach the goals.

Before going in deep on how projects are managed and how to deal with the bidding phase (which will be discussed into the chapter one), we will introduce the core of this thesis: the case of the Rome bidding for the Olympic Game of 2024.

With a low-cost forecast of 5.3B€ and an average annual growth of GNP +0,4% for the Lazio region (data from the newspaper “*il sole 24 ore*” 17th February 2016), the bidding for the XXXIII edition of the Olympic and Paralympic Games seems to be one of the best Italian megaproject of the last years. Winning this bidding would increase, according to the professor B. Quintieri for Tor Vergata university, of over +2,4% the GNP for the region during 2017-2023 and would allow the creation of about 177k new jobs. The chairman Luca di Montezemolo declared: “the main theme of the biggest party of sport will be the art of Italian welcoming and the ability of spreading around the life quality of our country”, while the president of Republic Sergio Mattarella expressed his approval underlining that this opportunity would stimulate the planning skills of the country leveraging on clear vision, high-quality and wide availability of resources. Indeed, just like hosting the 1960 Games pushed for an important step in economic evolution for Italy, the purpose of 2024 will be the appreciation of the country through a promotion of sports, avoiding illegality issues, and highlighting the strength to maintain a qualitative and sustainable economic growth. According to the ex-ante analyses, 48k of the 177k new job working will be directly connected to the preparation of the Games, while rough 90k working units would be created by the application of the economic model, that will increase the employment values over the next decade. The cost for planning is estimated for 2,1B€, and the main accounts are the Olympic Village in Tor Vergata, which will require 17k job units, and the printing center in Saxa Rubra. Despite of that, the 70% of constructions is already available, due to the exploitation of formerly developed venues. Additional accounting for temporal structures and for the organization is assessed for 3,2B€ and will be entirely covered by earning from ticketing, sponsors

and the IOC (International Olympic Committee) contribution of 1B€. Keeping always in mind that the real added value is not bounded with a direct positive income at the end of the event, but to a stimulation for growth and modernization of the city and the country. Indeed, to reach this purpose, the whole project will be developed with a direct contact with local municipality, environmentalist associations, schools and universities and entrepreneurial or commercial entities in order to share among all citizens the emotional involvement in this Italian megaproject.

The project establishes over four pillars: high *transparency* in the low-cost approach, *involvement* of all people, *engagement* from all the entities taking part, and *improvement* of the city *quality* (Candidature dossier, January 2016). Juxtaposing the lowest budget ever estimated for an Olympic Game bidding (only 5,3B€ with a maximum uncertainty of few hundreds) with the 10B€ of the candidature file for the edition of 2020, the president of CONI (Italian National Olympic Committee) Giovanni Malagò explained that the difference is offset by the exploitation of all available venues and plants, reducing as much as possible the creation of new structures. With these presuppositions, the project seems to be a great deal, able to increase the exposition of the whole city and country creating a direct added value in terms of employees and GNP.

During the next chapter, we will go through the analysis of the bidding phase; the in-depth description of the case with some comparisons with world-level megaprojects (in chapter two); and we will sum up, during chapter three, with an investigation of the real value of the project exploiting also the theory introduced and the juxtapositions made.

CHAPTER I: The Bidding Phase

1. Introduction

In project development, forecasting and avoiding major issues is almost an art. Managers have to focus on what could happen and foresee possible solutions even before problems occur. If we involve the dimensional variable among those already affecting decision-making process, this issue can only grow. In this chapter, we focus on the first step of all project: the bidding phase.

Even though it might seem easy to develop a full business plan, and to combine all information throughout a step-by-step based project, the initial phase of each project (or firm) requires the highest amount of skills and know-how. Indeed, it is not only a matter of purpose and/or development, but also a human-based one due to the team selection variable, and for the strong relationship with aims and purpose that can be not that clear. Moreover, the budgeting and estimation are probably the hardest part to foresee with actual precision affecting almost all project (even the best one) and risking to fail in it.

On September 16th 2015 the bid for Games of the XXXIII Olympiad were opened by Budapest, Paris, Los Angeles, Hamburg, and Rome. The latest two already withdrew: Hamburg due to bid per referendum on November 29th 2015, Rome for fiscal issues and difficulties on September 21st 2016.

The candidature process was also announced at the same moment as three stages scaling from theoretical to real development.

	Stage	Candidature File Submission
1	Vision, Games Concept and Strategy	Candidature File Part I: 17 February 2016
2	Governance, Legal and Venue Funding	Candidature File Part II: 7 October 2016
3	Games Delivery, Experience and Venue Legacy	Candidature File Part III: 3 February 2017

Fig. 1.1: Stages of the candidature process. Source: https://en.wikipedia.org/wiki/2024_Summer_Olympics

Analyzing all steps, the first one is the result of the real planning; it is mainly focused on how to realize the project and create the hard base on which the candidature will be developed. Indeed, it should exploit all the theoretical major issues and, respecting all mandatory deadlines, must accomplish different steps until the evaluation by the IOC (International Olympic Committee) on 17th September 2017 in Lima, Perù.

- ❖ 25th June 2015: The Municipality Assembly approves the candidature of Rome as host city of the Olympic and Paralympic Games in 2024;
- ❖ 2nd July 2015: the CONI (Italian National Olympic Committee) unanimously approves the candidature;
- ❖ 15th September 2015: Rome officially presents its candidature for the Olympic and Paralympic Games in 2024;
- ❖ 17th February 2016: Submission of the candidature file part I – Vision concept and Strategy;
- ❖ 5th_21th August 2016: Olympic Games in Rio de Janeiro.

Throughout those dates, an assessment of economic feasibility and Infrastructure impact has been produced.

2. The Theoretical basis

Stepping backward, we must first understand what is the bid and how it should be developed. At its core, the bid is a sales proposal, representing the answer of the supplier to a concept of the customer. It takes the form of a sales document structured throughout the bidding process and its main phases, specifically created to establish if the supplier should work at the project. According to major theories, there may be several stages of the bidding process, as the Pre-Qualification Questionnaire (PQQ), to select among all the suppliers; the Invitation to Tender (ITT), to create a real answer to customer's idea of the project; the project evaluation, and the Best and Final Offer (BAFO), as the submission of the best and last supply.

Knowing the bigger picture can provide some hints of the most-likely issues making steps and some clues on how to prevent them (Cleden, *Bid writing for Project Managers*, 2011).

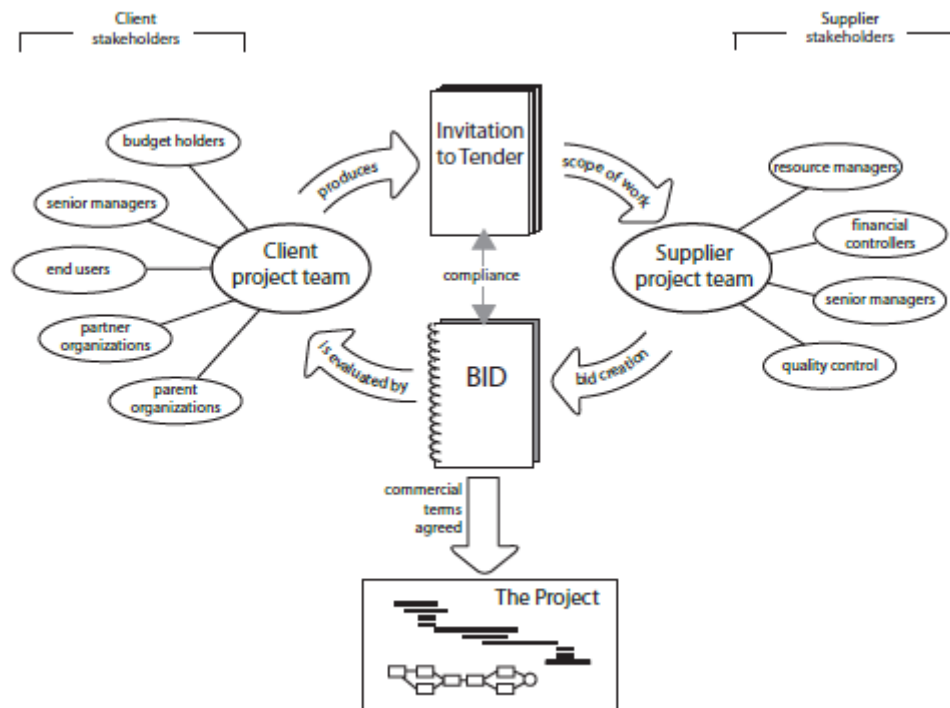


Fig. 1.2: The bidding process picture. Source: “Bid Writing for Project Managers”, D.Cleden 2011.

The ITT phase is critical. It not only contains all details on the structure of the project to develop and all the achievement required, but also stands in the crucial moment between the two teams. Compliance is, certainly, the driver of first communication among two parties, and it is the best way of sorting out doubts and troubles that otherwise would spread among all phases of the project framework. During this step, the supplier team must consider all the key elements to develop a stronger project knowledge to support the customer even before any problem occurs. Even though there are as many types of bids as there are many types of projects, some key topics can be underlined as essential in the project framework (Cleden, *Bid writing for Project Managers*, 2011):

- ❖ Understand the project objectives.

A deeper understanding of the client's requirements increases the opportunities to answer the problem and to come up with new solutions. During the ITT phase, the document has not to contain any kind of omissions or contradictions to result efficient.

- ❖ Monitor fulfilment of objectives.

Creating and accomplishing the building blocks of the project is the most common way to increase efficiency. The delivery of the objective is just the result of a deeper business structure managed in each single step.

- ❖ Manage the deployment of resources.

There is no project without planning, no matter the time or the effort a strong plan of action is always the first driver of a better work. The harder part of the planning is, indeed, the use of the wherewithal.

- ❖ Delegate and manage task completion.

This action relates deeply on the team composition, but, a good team with complementary skills can be inefficiently assigned to different building blocks.

- ❖ Protect against threats.

Risk management is the most sensitive side of every bid and can also lead to a waste of time and efforts. To be truly effective, the whole team need to understand what there is below the surface and to solve uncertainties before they manifest.

The focus on one or more points of this project framework often relies on the needs of the bid and of its subject: the customer. Strong preliminary planning is an answer to a step-knowing necessity, likewise, a deep risk analysis is the result of a requirement for the risk to be entailed.

A successful bid rises from three principles: Organize the bid production, Persuade the customer and Establish the project framework. Organization is the base to an effective bidding process, and it is mainly focused on the work made even before

the writing of project begins. The bid should be considered as a mini-project standing on its own to develop a great value added. Persuasion is mandatory to succeed, indeed, a strong strategy and an outstanding solution sometimes is not enough to convince the customer. Highlighting the strengths and showing the value of the work made, can be the change in the decision for the bid. A well-defined project framework is the main element to create the success of the project. Creating a framework is likely a planning, indeed, the main questions it mainly has to answer are about feasibility of the project and work commitment, at an early development phase. It represents a solid construction related to the gross dimension, but it is not a finished artefact, meaning that details are still shaping.

3. *Anatomy of a Bid*

“In the modern world of business, it is useless to be a creative original thinker unless you can also sell what you create. Management cannot be expected to recognize a good idea unless it is presented to them by a good salesman.” [quote David M. Ogilvy]

We already dealt with the importance of persuasion in bidding phase, indeed, having the best approach or the most innovative solution is only half of the work. As Ogilvy states, without the right message the customer will not see the truth behind the researches made. The proposal for a bid has to achieve both the understanding of the value of the project by its economic value and the use of the right mean to create persuasion into the client. It is a double-sided work, which could explain the difficult in bid-writing. As a technical report, it has to develop the factual basis providing all the information to accomplish the request made by the customer in order to have a key decision taken on facts presented. But, it must also be a marketing document, developed to be persuasive highlighting the strengths of the proposal and going beyond mere facts to exploit unique added values. The bidding team has to send a clear message:

- ❖ Fulfill all the requirements as a mandatory objective;
- ❖ Tell the customer what is the kingmaker in the bidding decision;
- ❖ Show to the client the uniqueness and attractiveness of the bid.

The win-lose gap is very small. Besides fundamentals, details can decide if the bid will or will not be effective.

According to D. Cleden (2011), there are five stages in the bid life cycle, each of which is relevant no matter the size of the bid. This cycle begins with the *analysis of the opportunity*, an initial evaluation for feasibility of the proposition to develop first confidence with the project. Checked the viability, a *strategy to win* must be developed, it is the stage to answer to all critical requirements and to understand the real object of the project. Then there are the *creation of a feasible proposal* and the *quality standards and compliance criteria*. Once the proposal is ready, the production phase begins with the *bid assembly and dispatch* to plan in advance with respect to deadlines. Finally, the *transition to the project* marks the last stage in which knowledge and insights must be transferred into the real project.

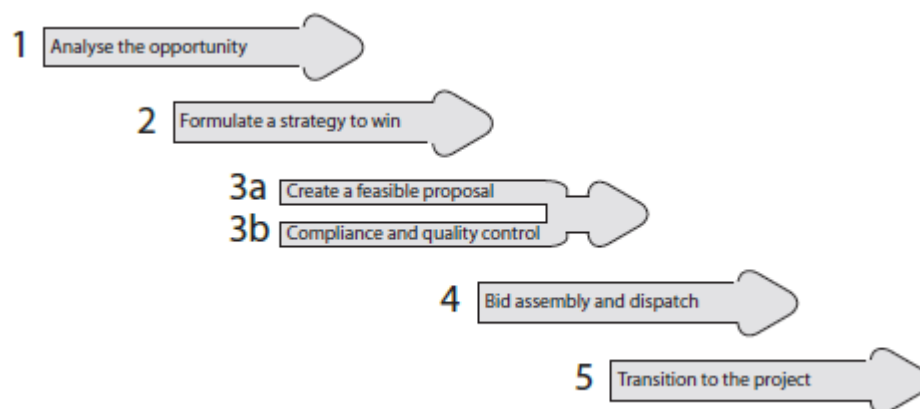


Fig. 1.3: Stages in a bid. Source: "Bid Writing for Project Managers", D.Cleden 2011.

- ❖ Analyse the Opportunity.

In business development, companies will always seek for new horizons and occasions. Without a constant flow of contracts, undertaking would run out of business. Therefore, when a new opportunity arises, managers need to quickly assess this possibility before they spent too much effort and time or before it

will be exploited by someone else. This is the key of this phase, to understand as soon as possible the value of an opportunity. Considering bid's resources as finite, an efficient business must qualify the prospect early and discard if it doesn't recognize its value.

❖ Formulate a Strategy to win.

Every bid is different, despite the similarity in projects or customers the differences can be everywhere from business to constraints. Recognizing the uniqueness of the bid is the real expression of a strategy tailored made on specific circumstances, even if the project core is the same. Indeed, we must highlight a strong difference between offering and solving.

Offering is just the product, service or skill that an organization is selling. There is no need of a specific customer reference to have an offer. For instance, a product-based company offers its product by a catalogue; part of this offer can be the technical support needed to set up the product using the skill and knowledge of the staff. But they all define what an offer is, none of them explain how it is made. The last is the task of the solution.

Solving is the creation of a unique customization or set-up specifically designed and delivered for a customer. Where the offering just tells what a client is buying, the solving describes how it will be tailored from the delivery process to the integration in the business activities and to the benefits assessment. A company will always have one set of offerings, but each client will require a different solution. The ability to answer to each of those requirements is a key element of a successful bid. In bidding, the offering is not what the client is interested into, they require a custom-made solution that exactly meets their own objectives, fits the environment and supports the existing processes over time, creating also real benefits. While the offering can be the core element, the way it is organised, personalized, combined, managed, adapted and shaped is what really matters. It must be unique on each of its side. The key task of the proposal is to show in what both the offering and the solving are the best match for the client's requirements.

- ❖ Create a feasible Proposal.

Among the most common reasons for bid failing, we should quote improbable objectives, poorly assumptions, misunderstood constraints, and wrong cash flows estimations. Indeed, if the proposal is not viable, nothing can recover the situation, neither the best amount of cleverness in management of the project. To develop the most feasible proposal, some key skills are required: *Scoping*, the skill to understand the entirety of the task required and figuring out what is really needed to complete the job itself. *Estimating*, creating or adapting an estimation method is also a mandatory ability in order to avoid the most common cause to fail. *Planning*, not in the common managerial meaning, but, in the sense of sequencing and prioritizing during the milestones of the development. *Risk Management*, having a practical and sensible analysis is most likely a challenge for all bids. *Creative thinking*, sometimes the unique added value rises from not only the work and delivery of the project, but also from the distinctiveness of the way it is done.

- ❖ Compliance and Quality control.

Lots of proposals fail because of the missing of the real client's requirement. A straightforward omission or a missing in customer's perspective can be highlighted only if there is channel to communicate. The compliance stage ensures that the instructions provided will be respected. Moreover, it also is a way to verify that the quality control standards of the supplier have been followed.

- ❖ Bid assembly and Dispatch.

Basically, creating a winning proposal means complete the real bidding job. Missing the deadline makes no difference if the work has been done in the best way, because the customer will always focus on the ending result, not on the way it has been organised or followed. This means that bid production must always take priority. All the management abilities should be efficiently exploited to design, organize and develop the components of the bid within the target timing.

❖ Transition to the Project.

This final phase is completely aimed to create the best success probability to the project delivery. It may happen that one of the determiner is the team composition or the expertise acquired by the members in previous projects or due to their background. Even if it is not possible to maintain the same staff between bidding team and project team, knowledge should be transferred by bid documentation, materials or throughout meetings to discuss and understand risks and problems that the project raised until that moment, avoiding to double the work to solve a single issue.

To sum up, the bid writing is a balance between feasibility and salesmanship. The latter is the competitive added value that creates the win-lose gap, but, success is not only made by it. The bidding team, indeed, must exploit its multidisciplinary skill set to be fully efficient and effective.

4. Knowledge sharing: Artefacts and Resources

From the last step analysed arises a whole theory on knowledge sharing in project development, both among different projects and inside the same if the team is changed. Managers have always been struggling with the transferring knowledge issue. Due to the possible benefits obtainable through this process, recent studies have focused on how to maintain and reuse previous know-how and expertise. This issue finds its core in project-based environment, in which the same nature of the project itself creates an extra barrier to the sharing, because of its distance with stable organization and its always changing nature (as we said, each project and each bidding is different). But adapting and reapplying knowledge, in a difficult context like project-development, to create each time a growing cost-saving result can be a crucial added value that can always offset the win-losing gap from competitors. Increasing the size of the project to a megaproject, leads to a growing complexity in management of previous knowledge and expand the value of crucial expertise.

The resource-based view of organizations (Barney 1991; Penrose 1959) states that competencies are the result of a process of learning and adapting knowledge to create routines. The critical importance of building a routine manifest through the constitution of firm's memory of operations, defining the process of *remember-by-doing*. Shaping skills to survive a constant changing environment requires the application of higher order routines able to change in details the operational routines. At the core of either firm's normal operations and of its ability to produce and adapt changes to constantly growth in hard context, there are already stable organizational processes. Literature also shifted this issue towards project-based organizations to leverage upon their flexibility and natural changing nature, in order to create and tailor existing competencies while avoiding all firms' rigidities. However, the temporary delimited and inter-organizational nature of projects impedes the process of routines creation, stopping a strong mean by which companies storage their learnings. Recent researches have proved that there are other viable alternatives to store knowledge, mainly in highly project-intense environment (e.g. advertising or film-making). But, while in ADV industries individual expertise is the crucial success factor for competitive advantage, the software industries rely on the importance of accumulating technical and organizational competencies preventing "to reinvent the wheel". Assuming that firms are the best inventories for encoding learning, the first variable is whether to rely on individuals or technologies. Indeed, the difference is embodied with the industry, creating a dualism between extremely tacit expertise, based on individuals able to provide added values, and codified knowledge, which can be stored into databases or softwires. This dichotomy led the organizational memory debate extent towards the inclusion of information technologies (IT) to augment and improve the human capabilities, mostly in companies with stronger standardization degree of products or services (Bannon and Kuutti, 1996, Paoli and Prencipe, 2003; Schultze and Leidner, 2002; Swan and Scarbrough, 2001). Further researches highlighted the crucial role of organizational processes in structured project-based environments. Analysing a project-based organization, it is needed to separate *project* from *business*. A project

process occurs in context of uniqueness in which the focus is on design, produce and deliver a specific output adapting also on each specific case leveraging on the flexible nature of the project-based organization. The business process, instead, focus on coordinating and managing in intra-firm context the access of each project to firm-specific resources, like expertise, to pull on stability and routine of a resource-based environment.

Bidding and project execution can provide an example of *economies of repetition* (Davies and Brady, 2000). Indeed, firm's processes are the key of encoding and making project-based knowledge available across projects, despite the discontinuities of project processes, there are always common stages across all of them. The reapplication of previous knowledge in stages like the bidding phase provides an always growing economic added value in cost reduction and a key success factor in terms of filling the win-losing gap with competitors. Certainly, only firms that have already worked in different industries can apply for this readapting knowledge process exploiting different application of specific know-how. The importance of this process is given by how these memories across industries interact and how they enable the transfer of adaptation and learning from project to project into a systemic memory view. The first step to apply this view is to find the best approach to artefacts as part of the organizational memory.

One of the most important research on organizational memory is the "computer metaphor of organizational remembering" (Bannon and Kuutti, 1996, Paoli and Prencipe, 2003; Schultze and Leidner, 2002; Swan and Scarbrough, 2001). This approach shift the concept of memory from a process to an object, seeking for a tool to store in databanks or inventories. The emphasis on reserving knowledge is justified by the need of recycling and tailing it across projects. This model meets the evolution studies on technology to prove the need of artefacts as storing tools for firms and project-based organizations. Indeed, objects able to embody knowledge are particularly crucial due to the dual effect that codification of know-how has. Firstly, codification facilitate the acting of storing and transferring knowledge across time and/or space. Secondly, codification works by symbolic representations that

can always be manipulated to improve the remembering process or can be combined to expand artefact's storage. Several authors (D'adderio, Howard-Grenville, Pentland and Rueter, Rerup and Feldman, Salvato, Turner and Fern) identified and defined artefacts through two dimensions: the first one divides them into *speaking* and *silent* artefacts, the second one into *generic to occupations* and *specific to occupations*.

The former is the formal representation of knowledge in its verbal or visual form, it is fundamental for the manipulation of the stored memory and involves artefacts mainly for their role in problem-solving and cognitive aspects of routines. The latter, instead, marks a line between specific situations and generical artefacts: the more the industry is multi-technology, the more specific the artefact must be to provide support. Here the main issue is the sharing because of the unique nature of each artefact, but both generic and specific mainly relate with organizational conflict in routine development.

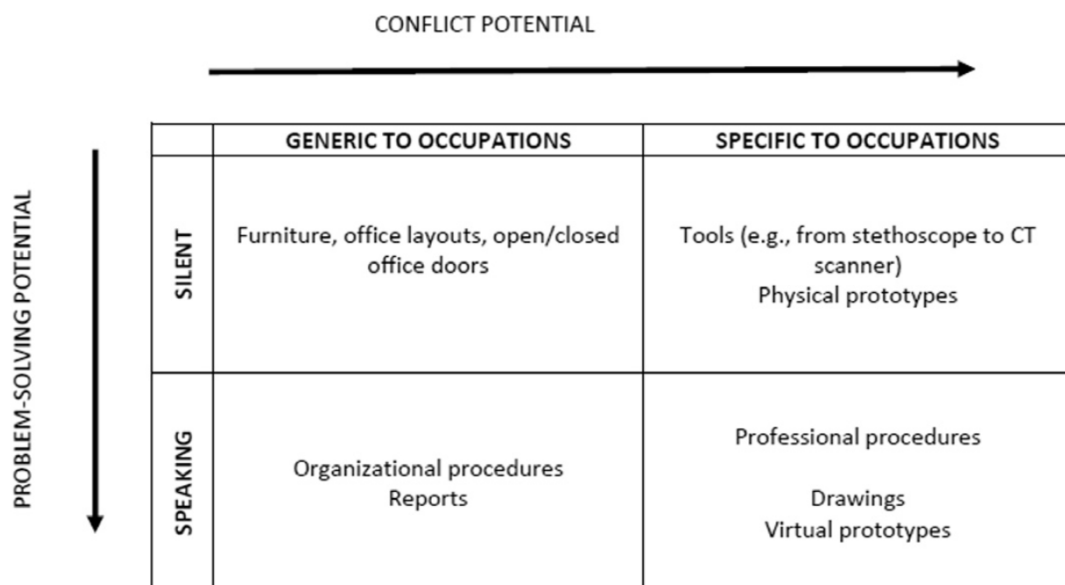


Fig. 1.4: Typology of Artefacts. Source: "Resolving Conflicts in Problem-Solving: Systems of Artefacts in the Development of New Routines", E.Cacciatori, 2012.

Speaking artefacts represent the explicit type of mean to transfer knowledge, like visual or textual representation as manuals or reports. Among this category are included drawings, sketches and all visual prototypes and process representations,

formed by procedure and checklist. Speaking artefacts are the most effective way to understand the impact of objects in problem resolution and routine studies. Their nature allows manipulation through different processes and different teams. But, effective solving across different occupations requires the artefact to be flexible and adaptable to different need or specific use. If there is not enough flexibility, then the scope of the use should be always translated into a common pattern allowing the adaptation in all specific situations. Rigidity can, also, be a pro. Indeed, a drawing is more reliable than a sketch in a manufacturing issue, while it is the opposite for a design industry. In each case, rigid artefacts can increase the difficult of creating routines, leading to organization's members to choose whether to change their behaviour or changing the artefact.

Silent artefacts embody knowledge and make it available for use. They do not rely on textual or visual representation, but include items such as furniture or tools. Due to their silent nature, they have less manipulability than speaking one and their role in problem-solving is important but more limited. The primary role of silent artefacts is being object of cooperation across occupations in case of new product development or new project beginning. Silent artefacts suggest knowledge by their nature, their shape or their location. Relating on their "action affordances", they are associated with deductive objects with an easily deductive scope (e.g. a door handle and the downward movement). The implementation of silent artefacts has a direct expression in strengthen the stability of routines by the association with experience-based actions.

Specific to Occupation artefacts are the needed tools for an occupation or for a close group of related use. Among the silent artefacts, we can quote the compass for the engineers or the scalpel used in surgery, while, speaking artefacts specific to occupation are technical drawings or account ledgers. But this relationship is not one-to-one, both artefacts and occupations evolve in time. The increasing specialization of industry has a direct affection over artefacts: the creation of new specialized figure shift the use of some artefacts from a generic to specific dimension. Moreover, the claim of a specific artefact for a single group define the

jurisdiction over a specific set of tasks in an environment with adjacent occupation with similar scope (e.g. nurse and doctors).

Generic to Occupations artefacts are used by an organization without a direct relation with a specific occupation. Office furniture is an example of generic and silent artefact, while, organization's procedures are speaking artefacts. These artefacts share the property of suggesting a particular value or involving a determined set of actions in line with company's purpose. The open-space office is a strong symbolic environment in which cooperation is the minimum requirement to work into. This symbolic message creates an organization routine if correctly translated into co-workers' behaviour.

Indeed, the use of artefacts can strongly affect a team especially in such phase like bidding where routine could show its higher added value. But also during the whole project phase and during the bid development.

5. Bid development and project framework

When the team start to develop all the key aspects of the bid, the principal focus is on what kind of solutions would best satisfy customer's requirements. Indeed, finding those solutions is also the first step of creating the project framework, because, deciding the building blocks in the bidding phase reduce all risks during the transition to the project and maximize the chance of success. In conventional bidding, the solution for any customer's need has a direct explanation into the ITT in the form of underlying problems. After a deep analysis, the supplier finds all the answer required and develops the proposal, which will represent the deciding base for the project. In this stage, there is a risk of mismatch between the customer's specification of the problem and the supplier's proposed solution.

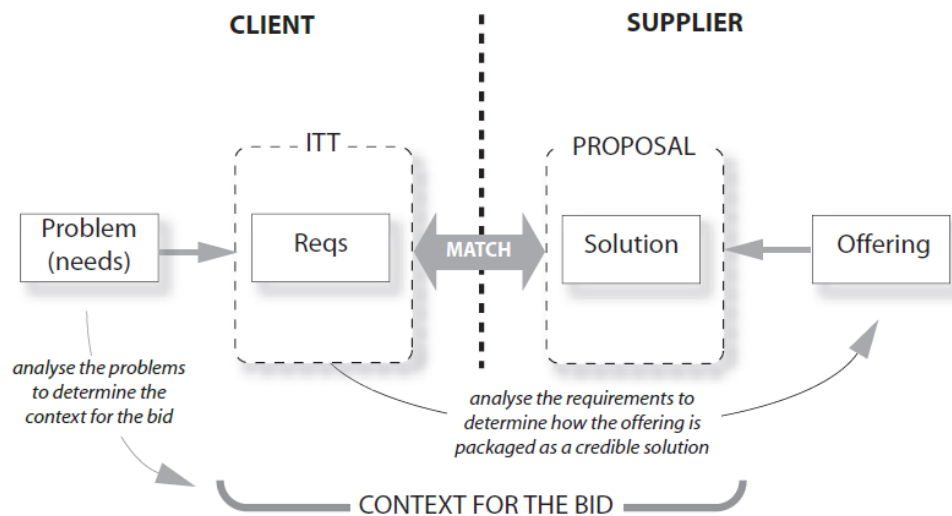


Fig. 1.5: The context for a bid. Source: "Bid Writing for Project Managers", D.Cleden 2011.

Analysis of the requirements should show how the offer must be tailored and how the bid must be made, but only the radical understanding of the needs can provide the context for the bid. This affords an opportunity for the supplier to look beyond the mere focus of the ITT and frame the bid context throughout further researches and contacts. But, since lots of business issues derive directly or indirectly from a need to change, can be helpful to identify this context into two classes: the *change implementation* and the *need to change* (Cleden 2011).

In the first case, the client probably knows which solution can fit and how it should be delivered, searching only for the best organization able to develop and apply this change. It is realistic to suppose that the customer also has a good understanding of the work to be carried out and is expecting a deeply-developed business case and initial risk assessment, being most-likely familiar with processes needed and technologies useful to develop and implement this change. For this kind of project there are no in-house processes already developed and external dependencies may be included, meaning that extra constraints must be considered. Being aware of the technology, results in a shift of the successful factors of the bid towards a maximization of the values in terms of properties or cash flows, with a stronger

emphasis on the *how* of the project instead of the *what*. Strategy is the key factor and it brings the project planning into the forefront of the proposal.

The second case is based on the scenario that the client has identified a *need to change*, but doesn't completely know the best way to apply this change. It is most-likely that the customer has a general idea of what could be needed, nevertheless without an in-depth analysis there cannot be a judging of the best approach. If the goals to reach are clear, the proposal must contain the processes applied to reach them and must clearly feature all the solutions and their required steps. The mark of this scenario can be found into the ITT, which highlights all the results and goals of the project, but has a lack on how to achieve them. This directly reflects into the composition of the bid itself, more time on issues and risk evaluation must be spent and a stronger analysis of the requirements before finding the best solution will be necessary. Indeed, the whole analysis should be summarized into the bid in order to persuade even more the customer, highlighting, also, the benefits deriving from the proposal. There could be also the case of researches leading to risks or suggestions unforeseen by the client, creating more advance for the bidding team throughout a support (and persuasive) process in fresh problems solving and showing the added value of the proposal made.

Identifying the ITT type is a valuable information to tailor the proposal and adding unexpressed or unknown concerns can provide competitive advantage to the bid, leading to success and ultimately driving to project benefits.

Proposal literature (Matheson 2008, McHugh 2006) also identifies the *innovative bid* as an alternative approach to meet client's requirements. Like in the identified *need to change* scenario, the bidding team develops the achievement of all requirements in a different way than the one expressed in the ITT. If a better model is identified and it still meets all the necessities, the innovative bid can be submitted. Innovation is a strong way to differ from competitors developing a unique value, but creating an innovative bid is a hard and risky task because implies reading key requirements in a different way. The downside is clearly the lack of consistency with what the customer has in mind, and it can be only sort out with a salesmanship ability in

persuading throughout the benefits created. It is all about the bid team's mindset, if the goal is just to complete the proposal as soon as possible without seeking for interesting solutions, then it is impossible to innovate.

As we previously underlined, finding the answer of all requirements is the first step of developing the project framework. Fundamentally, it is the set of processes, task, and tools used to develop a project from its bidding to its delivery. On its core, the crucial step in project framework management depends on having a good estimation.

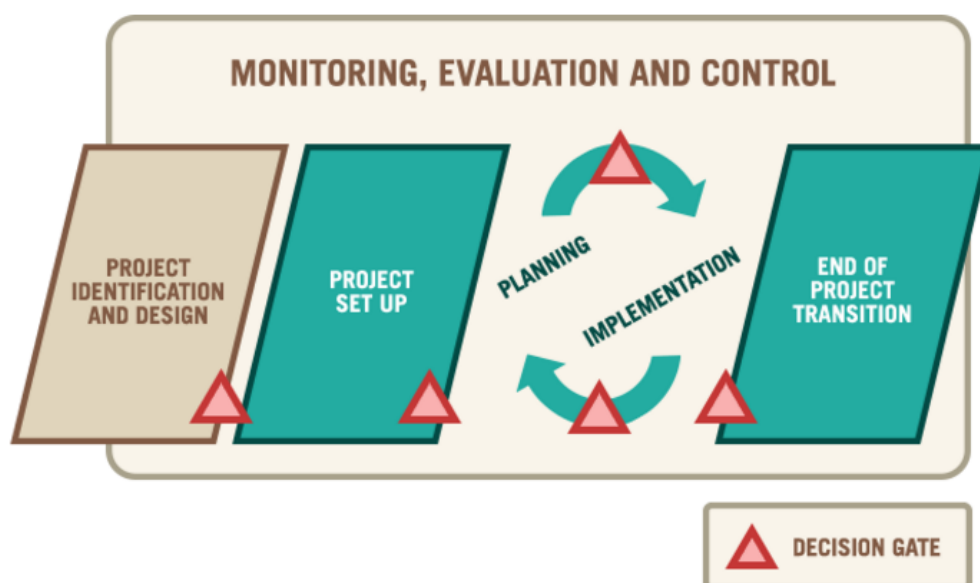


Fig. 1.6: Example of project framework. Source: <https://www.heiferstage.org/ending-hunger/our-approach/project-framework/index.html>

The estimation process is mandatory for both the quantity of work and for all the resources required, including time. Indeed, the customer want to know not only the *what* is the proposed solution and *how* it is made, but also the *when* it will be delivered. Detailed planning is never easy during the bid stage. As a matter of fact, it must be the result of different lower-level estimations from the understanding of the tasks, to the skill and effort needed over time, ending with a contingency scenario analysis to prevent direct impact of unforeseen events.

Once the estimations are made, the project framework is created over four logical steps (Campbell 2011):

❖ Solution Design.

Planning the solution is the first rational step. During this stage the bidding team must focus on brainstorming to figure out what solution could best fit the requirement of the client, and, if they can find it, innovate throughout the proposal. Indeed, it is the phase of ITT analysis and answers planning in order to create a picture of what must be estimated.

❖ Set-up and Estimation.

After a tailored solution is supposed and settled, the process of developing knowledge over all components begins. The aim of the team is to understand how all components work, and to develop this know-how to increase the accuracy of the estimations already made. During this phase, judgment is the kingmaker for a successful bidding. Indeed, the output of this stage is to improve and refine the estimation, due to the availabilities of extra information and researches, and to isolate and define the possibility of a managed risk of mistake, keeping in mind that all estimations have a percentage of error, but the latter can always be reduced throughout additional information.

❖ Planning and Implementation.

Once estimations are refined and an allowance margin for error is suit up, the project translate into a workable and feasible plan. In most of the case, timing is the crucial variable. Planning has to take into account also the risk of a mismatching with the schedule through a contingency time-plan. The previous estimations became, de facto, a ready to apply plan. To be completely prepared, project managers decide to develop also a scenario analysis and estimation, which highlights all case from low to high risk for items involved into all processes. Implementing the estimations and the planning into the real project is the last part of this stage.

❖ Project close: Selling.

We already shown the need to have also a salesmanship set of skill to close the gap with competitors and having a successful proposal. We define the

selling phase as the output of a well-developed project. This job is twofold. First, from the first step of the project it must certainly communicate all benefits and positivises of the solutions proposed (in innovating case this persuasion must be stronger to offset the difference with unmet ITT requirements). Second, there should be a choice explanation part, in which, the team shows only what is reasonable to achieve according timing and deadlines. Innovating to cut waste of time is a strong successful factor of the proposal.

Each of those stages requires a different set of skills expressed with a different mindset. Estimating is a “chemistry” task, where precision and realism are crucial, while, designing a feasible solution requires managerial expertise and marketing creativeness.

Through next chapters we will reach the core of the research understanding how the theory has been applied in the project case and showing what could have been improved or refined in the bidding phase, moving from a mere theoretical parlance to a more realistic study of the case.

CHAPTER II: Rome2024 description

1. Country Analysis

Even though it might be unrelated, Italy as a country has to deal with political and governance framework in economic issues and, specifically, in megaproject development. As we will see into historical data, all projects with same size of Rome2024 had a strong participation of government as funding and/or as supervision, both on national or local level. To understand the feasibility of this project, can be useful to know also the background of the country on a political side. Examples like Turin Winter Games of 2006 and Milan Expo2015 proved the influence of policy makers, due to the strong mass participation and the event ability of attracting huge amount of people. Indeed, the impact both on social and economic side of this kind of events generally creates positive evaluations for public and opinion leaders. Among researches aimed to understand the local and country effect of megaevents, a common thesis is reached: the real focus of the organization is not always oriented to the creation of a direct economic value (in terms of cash flows), instead it is the *legacy* of the demonstration that can move stronger interests. But, even if the monetary value of the event has not always been reached, the management of major playful events and the beneath organizations often proved to be the profitable part of this balance. Moreover, having a look to available studies on megaevents related to Rome2024 (e.g. Montreal 1976) shows that the balance sheets are mostly like to have negative income due to the application of unrealistic *ex-ante* analysis able to push the decision through a positive result.

The official Candidature file for the Stage I of Rome2024 bidding deploys, among others, a useful pattern to create a realistic representation of Italy's analysis as a country. Indeed, as we saw in the previous chapter with the *persuasion* theory, it is mandatory to provide a way to understand whether the host country can perfectly suit the proposal and how the mechanisms of public opinion can affect the realization of this project through the political parties or through direct referendum (like for Hamburg). A brief recap is here summarized. The Italian Republic is a

parliamentary democracy with a three-sided government: Executive, Legislative and Judiciary power. The council of Ministers is in charge for the executive power, the Parliament has the Legislative one and the Magistracy has the Judiciary power. Moreover, due to the structure of the government, based on the Italian Constitution, we have to distinguish between regional (and local) level and national governance. Indeed, according to the 5th title of the Constitution, administrative functions expressly not assigned to national level must be managed on a local level. Metropolitan Cities and Regions also have financial powers and owns a destined fund to develop their own project and/or investments.

The clear result is a major power to political parties in decisions of Rome2024 project's range. Indeed, this led to the withdraw in 2016 due to the new governance for the city of Rome. The mayor Virginia Raggi (for the Movimento 5 Stelle party) and her administration decided not to attempt for the bidding due to the fiscal and financial issues the city has been facing in the last years.

During the ex-ante analysis, which did not foresee the presence of the new mayor, has been also created a detailed table of each party's position, including a brief description of the reasons behind it, to enforce and ensure the candidature of Rome with the support of the local governance:

Political Party ¹	Percentage of National Level Seats held ²	Percentage of Regional Level Seats held ³	Percentage of Local Level Seats held ⁴	Position on the Staging of the Games in 2024 (support/opposition/neutral) ⁵	Principle reasons for support/opposition
Partito Democratico (Government Majority Party)	47.6%	43.2%	41.6%	Support	"The Games are a great chance for Rome and Italy, as a catalyst for the long-term development strategies of the city and the country. We believe that honouring our history means getting to the finish line rather than refraining from even trying."
Area Popolare (Ncd-Udc) (Government Majority Party)	4.9%	7.8%	2.0%	Support	"It is possible to organise the Games in a financially sustainable manner, especially by using the city's pre-existing sports venues. The Games will act as a great educational focus, instilling the Olympic values in our society."
Democrazia Solidale - Centro Democratico (Government Majority Party)	2.1%	2.0%	2.0%	Support	"It's a hard but stimulating challenge to act as a catalyst for planned and existing infrastructure."
Scelta Civica Per L'Italia (Government Majority Party)	3.7%	-	-	Support	"Sport is education, health, discipline and sacrifice: an instrument of integration and peace. The Games could represent a unique opportunity for the country's economic development, the promotion of sport and the Olympic values."
Forza Italia - Il Popolo Della Libertà - Berlusconi Presidente (Opposition Party)	8.7%	7.8%	12.5%	Support	"We believe that the Olympic and Paralympic Games represent an incredible opportunity to redefine the image of the city and of the country, building on its history, its great potential and professionalism to give new life to the city's urban areas."
Fratelli D'Italia-Alleanza Nazionale (Opposition Party)	1.3%	2.0%	4.0%	Support	"We are in favour of celebrating the Olympic Games in Rome and we are ready to do our part in ensuring the lowest economic and environmental impact, while promoting sports activities and accessibility in the country."
Sinistra Italiana - Sinistra Ecologia Libertà (Opposition Party)	4.9%	3.9%	8.3%	Opposition (but voted in favour at City Council level)	"We are certain that Rome and the country would be capable of hosting the Olympic and Paralympic Games, and we also believe in the power of sport to strengthen the human spirit. Our motion is not against the Games, but in favor of consulting the Roman citizens."
Lega Nord e Autonomie - Lega Dei Popoli - Noi Con Salvini (Opposition Party)	2.5%	-	2.0%	Opposition	"No one denies the great impact that such event could have. However we believe that we should let the citizens decide."
Movimento 5 Stelle (Opposition Party)	14.4%	13.7%	8.3%	Opposition	"We believe that sport can act as a formidable social catalyst but we oppose the concept of spending large sums that could be aimed at renovating sports venues or strengthening the transport network."
Gruppo Misto (Other parties)	9.8%	19.6%	18.6%	At City Council level: 4 votes in favour; 4 abstentions; 1 vote against	-

Fig. 2.1: Table of supporting/opposing political parties. Source: <http://www.roma2024.org/en/page/tag/dossier-page-en>

Letting apart the misevaluation of the possible influence of the opposition, a well-defined country analysis is required to highlights the structure of the organization tailored for the project. In a city like Rome, the success of a mega event is the result of a fully integrated services plan delivered by all entities on national and public level, as well as all the involved third organizations managing utilities or external services. Based on Italy's expertise on megaproject managing and megaevents

related to the case in analysis, the Rome 2024 project has a working relationship plan with the IOC, the Organizing Committee, the City of Rome in its local entity, the Region of Lazio, the National Government and all the agencies in charge of delivery the development for the Games, through a direct communication line and following a pre-signed roles and responsibilities document. The quoted plan involves each level of the Government with primary roles to deliver a world-worthy experience for the Olympic and Paralympic Games (Candidature dossier, January 2016):

- ❖ The Parliament will delegate to the Government, as required, to implement all the required legislation for the organization of the Games;
- ❖ The National Government will be active in the Foundation phase, with all Ministries involved as following:
- ❖ Ministry of Economy and Finance: financing the infrastructure, fiscal matters and customs exemption;
- ❖ Ministry of Foreign Affairs: fast-track procedures for Immigration and Customs services;
- ❖ Ministry of Interior and Ministry of Defense: security;
- ❖ Ministry of Health: health programs and medical services;
- ❖ Ministry of Infrastructures and Transport: monitoring of venue construction and transport infrastructure to support the Games Transport Strategy;
- ❖ Ministry of Labor (in cooperation with the Ministry for Interior): issuing of work permits;
- ❖ Ministry of Economic Development: energy and telecommunications;
- ❖ Ministry of Environment: support sustainability programs to minimize the Games carbon footprint;
- ❖ Ministry of Education: Olympic and Paralympic education programs;
- ❖ Ministry of Cultural Heritage and Activities and Tourism: Cultural Program, use of Rome and Italy's heritage sites and tourism promotion;
- ❖ The Judicial system and the Anti-Corruption National Authority (ANAC) will advise and oversee the Organizing Committee's activities through prior

approval of all procurement processes and the establishment of an ex-ante control mechanism to ensure efficient tender procedures.

The city of Rome will plan and deliver, for the City Operations, all services involved and will handle the permits and legislations issues, the infrastructures and overlays, the visitor services, security, workforce management, community services, parking and transports services (including public ones with Olympic dedicated lines and fleet services), city volunteers and cultural/educational programs. The Regional Government of Lazio, instead, will provide all the needed support on security and traffic planning, assisting also the organization in legal and legislation issues and in medical and health care.

The whole detailed plan is the result of a deeper know how of megaproject management and organization, indeed, we will see that Italy hosted several events (also in Rome). The resulting experience, deriving both from positive or negative events, is totally applied in the development of the Rome 2024 project to have improved issues forecasting and to offer a better service for a world-class adequate expectation.

2. Historical Background

Over the past 10 years, Italy hosted many international main events as sporting competitions like the *Mediterranean Games* in 2009 and *FINA World Championships of 2009* and as cultural events like *Expo2015* in Milan.

In 2006, Turin was the host of the 20th Olympic Winter Games and the 9th Paralympic Winter Games recording 80 National Olympic Committees (NOCs) and more than 2.5k athletes. Two entities made the governance structure of the event: the TOROC (Torino Organizing Committee of the Olympic Winter Games), a non-profit private foundation which laid on investors' funds, ticketing revenues and medias' rights; and the AT2006 (Agenzia Torino 2006), a Government Agency in charge for venues and related infrastructures delivery financed with public funds

and subjected to public controls, regulations and procurement. This clear division made a deeper focus possible, from one side TOROC developed and reached all requirements and all event operations needed during the Foundation phase; while, Agenzia Torino 2006 took responsibility for the design, tendering and development of all manufacturing, including integration of legacy provisions. TOROC assumed all the contractual obligations deriving from the supply to all customers involved in the event (from athletes to spectator and delegations). This event had a cost of 2.4€B in terms of manufacturing, reconstructions and adaptation of venues to suit the manifestation with less of 1€B for managing and organizing the whole. More than a third of this cost was offset by ticketing, royalties, TV rights and others. But, the major part of all the infrastructures relied on public funding from Law 285/00, Turin City Council, the Region of Piedmont, CIPE (Interdepartmental Committee for Economic Planning), ANAS (national public corporation of roads), ATIVA (Torino-Aosta Valley highway corporation), SITAF (Italian corporation for the Frejus tunnel), ARPA (public regional agency in charge of environmental prevention and protection), other expenses of Agenzia Torino 2006, with only a 6% based on private investors (Bondonio & Campaniello, *Torino 2006: an organisational and economic overview*, 2006). The two thirds of uncovered costs were overcome during subsequent years as legacy and increase in appreciation of the city of Turin, thanks to the record number of visitors during the event. Indeed, as the famous journal “*Il Sole 24 Ore*” quoted a few days before the opening ceremony, the hosting event was able to create almost 17€B through the next two decades due to the new increased awareness of the city and its bordering ability to create new tourism with a forecast of 100-150k new visitors per year. Also, the Olympic Movement in 2014 expressed its positive opinion as “the Turin Games of 2006 changed the history of the city. It was a forgotten city, out of sight, that was losing trust in its capacity and professionalism. Now Turin has recovered trust in itself”. This is the main reason why also the Rome 2024 project took as example the organizing framework of Turin 2006 in terms of clear division among responsibilities and entities’ tasks.

Environmental impact and sustainability is an expertise of 2010, year in which Italy hosted the FIVB Volleyball Men's World Championship among 10 locations across the whole country, with the final in the *Palazzo dello Sport* in Rome (which is also proposed for Rome2024). This tournament involved 32 different nations and involved 340k spectators, with an apex of 3.5M viewers (almost 15% of market share) during the Italy vs Brazil match. During this event, the Organizing Committee, mostly composed by technical experts, was in charge for planning and delivery of the event with the support of external companies for the marketing and security issues. The Organizing Committee received the ISO 14001 certification by Det Norske Veritas (DNV) and joined the Sustainable Energy European Campaign, in line with the purpose exposed in the bidding phase of having the lowest environmental impact hosting this main event. The success of the event and the presence of positive feedbacks were the surround for the success of the country in the championship with the commitment to host the same event in 2018 in partnership with Bulgaria. The key lesson learnt and the particular obligation of respecting sustainability principles to achieve the lowest environmental impact, will be applied also in hosting the Games in Rome for the 2024.

Finally, the use of ex-ante control mechanisms to provide additional integrity measure is a lesson from Milano 2015 Universal Expo. During the six-months "Feeding the Planet, Energy for Life" event, the city was visited by over 21million visitors and more than 60 heads of states thanks to the participation of 120 countries and the presence of several international organizations in the 1.1M m² venue. The Organizing Committee, Expo 2015 S.p.A. was a single public company that handled both the infrastructure and operational level of the project, unlike the example of TOROC and the destined dual organizations, maintaining also a world-class level quality event. To preserve the required high level of transparency and fairness (also certified by ANAC, the national authority for anti-corruption), the company implemented a detailed checklist and an innovative ex-ante control mechanism to monitor the applications of all procedures. Due to the recent experience, the Government Authority for venues and infrastructure will be supported by ANAC also

for Rome 2024 to lead the public procedures and construction milestones. Moreover, the same ANAC, as a direct result from Milan experience, decided to apply the same method and a similar preventive checklist to develop a strong and deep control over the deployment of Rome 2024 project ensuring complete transparency over documents and procedures. The ex-ante control mechanisms, instead, will be provided before the Foundation phase for the Games in compliance with the Olympic Agenda 2020 principles. With a total cost of almost 14€B, divided as 13€B of infrastructure and 1€B organizing costs, this mega event created an affluence of over 21M visitors and over 70k work occupations per year. The economic impact of the project is estimated to a total added value of 15€M and 28€M extra production tailored for the event, according to the bidding dossier. The latter did not consider also the value of the legacy, which, according to CERTeT (2015) studies, may be 10€B with an extra production and extra services values of 24€B for the next years until 2020. It is not like the example of Turin, which can be assumed as a less known tourist destination then Milan (with a world point of view), but also this city will benefit of additional exposure. Moreover, due to the destination of the event, the creation of new infrastructures and the incremental effect of new undertakings taking place during the exhibition should be included among the positive future benefits (according also further analysis of SDA Bocconi). Due to the contiguity of the event it is still not clear whether the estimation made and the ex-post evaluation are overestimation or realistic ones, but the whole project has been a strong opportunity to prove the worthiness of Italy in management of megaproject and a chance to integrate key lessons (the control mechanisms in this case) into the development of future similar events.

Besides the expertise deriving from hosting several events, the joining link of all quoted project is the appreciation of the country through a legacy program. Indeed, also Rome 2024 has a legacy plan developed and implemented by the Legacy Department. This organization is in charge of the delivering during the Foundation phase within the Organizing Committee (OCOG) and through the partnership with it. Specific commissions will be included inside the Legacy Department with tailored

tasks, roles and responsibilities. Sport Legacy, Olympic Village Legacy and City Legacy commissions will set up to coordinate deliveries across all legacy-stakeholders, managing the deployment of key infrastructures projects and dedicated transportation infrastructures. This work will set the way up to the new legal entity creation two years before the delivery of the Games, in order to coordinate and support all private and public entities already involved. Among other powers, this entity will represent: Italian Government; Region of Lazio; City of Rome; CONI; Italian Paralympic Committee (CIP); Tor Vergata University; other Rome Universities; RAI; and the Rome Chamber of Commerce (Candidature dossier, January 2016). This decision relies on the application of the best practice from previous Games organizations, such as the London Legacy Development Corporation. This legacy program, representing also the CONI and Tor Vergata University, will take care of the support at the Natural Water Sports Park creation that will be a high-performance training and competition center fully managed and funded by the CONI, and will attend to the selection of the management authorities for the Tor Vergata Cycling Arena through an open tender process.

3. Long-term integration process

Quoting from the Candidature Manifesto the vision for this Olympic Games is based on using “the art of the Italian welcome to unite the world through sport”.



Fig. 2.2: Rome 2024 vision. Source: https://en.wikipedia.org/wiki/Rome_bid_for_the_2024_Summer_Olympics

But, even if it seems to be a quite conceptual vision, what Rome aims to create is a sense of pride similar to the one originated from the hosting of 1960, marking a new milestone in Rome's history and a turning point in the city's development to improve confidence for the future enhancing a quality increasing mechanism for all citizens. To do so, the three pillars model will be the guide for all achievements of the project and will maximize benefits from bidding, planning and hosting the Games throughout a strong legacy. Indeed, *Culture, Lifestyle & Landscapes* will be not only a quality celebration of sport in a unique outdoor setting, but also a catalyst to transform city's infrastructure improving their quality (following the Olympic Agenda 2020 principles). *Families* is a friendly concept to introduce a promotion through generations, with a focus on new ideas and a new society value creation. At last, *Tradition & Innovation/Technology* is probably the greater purpose, striving for the creation of a showcase in the history and heritage of the country incorporating innovative ideas and using high quality technological expertise. In details, the proposed goals are the following (Candidature dossier, January 2016):

- ❖ To deliver a memorable experience for athletes and a unique Games-time atmosphere for all;
- ❖ To celebrate and inspire participation in sport and deliver more sporting opportunities and achievements, inspiring new talents and using sports to strengthen the society;
- ❖ To unite communities, families and society and improve the quality of life for Italy's citizens;
- ❖ To improve city infrastructure and living environment to create a more accessible, sustainable city with the core principles of transparency, environmental protection, inclusion and ethics;
- ❖ To incorporate creativity, innovation and technology into all Games-related planning and programs to deliver outcomes of the highest quality, promoting Rome as a hub for innovations and creativity.

Unlike the most part of European countries, Italian cities are not required to provide a long-term development strategy. Despite of that, Rome has completed its long-term planning over the past ten years, including the development of the *Roma Capitale Strategic Development Plan (SDP)* in 2011 and, most recently, the *2025 Urban Agenda for the City of Rome*, the “Agenda Urbana” in 2013. The strategic vision is recapped into four objectives:

Rome, city of environment sustainability			Rome, a city polycentric and united			Rome, a globally competitive city			Rome, city of culture and entertainment		
Development of sustainable mobility	Rehabilitation of the Tiber as a vital artery for the city	Action plan for sustainable energy	New model of social inclusion	New urban centres	Urban renewal in the suburbs	Centres of excellence for health	Mixed-mode accessibility	Cooperation between universities and businesses	Improvement of abandoned areas	Second tourist hub	Protection and enhancement of Ancient Rome

Fig. 2.3: Rome SDP. Source: Strategic Development Plan for the City of Rome, 2011

This pattern gave special attention to sport due to the previous withdraw from Olympic Games of 2012 for economic crisis and to prevent future candidatures like the 2024’s or the hypothesis of 2020. In this framework, the bidding to host the Games is perceived as and accelerator for the implementation of the SDP, in order to improve both the image of the city and the country, and to contribute to national economic growth. Moreover, in 2013 the *2025 Urban Agenda for the City of Rome* was launched to facilitate the integrated planning of available economic and financial resources and to attract capital investments for innovative projects. The four main pillars and the SDP have strong elements of similarity to support and develop part of the Rome 2024 vision and rationale, throughout:

- ❖ A strong focus on sustainable development, to promote an effective balance between economic development, environmental and cultural heritage protection, social cohesion and innovation;
- ❖ The use of sport and culture as a priority for the city development;
- ❖ The role of the Olympic and Paralympic Games as a unique promotional opportunity for the city, to accelerate the strategic plan implementation, attract investments, mobilize local economic and social resources.

Hosting the event the city aims to create “a new dimension of unrivalled impact, with a heightened cultural and social experience” within a cultural and social setting that will draw even more people each year in Rome. Moreover, the city is positioning as a sport hub for this global event allowing athletes and spectators from different countries to enjoy the country heritage and history. Doing so, the Games will enhance and reinforce Rome as a global event city as for the International Federations (IFs), increasing even more the potential to attract many spectators through its cultural and tourism offer with a direct result in more people playing, watching and engaging with sport from over the world. The project of Rome 2024 also contemplates a city dressing program creating a *Look of the Games* inspirational and innovative purpose to go beyond the mere venues and locations to appreciate the organization of such mega event. Indeed, the plan is to “create a festival atmosphere for all visitors and maximize the visual impact for sponsors and media audiences” as a buster for world-wide media exposition even out of the sport range. In partnership with Italy’s most innovative companies and associates they will provide the best showcasing opportunity for sponsors. The Games will be a unique chance to display the *Made in Italy* brand as the excellence across many sectors all over the world.

4. Introducing other megaprojects

As we already analyzed, sometimes the real value of hosting megaevents is not related to the creation of a direct positive income, but is bonded with the indirect exposition effect over the subsequent time. On a mere financial level, there are few examples of positive-income project worldwide. In this part, we will go through two juxtaposition from UK's projects to understand the main difference between Rome 2024 event and other similar cases of megaproject, that will be further discussed as key topic in the next chapter.

- ❖ The London Olympic Games of 2012

What is really impressing of this project is its size. This mega event was twice as large as the Heathrow Airport Terminal 5's one (which has the double of the expected time to be delivered), had a capability of over 1B visitors and an estimated television audience of over 4B viewers. The bidding phase ended on 6th July 2005 when the International Olympic Committee (IOC) announced, with an absolute surprise for the bidding team, that London would host the Games. Paris was the favorite site to win. The added value of the proposal was symbolized by the aim of reaching the success of the 1908 (year in which the city held the Games being able also to make profits). This objective was the inspiration for one of the greatest infrastructure project of the UK. Ken Livingstone, the at the time mayor of the metropolis, said "The Stadium will act as a beacon symbolizing the extraordinary transformation and regeneration of East London" due to the huge construction of a 600 hectares Village for the 17k athletes (with a cost of 1.1£B) and to the subsequent use of this infrastructure through the conversion in to 3.500 homes, mainly for first-buyers, increasing the value of the whole project and amortizing the production costs (London 2012 candidature dossier, 2012). Adopting a well-developed scheme of milestones and respecting all the deliveries, the city was able to achieve the 89% of the project in November 2007 before the large fire destroyed part of the Olympic site. Indeed, the organizing framework was already deeply

defined and optimized to obtain the best efficiency maintaining a certain flexibility ratio during the bidding phase and it allowed to offset the 4 times changing before the start of the Games.

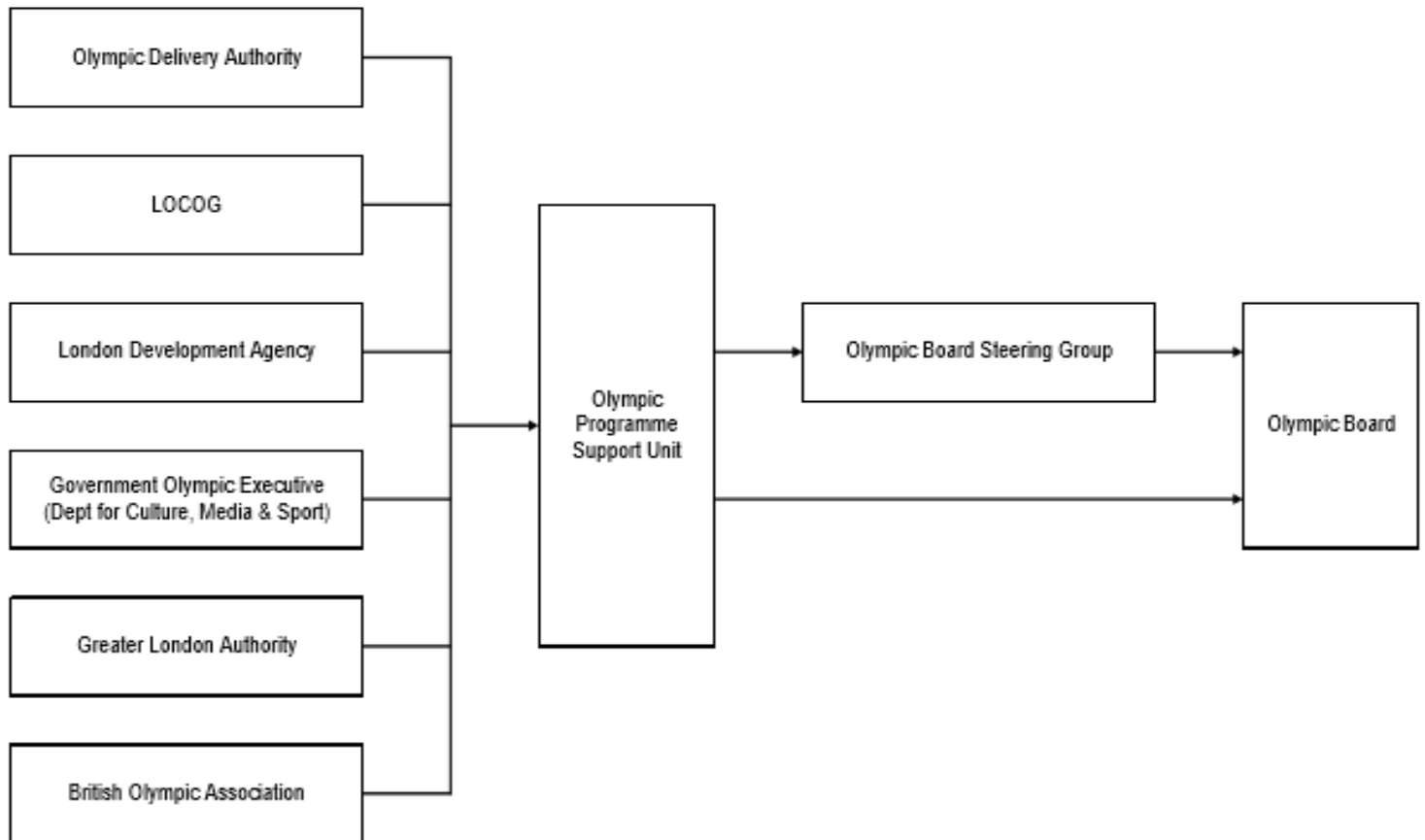


Fig. 2.5: London 2012 organizing framework. Source: <https://www.olympic.org/london-2012>

On the planning side, the project team submitted in 2006 a 10k pages document to the GLA (Greater London Authority) for the approval before the full-plan publish in October 2007. Main issues were highlighted by the creation of the new sporting venues, the improvement of highways, the building of 18 bridges and all the others utilities related to the river works. The greater gap from the ex-ante forecast was the budgeting for the main stadium, which had just an 80% of certainty in the pre-event estimations. Another key success factor, during the bidding phase, was the green purpose of the whole project and the focus in lower as much as possible the impact of the event in the environment of the city (a common point with both the

Italian projects of Rome 2024 and FIVB Volleyball Men's World Championship of 2010). For instance, to achieve such difficult purpose, 55k seats from the top tier of the main stadium will be sold to reduce the impact of pollution and to prevent the creation of another huge venue that cannot be recovered. Taking into account also the governance side, the enormity of this megaproject manifested through the creation of various entities to oversee several aspects of the Games. We can quote the DCMS (Department for Culture, Media and Sports) that oversaw the Olympic Games, the LOCOG (London Organizing Committee for the Olympic and Paralympic Games) which prepare and staged the Games, the ODA (Olympic Delivery Authority) for the new venues creation, the improvement of the existing one and the deployment of all required infrastructure, and the support of the GLA (Greater London Authority) as a strategic body that took responsibility for the regeneration and preservation of the environment of London increasing the legacy of the Games.

❖ The Cross-rail program and Innovate18

In line with the previous example, the mega project of the new railway is a wide range project that will involve 1.5M people, allowing within 45 minutes to cover all London's key districts. With more than 75% of the project already delivered, the milestone of having 26 miles of new tunnels for 2018 seems more than realistic. But, the real big deal of this project is the correlated Innovate18 program, which will transform the cross-rail creation in to a culture of innovation. Indeed, many technologies will be tested during works, like immersion facilities and virtual 3D environment to build information modelling (BIM). The whole project has a doppelganger in its virtual version, thanks to the development of the over 100 pioneering innovations, selected from over 1000 ideas submitted by people across the project. Being the largest constructing project in Europe, the bidding team adopted as objective the purpose of providing a technological, productive and methodology benchmark for other similar projects. Cross-rail aims to create a legacy that

can influence and motivate all future infrastructure innovations by thinking differently in idea sharing and implementation. With this point of view, the Innovate18 program involves the project supply chain and all partners to explore market leading technologies, to apply new systems and to improve designing process. It also supports the improvement of safety, reducing wasted times and increasing efficiency, with a constant eye on environmental sustainability in finding new solutions. At its core, the program is just a commitment to collaboration, enhancing ideas across the supply chain to support and cooperate in challenge overcome and to have a delivery even more efficient. Cross-rail project is proving the direct relationship between performance and innovation by creating a new mind-set through different routines in people from different collaborating firms. The ultimate purpose is to embody each worker inside the same working organization to promote sharing of innovation and creative thinking.

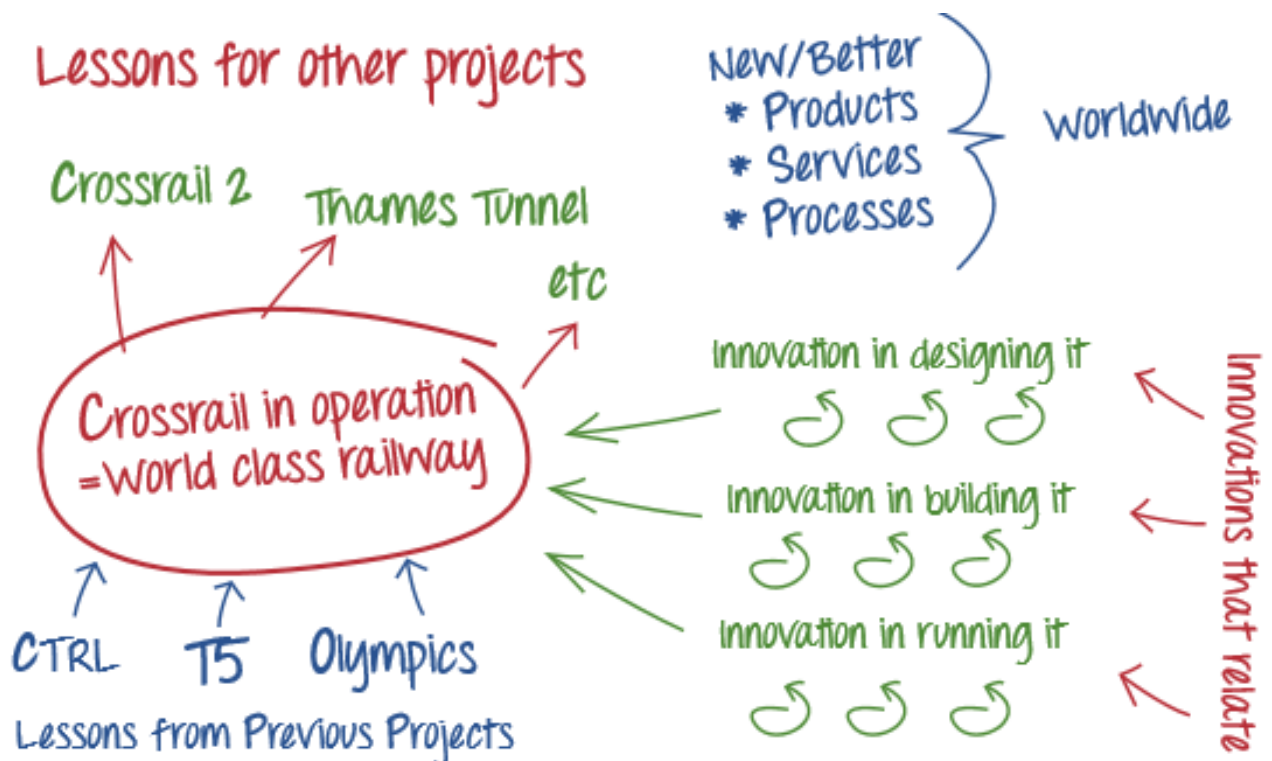


Fig. 2.6: Cross-rail innovation vision. Source: <http://www.crossrail.co.uk/sustainability/innovation/>

From the manifesto of the innovative project, we can understand how Cross-rail aims to create a world-class innovation program enhancing quick and

systematic innovation in an *open innovation model* (from the official website crossrail.co.uk, 2017). To reach such purpose, it “feeds” from ideas also from the outside of the construction industry that (like P&G, Rolls-Royce, Siemens or IBM) have proved of being able to change the market innovating creating a reliable best practice. Cross-rail is the first construction organization in UK which has develop a strategy and a process of managing innovation in mega projects, overcoming the steps already made by other megaproject switching the focus from the novelty of the approach to a full creation of a promotive process to innovate even beyond the end of the project. To do so, the model developed is entirely focused on innovation: the *3Cs of Innovation*. *Capability* through a gathering of all high-value organizations as contractors, designers, technology providers, and partners; *Culture* as a direct refer to the sharing of mind-set, beliefs and value to contribute to the great success of the innovation; *Collaboration* to involve each individual starting with top management support and cascades throughout the organizations involved. This mega-project, like the Rome2024 case, wants to access to the previous expertise of national similar events, to use the legacy of them to provide the best service possible.

These two examples provided some discussion cue for the next chapter. Indeed, the Rome 2024 case is very particular because of the high potential of the bidding proposal despite of the withdrew of the city. To understand the possible impact of this event we took other projects of the same size into account, and we will highlight the true pros of the proposal and develop some hints of improvements.

CHAPTER III: Case interpretation

1. *Proposal's added value*

As we saw on chapter two, in the introduction of other Italian megaevents and during the analysis of the UK's megaprojects examples, the added value of such events is deeply inbounded with the creation of a legacy that will increase in the future the social worthiness of the efforts. Rome's candidature for 2024 makes no difference. At its core the value generation comes from a public policies and strategies for sustainability program. Following the purpose of reducing the pollution (already reached in 2010 event) and preparing for a wide people affluence for the event, the city developed a four points legacy strategy that will increase the heritage of the event by preserving or improving the environmental conditions and the services quality (Candidature dossier, January 2016).

- ❖ Improving the transportation system.

"The overall aim is to provide a more efficient and environmentally friendly system that embraces all forms of transportation". Ensuring the provision of healthy, safe and efficient services, the Sustainable Mobility Plan (SMP) is a guideline to the environmental-friendly development of transportation in Rome. Its main purpose is to reduce the reliance on private transportations to improve road safety, prevent traffic jams, and strengthen connections with airports. Besides the public services improved by the program, it also includes the possibility of including a system of bike sharing among all the hot-points of the city.

- ❖ Reducing Rome's energy footprint.

By the application of the Sustainable Energy Action Plan (SEAP), which includes also the SMP, Rome aims to achieve the reduction of greenhouse gas emissions through an improved transportation system, an increase in energy efficiency, and the implementation on renewable energy sources. This project includes the use of LED lights (which have lower energy use) to illuminate city's main

monuments and landmarks to allowing a constant exposition of touristic venues while maintaining low waste of energy.

❖ Improving waste management.

The municipal body for waste operations management is the AMA (Azienda Municipale Ambientale). In order to expand the offered service, a plan of improvement has been applied during last years, but, following the purpose of having a green-event with the hosting of the Games, this plan has been even more refined and upgraded. Indeed, this led to a separation of households for different collections that increased the efficiency of the waste recycle management, going from a 25% in 2011 to a 43% in late 2015. With a door-to-door system, spreading in several urban districts, that separates into waste streams, Rome is aiming to become an advanced benchmark by 2024.

❖ Preserving natural resources and biodiversity.

The two-thirds of Rome's municipal area (around 87k hectares) are green spaces, and 30k of them are subjected to environmental protection. The city itself is one of the greenest of Europe and on top of metropolitan major cities in the world, in terms of both green extension and of biodiversity presence. Indeed, the preservation and expansion of these ecosystems is one of the highest priority of the Sustainable Energy Action Plan (SEAP).

The Games, in this context, will act as a catalyst for this plan, by the purpose of delivering and supplementary long-term legacy of best practices in sustainability and in infrastructure management, and by the availability of additional resources and expertise.

Bidding for Rome 2024 is even now enhancing some changes and evolutions for the city, indeed, it allowed the promotion and prioritization of a wide number of urban infrastructures and environmental projects, with a direct improvement of the quality of the city as a whole. On a country level, Italy is already benefiting of the engagement for this megaevent both on the economical side and on the social's, also due to the effective engagement of all regions. Some of these benefits from

bidding for the Olympic Games, irrespective of outcome, are (Candidature dossier, January 2016):

- ❖ Significant educational and social benefits from the Olympic Education Program, through a digital kit to national schools to promote the Olympic values.
- ❖ Communication and partnership working enhancement between agencies, government departments and other bodies/entities involved within cities, regions and nationally.
- ❖ Connections with non-government organizations related to different derivations from the Games, e.g. *ActionAid*, a two-year bid program established to integrate different culture and background people into a single community driven by sports.
- ❖ Promotion and renewed interests in sports, particularly by young people, students and other target groups.
- ❖ Building and improving sports facilities in public schools and institutes through the support of Government's commitment to sport promotion.
- ❖ Endorsement of the innovation campaign *#LabRoma2024* which encourages young innovators through a call for ideas and proposals to address modern day challenges.
- ❖ Encouragement through an active participation and involvement of local communities in the planning and redevelopment of all the facilities around the Games venues.
- ❖ Raising Rome and Italy's profile on the world stage, increasing the exposition of the city and the country and providing a better media exhibition world-wide.

Furthermore, during the bidding phase, the organizing committee established a strong and positive relationship with many stakeholders able to benefit from hosting the Games. This led to a development of a comprehensive sustainability strategy and legacy framework also based on the engagement of those relevant

stakeholders, which, would support the candidature process of Rome. Besides the development of working groups to encourage the contribution of single stakeholders (mainly related to the prevention of negative impact on the environmental and energy-waste side), these relationships are key factors to have the full support during the candidature of the city. Relevant public entities on the Government, both locally and nationally, and several institutions (e.g. Tor Vergata University) have been directly involved into the development of this megaevent. Moreover, several NGOs (Non-Government Organizations) have been created to work closely with the bidding committee to assess the value of potential venues, due to the necessity of reducing the number of facilities and improving the efficiency of the organization. On the private side, a wide range of different companies have shown proactive and intense support for Rome bidding, participating to several meetings to provide support and identify all best ideas to increase the legacy of the project. Private sector also allowed a fundraising and sponsorship by including international companies like Alitalia, BNL, ENI and Unipol-Sai (Candidature dossier, January 2016).

As we saw in the Turin Olympic Games case of 2006, to monitor and prevent unsustainable impact the development of a Strategic Environmental Assessment (SEA) has been foreseen, in accordance with European, national and regional legislation. The SEA procedure provides a valuable tool to strengthen the commitment to sustainable development, enhance efficiency in resource management and push for a greener economy. It also addresses an environmental and social monitoring task to the committee to preserve safety of people and to maintain the value of infrastructures and venues. Indeed, the purpose is to have an innovative approach to manage and minimize the overall environmental footprint of the Games.

2. Economic Assessment

When it comes the economic analysis, three elements must be distinguished in the assessment of the Games, that differs each other per conception, interpretation and measurement: the *financial sustainability analysis*, the analysis of *economic advantage* and the *impact analysis*. With an administrative point of view, we have a responsible entity, the Organizing Committee, and a gathering of coordinated entities (part of which represented by national and regional bodies) with a separated balance sheet. Each of them has its own financial plan, with an equally relevant sustainability problem faced by the Coordinating Committee. Hence, it is compulsory to assess the feasibility problem also from their point of view. Indeed, on a mere financial level, the ex-ante analysis made for the Games is a complete cost-benefit assessment which involves the preparatory works and the celebration of the event on a local and national economy level. Investments consist in a wide range of projects of different kind with various degrees of inter-dependence as new buildings, improvements to already existing infrastructures and re-adaptation to obtain residential accommodation and residential services. Therefore, the economic analysis must distinguish between the value of hosting the Games from the value of the works necessary to do so. On one hand the effect of the infrastructural works must be examined to raise a deep analysis, on the other one, it must be take into account that Games themselves gave an economic impact on the country unrelated to the investment made. The result is the seek for a study that: develops a reliable economic model tailored for the event; uses specific methodologies to understand the assessment of the benefits; identifies net benefits of intangibility of the event; and measures all economic effects in the long-run. This analysis, made up for the bidding, had an optimistic result. Indeed, the Olympic Games in Rome for the 2024 are assessed as a *“positive economic event, both in terms of cost benefit balance and, more generally, owing to the favorable effects it would have on the local and national economy in short and long term, which increases into the aggregate Gross Domestic Product (GDP) business’ income”* (Economic Impact Assessment of the Rome2024 Olympic and Paralympic Games, January 2016).

The assessment made is broken down into two separate parts: the analysis of impact and of its economic effects and the cost-benefits analysis that is the attribution of monetary values to the event to set up an economic balance sheet. This dualism aims to not only estimate a direct economic benefit, but also to understand the effect on social and cultural life quality in Rome during and after the event. Substantially, the assessment developed aims to a determination of the impact on the quality of life of the citizens involved, assessing their direct, indirect and induced effects.

The next table shows the initial data of the expected expenditure and financial coverage for the preparatory works and for the celebration of the Games.

Costs	
Investment costs	3,897.44
Unexpected events (35% of investment costs)	1,364.1
Operating Costs	2,184.22
Returns	
National sponsorship	615.25
Merchandising	73.78
Tickets for Italian spectators	345.86
Tickets for foreign tourists	94.76
IOC contribution	1,046.02
Benefits from the Olympic Village	78.02
Public investments already planned	2,211.58
Estimated tax revenues as a result of the Games	1,150.57
Public contribution for unexpexted events	1,364.1
Public contribution	465.82

Note: millions of euro: values discounted at 2017 values at a discount rate of 5%

Fig. 3.1: Preliminary financial analysis of the Public components. Source: "Economic Impact Assessment of the Rome2024 Olympic and Paralympic Games, January 2016"

On this base, a three-scenarios estimation is developed with the sequent assumptions: Economic Net Present Value is discounted with a 5% rate, leading to a €2.9B base scenario in 2017, with an Economic IRR (Internal Rate of Return) of +31,09%.

Economic indicators	Base scenario	Worst scenario	Best scenario
Investment costs	1,050.79	1,050.79	1,050.79
Overrun costs	367.78	367.78	367.78
Congestion costs	203.05	203.05	203.05
Security costs	676.84	676.84	676.84
Operating costs of the event	1,937.64	1,937.64	1,937.64
Total Costs	4,236.1	4,236.1	4,236.1
Existence value	107.96	107.96	107.96
Macroeconomic benefits	2,676.08	1,637.57	2,676.08
Benefits from the Media	482.45	192.99	1033.2
National Sponsorship	615.25	615.25	615.25
Merchandising	73.78	-67.68	147.55
Ticket surplus	763.47	381.74	763.47
Tickets for italian spectators	345.86	345.86	345.86
Tickets for foreign tourists	94.76	94.76	94.76
IOC contribution	1,046.02	1,046.02	1,046.02
Sport practice option	532.34	159.7	1,064.68
Social inclusion option	245.02	73.5	490.03
Olympic Village benefits	139.09	69.54	139.09
Total Benefits	7,122.08	4,657.21	8,523.95
ENPV	2,885.98	421.11	4,287.85
EIRR	31.1%	10.4%	41.4%

Note: Differential values with respect to the situation without the Games; millions of euro discounted at 2017 values at a rate of 5%

Fig. 3.2: Scenario Analysis of the Net Present Value of the Games. Source: "Economic Impact Assessment of the Rome2024 Olympic and Paralympic Games, January 2016

Going further in the economic assessment, the investment in the Olympic Games would probably need other resources into action. In monetary terms, the total contribution to the increase of GDP in Lazio Region (Rome included) is over 2,4% during the construction period (2017-2023) due to the difference between €5,58B of planned investments and the €4,03B expenditures in public programs. If the effect on Income and consequently on Household consumption is considered, net impact turns out to amount to 2.9 billion euro, while businesses benefit for about 1.7 billion. If the effects on tax revenues are also considered at central and local level, the net impact is estimated to be 868 million euro (Fig. 3.5). Finally, the net effect on production is about €9B, with a strong preponderance €5.68B of the impact on services activities, which are also the fundamental element in the local economy of Rome metropolitan area (Fig. 3.6).

	Scenario with the Project	Scenario without the Project	Difference	
Value Added	14,561	10,599	3,961	million euro
Household Income	10,708	7,804	2,904	million euro
Tax Revenues	3,199	2,331	867	million euro
GDP increase/year	1.4%	1.0%	0.4%	%
Total employment - construction period	177,408	129,408	48,000	jobs
Annual employment - construction period	29,568	21,568	8,000	jobs

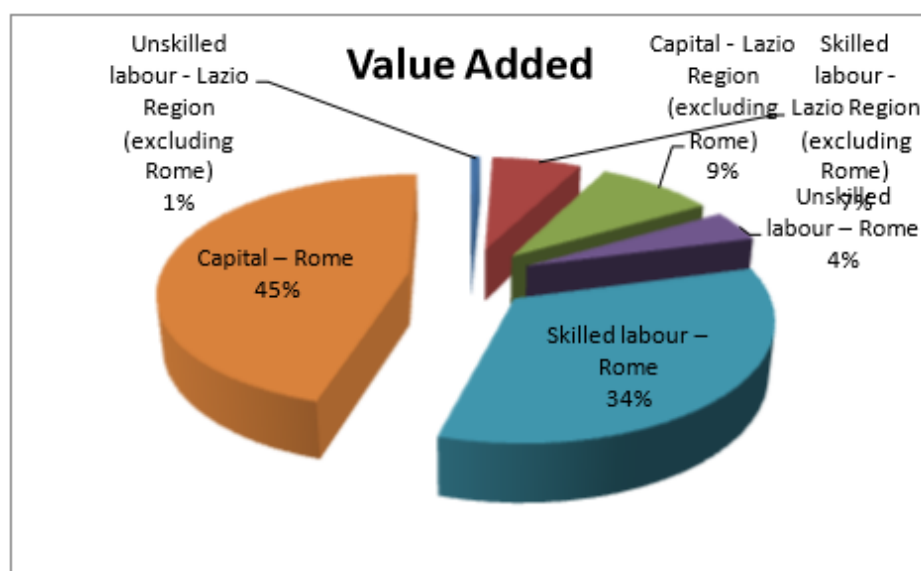


Fig. 3.3 and 3.4: Added Value of the Investment. Source: "Economic Impact Assessment of the Rome2024 Olympic and Paralympic Games, January 2016

Institutions	Scenario with the Project	Scenario without the Project	Net impact
Households 1	381.1	277.7	103.4
Households 2	858.4	625.6	232.8
Households 3	899.3	655.6	243.7
Households 4	1,424.5	1,038.3	386.3
Households 5	1,770.8	1,290.8	480.0
Households 6	1,877.6	1,368.5	509.1
Households 7	3,496.5	2,547.4	949.1
Businesses	6,186.9	4,495.1	1,691.8
Central Government	1,868.0	1,361.6	506.5
Local Government	1,330.6	969.6	361.0
Total	20,093.8	14,630.2	5,463.7

Fig. 3.5: Impact on Institutions for Lazio Region. Source: "Economic Impact Assessment of the Rome2024 Olympic and Paralympic Games, January 2016

Production	Scenario with the Project	Scenario without the Project	Net impact
Agriculture	256.6	187.5	69.0
Industry	4,048.0	3,169.9	878.1
Construction	2,882.0	1,903.3	978.8
Trade	4,233.8	3,113.3	1,120.5
Accommodation	894.3	650.4	243.9
Other services	20,473.6	14,785.4	5,688.2
Total	32,788.4	23,809.8	8,978.6

Fig. 3.6: Impact on Production for Lazio Region. Source: "Economic Impact Assessment of the Rome2024 Olympic and Paralympic Games, January 2016

Another major impact generated by investments in the construction period is that on direct, indirect and induced employment. The estimated effect on employment considering a 6-year construction period is about 48k new jobs in the whole period, about 40k of which in the Rome area, with an annual average of about 8,000 jobs, more than 7k of which in the Rome area (Fig. 3.7). The increase in employment would be added to a forecast average increase of about 27k jobs per year which would also be created if the Games were not to be held in Rome, provided that the public infrastructures plan for Rome already in the pipeline is implemented. Although it is not quantified the corresponding benefit, this plan is presumably more likely to be carried out if the Games are awarded to Rome. Furthermore, in the post-Olympic period, the economic model that we used projects more than 9k additional permanent jobs (Fig 3.8).

Employment in the construction period	Scenario with the Project		Scenario without the Project		Net employment	
	annual	total	annual	total	annual	total
Unskilled labour - Lazio Region (excluding Rome)	693	4.159	506	3.039	187	1.121
Skilled labour - Lazio Region (excluding Rome)	4.196	25.174	3.065	18.392	1.131	6.781
Unskilled labour – Rome	4.149	24.896	3.015	18.087	1.134	6.809
Skilled labour – Rome	20.530	123.180	14.982	89.890	5.548	33.291
Total	29.568	177.409	21.568	129.408	8.000	48.001

Fig. 3.7: Annual employment. Source: “Economic Impact Assessment of the Rome2024 Olympic and Paralympic Games, January 2016

Value Added	726	million euro
Household Income	835	million euro
Tax Revenues	331	million euro
GDP increase/year	0.4%	
Annual employment – period of full operation	9,117	jobs

Fig. 3.8: Economic impact in the period of full operation. Source: “Economic Impact Assessment of the Rome2024 Olympic and Paralympic Games, January 2016

3. Juxtaposing Rome2024

In chapter two we introduced two main examples of other megaprojects and megaevents in UK: the *London Olympic Games of 2012* and the *Cross-rail program*. The first one represented for the United Kingdom the accomplishment of a strong expertise based on several trials in megaproject management. Indeed, the UK government has a history of highly-difficult projects’ establishment, that, most of the time, did not obtained positive income. Examples of that can be found in the large-scale planning of the Dome, made for the new millennium, that led to an over +£10k per month in extra tax payment to be recovered, or in the Scottish parliament building and in the Wembley stadium. Italy, almost at the same way, in recent years had a chance to prove its value in megaevent’s hosting during the Winter Games of Turin 2006. But, even if the event led to a constructive exposure of the city (mainly for tourism) with a positive value creation process over a decade, it does not imply that the project was easy. The top management had to face several issues from the very beginning. The adoption of a dual organizational structure (TOROC vs Agenzia

Torino 2006) was a limit in terms of fast decision process and fast deployment of major development steps, but it made possible a clear separation in tasks that is today a strong part of the know-how of the country. Moreover, the event had only a 6% of private investments, which is absolutely an inadequate amount for a project that had all the best chances to be a total success. Rome 2024 bidding proposal highlights, as much as the UK did for the candidature in 2012, how the country is now evolved from that point. If the dualism in the structure was partially a limit for Turin, the expertise of that case transformed it into a strong base and into a strength for the new organization, just like it happened with the 2010 FIVB Volleyball Men's World Championship in the same city. Hosting the latter in Rome and sharing the same venues provided an easier starting point and a deeper knowledge of the issues most-likely to face. Indeed, the environmental impact and sustainability problem, that was one of the major limit for the management of the event, is now technically overcome with the 2024 event and its Strategic Environmental Assessment (SEA). Stepping backward to the London case, similarities with our analysis are not ended. Both of these projects are the biggest development for the hosting country (at the development time), and both of the cities are looking at the chance of hosting the Games as a catalyst to enhance wider processes of improvement. But, most of all, these projects share the purpose of achieving an increase in social and environmental quality status. Whereas London 2012 was aiming on the creation of the greenest event ever made in UK maintaining a strong level of innovation and greatness legacy creation purpose, Rome is looking for a huge "Olympic Educational Program". It includes all the major universities in the city and all the most important entities in a process of community improvement overflowed throughout all social spheres, from the pure education level to the integration of different cultures through sports, while preserving the environmental status with a constant care in pollution management. Rome 2024 is, indeed, building a hub of ideas and innovations to improve the life quality in Italy. By the application in eco-friendly planning and the constant care for social issues managing, the project is creating its legacy in the added value provided to the country. During the main steps, it is also

enhancing the communication among different parties involved in the project (from volunteers to top managers) to maintain a high-level of applicable ideas to always increase the social benefit. This is a common point with the Cross-rail case. As we previously saw, the knowledge and idea sharing is the base of the development of this wide project. Cross-rail in UK is standing for the creation of a world-class innovation process developed as a system of know-how revolutions in an open innovation model. Like the Rome's project is pushing to reach the best availability in ideas and in innovation level to create the best legacy, also Cross-rail is gathering best practices to deploy the absolute best service available. Moreover, both the projects are shared with universities and schools to have a strong case study and to always find new flows of novelty. They are all made possible by the lessons learned from other project, despite being failures or successes, and they both aim to provide a *lesson to learn* to all future megaprojects with new and better products, services and processes coming from worldwide.

To sum up, even if Italy has fewer examples of successful megaevents, Rome 2024 proved to be a case able to reach the top world-class megaproject due to his bright use of expertise to overcome issues similar to those already faced, to its innovative purpose of social engagement and social quality improvement, and to his clear legacy to be delivered to all future projects. Despite of the fact that the bidding for the event was pulled back for fiscal and economic issues of the city, it had already a positive effect in the society enhancing some benefits irrespective to the outcome and guaranteeing some extra media exposure.

In the last part of this chapter we will go through the application of the theory to understand also the feasibility of the candidature.

4. Theory application

Chapter one gave us a strong core base for the best bidding creation. The candidature file with the all vision, concept and strategy for the game has been deployed and submitted within the limit of the 17th February 2016, but it is missing

the legal, governance and venue funding stage, due to the early withdrawal. Despite of that, we can also apply the model previously introduced: according to theory, to overcome the small win-lose gap, the bidding team has to plan all five stages of the *bid life cycle* fulfilling all the requirements to obtain a unique added-value able to create attractiveness toward the project in the customer. The initial *evaluation of the opportunity* is mainly represented by the establishment of the project's worthiness and it is crucial by its nature of "first step" to the accomplishment of the whole planning. In this phase, ex-ante analysis and extensive forecasting are required to understand potential risks and forecast eventual unexpected issues. The viability of the Rome 2024 project is validated by not only the ability of the country to host event of the same size (like we previously quoted), but also by the intrinsic qualities of the city manifested in 1960 with the great success obtained hosting the same event and in 2010 with the Volleyball's final. Stepping into the core of the event and into the main parts of the planning, the viability of the opportunity manifests through the already deployed benefits (irrespective to the outcome) which, in line with all bidding purposes, are related with the improvement of social quality, and through the legacy and heritage plan comprehensive of the increase in tourism. Indeed, another aspect to be considered before going into the other stages is the media exposure. An event like the Olympic Games can provide much more benefits if related to all media channels and to the power of pushing on a world-wide level a whole city and a whole country, like we saw in Turin example. Understood the viability of the opportunity, a *strategy to win* must be formulated. Rome aimed to two main strategies to close the gap with the most favorite-to-win cities: *provide a social added-value* and *leverage on historical relevant venues*. If the first one is an "almost abstract" added value, because of its long-run effective outcome and because of its community nature, the second is a certain differentiation with competitors. Indeed, the proposal fulfills all the requirements of the Olympic Agenda 2020 (which sets the minimum standard skills needed to submit for the candidature) by the aiming to use this sport event and the same sports as a vehicle to improve cohesion and cooperation to obtain a final social value increased.

The use of the project as hub of ideas, instead, is the extra-value able to close the win-lose gap, by adding even more benefits to the outcome of the event and by its nature in line with the previous requirements. In this context, having as location the greenest city in Europe and taking a chance to broadcast the event with a world-level landscape can be crucial to persuade the customer, solving unexpressed necessities of the client and tailoring the megaproject for the event's needs. Obviously, talking about megaevents, we must assess also the economic impact to understand the *feasibility of the proposal*. The celebration of the Olympic Games in a metropolitan city like Rome involves two concepts: endogenous growth and sustainable development. Those elements, once they are triggered, are self-fueling and do not interfere with the equilibrium of the project over time, making possible that the planning "does not devour itself" by the creation of environmental issues or causing economic and social crises. Plan's feasibility, as we previously discussed, is mainly guaranteed by the smart use of all available and suitable venues for the event and by the presence of a wide range of collateral added-values that increases the worthiness of the proposal. On an economic level, the endogenous growth of the city will be visible in the subsequent decade through an increase in regional and municipal GNP thanks to the extra-tourism mechanisms, while the sustainable development is maintained by the presence of several plans already in place to support the deployment of the event in a qualitative-high city. Indeed, the project fits all the theoretical standards to be viable: it has a strong *scope*, which is delivering the best megaproject for novelty and ideas application setting a benchmark for the future; it has an in-depth *estimation* dedicated with a model that takes into account collateral added values; its *plan* is well-defined in terms of steps required to reach the milestones and venues or infrastructure use; and it is characterized by the *creative thinking* of all external bodies (e.g. universities) involved. According to the theory, what is missing is the *Transition to the project* (we will not take into account the *bid assembly and dispatch* stage because the candidature has been submitted on time and there were no other opportunities to assess the time management), a

phase that will not be ever reached due to the withdrawal of the city from the bidding.

In conclusion, the proposal has a perfect balance between feasibility and persuasion. It proves the worthiness of the project and fulfils the win-lose gap by its added values, providing also extras throughout historical venues and environmental care. Hence, we expect and hope to preserve this high-level of bidding for the next candidature for Olympic Games or the next Italian megaproject.

Conclusion

During this thesis, I tried to reach a deeper understanding of the feasibility and the viability of the Rome's candidature case comparing this megaproject with other major cases with the purpose of highlighting the strength and the weaknesses of a project that, on paper, seems to be the reliable. The case by itself is a big challenge. As the withdrawal showed, this project was quite a gamble due to the current economic status of the city and due to the country's availability of a small expertise if related to all other competing metropolises. But, the theory that was took into account allowed to study the proposal without the influence of the economic status of the city, showing not only the ability of the candidature to be truly effective, mainly throughout a strong planning on each phase and a deep consideration of the requirements, but also by its creation of a unique added-value, which, as we saw, is the kingmaker in a bidding phase.

1. *Theoretical contributions*

With respect to the first chapter, I gathered relevant literature on the bidding phase in order to create a wider picture of how to analyze a megaproject and how to understand its intrinsic qualities. Moreover, the theoretical background acted as a testbed for both the case of Rome 2024 and the others analyzed, proving how much important is to have a well-developed plan before trying to face a bid. To reach such point of view, I used Cleden bidding knowledge on each main phase of the development of a candidature file, integrating the expertise of authors like Flyvbjerg to keep in touch with the concept of Megaproject, developing as result a comprehension of the *bidding for megaprojects*. Then, I touched a common issue in project study: the sharing of knowledge. The study of experts like Bannon and Kuutti, Paoli and Prencipe, manifested the increased efficiency and the scaling of value when a project is able to access to previous know-how of each component of the developing team or on each other past project developed in a similar context. Hence, the need of finding an historical relief became mandatory. Moreover, the set-up of this theory into the concept of project framework, to foresee how the context for the bid should be handled, raised the dual vision of the bidding

phase: even if the strategy of a bid, due to its uniqueness, has to be tailored for a single project, it needs to be both an appealing offer through its core values and its main benefits, and a persuasive document able to intrigue the customer. To ultimate the theoretical picture, the statement that economic estimations are vital to the project since the early stages, was almost immediate. But, estimating is a “chemistry” task, where precision and realism are crucial, while, designing feasible solutions requires wide managerial expertise and marketing creativeness. As result of the comparison between the steps of Cleden and the project framework planning nature, and due to the need of *integrating knowledge sharing in bidding for megaproject*, the theory provided a full system of required actions to not only trying to participate into a bid, but also to win it. Indeed, following the mandatory planning purpose, respecting deliveries, and achieving a comprehension of the case and of its tailored solution, is not enough to win a bid. What truly can make the difference is a uniqueness characteristic. An added-value that no one can provide.

2. *Empirical evidences*

Only after this deep development of theory framework I had the tools to study the bidding phase, testing this theory and applying my statements. Doing so, I introduced firstly the historical background of the city and the country with an investigation on the presence of an expertise relief, that I found mandatory into the theory. Indeed, having a successful past in megaproject with a case developed in the same city (like the FIVB Volleyball’s final hosted in Rome) is a great starting point, as much as, the possibility of using the know-how of the XX Winter Games hosted in Turin to prevent most-likely to face issues. Moreover, also with the experience of EXPO 2015 in Milan, they provided to the case of Rome 2024 an important *knowledge sharing* and a vital awareness of italian capabilities. With the introduction of a direct comparison with UK’s most relevant cases, heaved my study to a world-level panorama and highlighted not only the common points with those highly-qualitative projects (like the environmental care), but also gave full support to my theory. For instance, the *cross-rail* program, which, like Rome’s, aims to be an innovative benchmark for megaproject scenario, has a stronger support by the

universities system and a deeper idea sharing through its innovating processes. On a theory light, analyzing their plans and their official documents, I found the willingness of knowledge sharing, the aim to an integrated system of added-value and a core planning developed in each phase and in each detail. This project, even though is still on development can be already be taken as the best in class for managers working in this industry and should be studied to understand how the Megaproject must be handled. Instead, the *London Olympic Case*, proved that *exhausting planning* is always a win-lose gap filler. Without it, the city would not be prepared to the surprising win and would not recover from the unforcastable venues fire. At the same way, Rome planned as a whole the impact of the event, studying a city's development plan to allow the event to take place and to preserve the environment of the greenest city in Europe, while estimating the worthiness of the project in a wide cost-benefits assessment which in some part was also irrespective to the outcome. Also in this part, I found a proof that the theory had a direct application into real cases: planning is clearly vital and, having that higher value can only be expressed thorough a well-developed process. The chapter two and its cases is a compendium of the best projects for the planning side, and wants to act as a study for managers in research for how an efficient and effective plan should be tailored for a bidding in megaprojects environment. All the cases have something strong in common: the added-value. Whether it's the extremely detailed planning for London, or the collection and application of the best-in-class innovations from all industries like in Cross-rail program, they had a unique set of benefits that each manager should seek before approaching to a bid.

3. *Rome2024 core studies*

In the third part, after the introduction of the case and the availability of a set of theoretical tools and skills, reviewing the Rome2024 bidding case I stated that it has certainly fulfilled all the initial requirements. The withdrawal of the city's candidature is acceptable only if focusing on the actual fiscal and economic condition of the metropolis, but, on a theoretical and empirical level, it has proved to be the most important Italian megaproject and it has proved to be able to respect the requirements found. The

economic analysis showed the worthiness of the project with its cost-benefit study. With respect to the 2020 candidature of Rome, it is a deep evolution in cost management and managerial skills. Indeed, leveraging on the available expertise from the Italian case, and looking at the Olympic previous editions, the bidding team for 2024 developed one of the lowest forecast megaevent: 5.3B€ and +0.4% GNP/per year increase. But, as from theory, having great cash flows forecast is not enough to win the bid. Rome had to prove whether its bidding was consistent and if the proposal had an added-value able to win the competition. Comparing all five hypothetical stages of the bidding with the official dossier of candidature, proved the viability of the project in analysis. It showed a full set of added-values, entirely in line with the purposes pointed out by the Olympic Agenda, and it mainly focused on social improvements and environmental preserve. To close the win-lose gap, the city took advantage of the venues with historical relevance (e.g. panoramic view on media expositions or astonishing photographic backgrounds) and of the collateral purposes of being a benchmark in megaproject management thanks to the application of important ideas shared with the *#LabRoma2024*. In this way, also Rome's case can be another lesson to learn before coming into the megaproject world: as before said, managers should seek for uniqueness, and the city's plan gave a full system of them.

4. Implications for practice

The case analysis offers the opportunity to unpack the role of the bidding into a megaproject while studying a candidature for one of the most important megaevent in the world. During this paper, I pointed to some of the open questions related to the actual ability of managing this kind of project and about the approach to the candidature for an event that involves and requires world-class facilities in a context in continuous evolution. The first is the relationship between the bid and its customer. This subject, mainly analyzed by literature in the case of project bidding, is stretched to a completely new environment when it comes to the Megaproject. The dimensional and qualitative improvement needed to face the entire world (and its novelty rate) is most of the time the biggest obstacle for a proposal unable to achieve the best expression of the

potentiality of a city or of a country. If related to the case in analysis, this issues became the Rome's inability of hosting a megaevent due to the infrastructural status of the city (which needs to be recovered to handle an Olympic Game), due to the transportation and facilities availability for people involved (which is no longer enough to allow hundreds of thousands of tourists to participate during the event and visit the city), and due to the economic condition of the metropolis (even if we forecast positive income, a strong initial investment is required to launch the project and to improve the city). In this specific case, the customer is represented by the Olympic Committee, that not only has a whole Agenda of requirements, but elects as hosting cities only the best in the world to ensure an incredible and amazing show to each follower of the event and to each athlete participating. But, the potentiality of the city (novelty creations, progress ability through a deep planned of recovery and improvements, and unique landscapes and historical venues) could overcome the limitation above exposed, it only requires a strong dedication through years and a deep and clear commitment aiming to a single goal: to offer the best in class in terms of megaevent.

The second question is the feasibility of the candidature in terms of "offering that unique value that competitors does not have". During the paper, I always highlighted the importance of having that value-added and I focused on the intrinsic worthiness of the city. In this context, the economic assessment made for the event, which exhibit positive incomes from the event, and the respect of a social improvement plan developed and widespread into each part and each moment of the event make the candidature the perfect balance between the needed persuasion to convince the customer to trust in the product and the accomplishment of all the requirements. This purpose, in line with the Agenda of 2020, finds its ground into the theoretical framework: if offering is just creating a product that answers to some demands, solving is the creation of a unique customization or set-up specifically designed and delivered for a customer, going even beyond the expressed needs and answering to those unspoken requirements. While the offering can be the core element, the way it is organised, personalized, combined, managed, adapted and shaped is what really matters. It must be unique on each of its side. Applying for a social major-quest and involving different aims, like the educational

purpose or the use of sport to create cohesion among different cultures, is a strong way to both differentiate from competitors and to provide and to answer to those unexpressed requirements, providing always a positive economic benefit.

Moreover, this study wants to contribute to the growing body of researches on megaproject into a framework of innovation and novelty coming from different industries. What I want to achieve, is a synopsis of studies and analysis to all managers acting in this framework and trying to have an effective bid in each of its stages. Due to the difficulty of megaprojects each case is an expression of astonishing ideas and an accomplishment of deep know-how. But, answering to the requirement of a megaproject's client is never an easy task.

To sum up, the project can be absolutely classified as strong "lesson learnt" not only for the bidding team, but also for the country that found in this event a chance to prove its managerial value understanding the importance of the added-value of all the historical-relevant venues available to provide unique landscapes that would probably have been the kingmaker in the fulfillment of the win-lose gap with other metropolises around the world. In conclusion, even if the bidding will not be carry on, its benefits are already tangible: Rome gave to the world the prove of being again able to handle a world-class project leading the innovation movement and aiming to be benchmark for the future; Italy as whole has been already exposed under the media light and will probably have an important role in next bidding for a similar event. Hence, what we can hope is to maintain such qualitative high level also for the next bidding and the next megaproject development.

Acknowledgement

First, I'd like to thank professor Andrea Prencipe, not only because being his student was already a great pleasure, but also for the wonderful case in analysis, the astonishing idea of studying the bidding of this megaproject and the always incredible passion profuse in this work. It is a pleasure to have been challenged with this subject of thesis and to have had an opportunity of understanding how the extremely interesting megaproject management world works. I'd like to underline the magnificent job made by professor Francesca Masciarelli and I'll take this chance to thank her for the continuous support and the time dedicated to me suggesting always interesting ideas. I want also to highlight the importance of being a LUISS university student, because it is this magnificent study system that allowed me to learn everything I know and to have the chance to analyze this case.

I want also to thank my family. They have been my biggest source of energies and they have always been there for me. Their constant work made possible to have a high-level education living abroad. We faced a lot of issues, but their dedication made possible to live a dream. Among them, I want to say thanks to my sister, for just being the most amazing girl there will ever be in this world.

Last but not least, I'd like to thank my friends. Brothers and sisters not by law, but luckily acquired during my life. Their daily support has been as vital as the one of my family, and they somehow have been able to tolerate me over a long time!

Finally, I want to say thank you to all of you for coming with me until this point in a very long journey.

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Summary_Rome2024 Olympic Games: A megaproject management case

1. Introduction

Megaprojects are vast, complex and large-scale endeavours that involves private and public stakeholders within a several years' development and building and with a range of cost that exceeds the billion unit. The same name origins from the Greek and indicates the huge scale of the size, as the word "Mega" indicates something large and imposing. Recent literature focused on the impact of such projects and their ability to change the structure of the society, differently from conventional projects that are tailored to fit into already developed patterns. Henceforth, Megaprojects must not be confused with standard project in a larger unit of measurement. They represent a one of a kind plan specifically settled to deal with high complexity levels, hard lead-times, and deep stakeholders involvement. The most characterizing aspect of megaproject is the difficulty in management. Even though their diffusion is strongly increasing across different business, from airports to megaevents and cross-rail, they have to deal with the transfer of goods/services model to a completely changed economic environment. Early strong effort in planning and forecasting prevents most of the problems, setting the strong basis on which the whole project will be developed. The better way to success is to be smart about deliveries, contract boundaries, and strategies from the very beginning of the final deployment: the bidding phase. Indeed, also putting appropriate management controls over the main phases reduce or, at least, moderate higher risks of failing. This mechanism creates not only a full-project point of view, but also a strong knowledge available to be transferred across different but similar projects. Increasing, in this way, the ability of efficiently use resources and timing, by creating a deep managerial know-how.

With a low-cost forecast of 5.3B€ and an average annual growth of GNP +0,4% for the Lazio region, the bidding for the XXXIII edition of the Olympic and Paralympic Games seems to be one of the best Italian megaproject of the last years. Winning this bidding would increase, according to the professor B. Quintieri for Tor Vergata university, of over +2,4% the GNP for the region during 2017-2023 and would allow the creation of about

177k new jobs. Just like hosting the 1960 Games pushed for an important step in economic evolution for Italy, the purpose of 2024 will be the appreciation of the country through a promotion of sports, avoiding illegality issues, and highlighting the strength to maintain a qualitative and sustainable economic growth. According to the ex-ante analyses, 48k of the 177k new job working will be directly connected to the preparation of the Games, while rough 90k working units would be created by the application of the economic model, that will increase the employment values over the next decade. The cost for planning is estimated for 2,1B€, and the main accounts are the Olympic Village in Tor Vergata, which will require 17k job units, and the printing centre in Saxa Rubra. Despite of that, the 70% of constructions is already available, due to the exploitation of formerly developed venues. Additional accounting for temporal structures and for the organization is assessed for 3,2B€ and will be entirely covered by earning from ticketing, sponsors and the IOC (International Olympic Committee) contribution of 1B€. Keeping always in mind that the real added value is not bounded with a direct positive income at the end of the event, but to a stimulation for growth and modernization of the city and the country. Indeed, to reach this purpose, the whole project will be developed with a direct contact with local municipality, environmentalist associations, schools and universities and entrepreneurial or commercial entities in order to share among all citizens the emotional involvement in this Italian megaproject. The project establishes over four pillars: high transparency in the low-cost approach, involvement of all people, engagement from all the entities taking part, and improvement of the city quality. Juxtaposing the lowest budget ever estimated for an Olympic Game bidding (only 5,3B€ with a maximum uncertainty of few hundreds) with the 10B€ of the candidature file for the edition of 2020, the president of CONI (Italian National Olympic Committee) Giovanni Malagò explained that the difference is offset by the exploitation of all available venues and plants, reducing as much as possible the creation of new structures. With these presuppositions, the project seems to be a great deal, able to increase the exposition of the whole city and country creating a direct added value in terms of employees and GNP.

2. *Juxtaposing the Italian case*

In chapter two I introduced two main examples of other megaprojects and megaevents in UK (the *London Olympic Games of 2012* and the *Cross-rail program*) to develop a comparison with the case of Rome2024 and the previous expertise of the country with the three highlighted cases (*Turin Winter Games 2006*, *FIVB's Volleyballs Final of 2010* in Rome, and *EXPO2015* in Milan).

The first one represented for the United Kingdom the accomplishment of a strong expertise based on several trials in megaproject management. Indeed, the UK government has a history of highly-difficult projects' establishment, that, most of the time, did not obtained positive income. Examples of that can be found in the large-scale planning of the Dome, made for the new millennium, that led to an over +£10k per month in extra tax payment to be recovered, or in the Scottish parliament building and in the Wembley stadium. Italy, almost at the same way, in recent years had a chance to prove its value in megaevent's hosting during the Winter Games of Turin 2006. But, even if the event led to a constructive exposure of the city (mainly for tourism) with a positive value creation process over a decade, it does not imply that the project was easy. The top management had to face several issues from the very beginning. The adoption of a dual organizational structure (TOROC vs Agenzia Torino 2006) was a limit in terms of fast decision process and fast deployment of major development steps, but it made possible a clear separation in tasks that is today a strong part of the know-how of the country. Moreover, the event had only a 6% of private investments, which is absolutely an inadequate amount for a project that had all the best chances to be a total success. Rome 2024 bidding proposal highlights, as much as the UK did for the candidature in 2012, how the country is now evolved from that point. If the dualism in the structure was partially a limit for Turin, the expertise of that case transformed it into a strong base and into a strength for the new organization, just like it happened with the 2010 FIVB Volleyball Men's World Championship in the same city. Hosting the latter in Rome and sharing the same venues provided an easier starting point and a deeper knowledge of the issues most-likely to face. Indeed, the environmental impact and sustainability problem, that was one of the major limit for the management of the event, is now

technically overcome with the 2024 event and its Strategic Environmental Assessment (SEA). Stepping backward to the London case, similarities with our analysis are not ended. Both of these projects are the biggest development for the hosting country (at the development time), and both of the cities are looking at the chance of hosting the Games as a catalyst to enhance wider processes of improvement. But, most of all, these projects share the purpose of achieving an increase in social and environmental quality status. Whereas London 2012 was aiming on the creation of the greenest event ever made in UK maintaining a strong level of innovation and greatness legacy creation purpose, Rome is looking for a huge “Olympic Educational Program”. It includes all the major universities in the city and all the most important entities in a process of community improvement overflowed throughout all social spheres, from the pure education level to the integration of different cultures through sports, while preserving the environmental status with a constant care in pollution management. Rome 2024 is, indeed, building a hub of ideas and innovations to improve the life quality in Italy. By the application in eco-friendly planning and the constant care for social issues managing, the project is creating its legacy in the added value provided to the country. During the main steps, it is also enhancing the communication among different parties involved in the project (from volunteers to top managers) to maintain a high-level of applicable ideas to always increase the social benefit. This is a common point with the Cross-rail case. The knowledge and idea sharing is the base of the development of this wide project. Cross-rail in UK is standing for the creation of a world-class innovation process developed as a system of know-how revolutions in an open innovation model. Like the Rome’s project is pushing to reach the best availability in ideas and in innovation level to create the best legacy, also Cross-rail is gathering best practices to deploy the absolute best service available. Moreover, both the projects are shared with universities and schools to have a strong case study and to always find new flows of novelty. They are all made possible by the lessons learned from other project, despite being failures or successes, and they both aim to provide a *lesson to learn* to all future megaprojects with new and better products, services and processes coming from worldwide.

3. *Rome2024 bidding case*

On September 16th 2015 the bid for Games of the XXXIII Olympiad were opened by Budapest, Paris, Los Angeles, Hamburg, and Rome. The latest two already withdrew: Hamburg due to bid per referendum on November 29th 2015, Rome for fiscal issues and difficulties on September 21st 2016.

Quoting from the Candidature Manifesto the vision for this Olympic Games is based on using “the art of the Italian welcome to unite the world through sport”. Rome aims to create a sense of pride similar to the one originated from the hosting of 1960, marking a new milestone in Rome’s history and a turning point in the city’s development to improve confidence for the future enhancing a quality increasing mechanism for all citizens. To do so, the three pillars model will be the guide for all achievements of the project and will maximize benefits from bidding, planning and hosting the Games throughout a strong legacy. Indeed, *Culture, Lifestyle & Landscapes* will be not only a quality celebration of sport in a unique outdoor setting, but also a catalyst to transform city’s infrastructure improving their quality (following the Olympic Agenda 2020 principles). *Families* is a friendly concept to introduce a promotion through generations, with a focus on new ideas and a new society value creation. At last, *Tradition & Innovation/Technology* is probably the greater purpose, striving for the creation of a showcase in the history and heritage of the country incorporating innovative ideas and using high quality technological expertise.

Chapter two, with the introduction of other Italian megaevents and during the analysis of the UK’s megaprojects examples, demonstrated that the added value of such events is deeply inbounded with the creation of a legacy that will increase in the future the social worthiness of the efforts. Rome’s candidature for 2024 makes no difference. At its core the value generation comes from a public policies and strategies for sustainability program. Following the purpose of reducing the pollution (already reached in 2010 event) and preparing for a wide people affluence for the event, the city developed a four points legacy strategy that will increase the heritage of the event by preserving or improving the environmental conditions and the services quality (Candidature dossier, January 2016):

- ❖ Improving the transportation system.
- ❖ Reducing Rome's energy footprint.
- ❖ Improving waste management.
- ❖ Preserving natural resources and biodiversity.

The Games, in this context, will act as a catalyst for this plan, by the purpose of delivering and supplementary long-term legacy of best practices in sustainability and in infrastructure management, and by the availability of additional resources and expertise. Bidding for Rome 2024 is even now enhancing some changes and evolutions for the city, indeed, it allowed the promotion and prioritization of a wide number of urban infrastructures and environmental projects, with a direct improvement of the quality of the city as a whole. On a country level, Italy is already benefiting of the engagement for this megaevent both on the economical side and on the social's, also due to the effective engagement of all regions. Some of these benefits from bidding for the Olympic Games, irrespective of outcome, are (Candidature dossier, January 2016):

- ❖ Significant educational and social benefits from the Olympic Education Program, through a digital kit to national schools to promote the Olympic values.
- ❖ Communication and partnership working enhancement between agencies, government departments and other bodies/entities involved within cities, regions and nationally.
- ❖ Connections with non-government organizations related to different derivations from the Games, e.g. *ActionAid*, a two-year bid program established to integrate different culture and background people into a single community driven by sports.
- ❖ Promotion and renewed interests in sports, particularly by young people, students and other target groups.
- ❖ Building and improving sports facilities in public schools and institutes through the support of Government's commitment to sport promotion.
- ❖ Endorsement of the innovation campaign *#LabRoma2024* which encourages young innovators through a call for ideas and proposals to address modern day challenges.

- ❖ Encouragement through an active participation and involvement of local communities in the planning and redevelopment of all the facilities around the Games venues.
- ❖ Raising Rome and Italy's profile on the world stage, increasing the exposition of the city and the country and providing a better media exhibition world-wide.

Moreover, chapter one gave a strong core base for the best bidding creation. To overcome the small win-lose gap, the bidding team has to plan all five stages of the *bid life cycle* fulfilling all the requirements to obtain a unique added-value able to create attractiveness toward the project in the customer. The initial *evaluation of the opportunity* assesses the viability of the Rome 2024 project by not only the ability of the country to host event of the same size (like we previously quoted), but also by the intrinsic qualities of the city manifested in 1960 with the great success obtained hosting the same event and in 2010 with the Volleyball's final. Stepping into the core of the event and into the main parts of the planning, the viability of the opportunity manifests through the already deployed benefits (irrespective to the outcome) which, in line with all bidding purposes, are related with the improvement of social quality, and through the legacy and heritage plan comprehensive of the increase in tourism. Indeed, another aspect to be considered before going into the other stages is the media exposure. An event like the Olympic Games can provide much more benefits if related to all media channels and to the power of pushing on a world-wide level a whole city and a whole country, like in Turin example. Understood the viability of the opportunity, a *strategy to win* must be formulated. Rome aimed to two main strategies to close the gap with the most favourite-to-win cities: *provide a social added-value* and *leverage on historical relevant venues*. If the first one is an "almost abstract" added value, because of its long-run effective outcome and because of its community nature, the second is a certain differentiation with competitors. Indeed, the proposal fulfils all the requirements of the Olympic Agenda 2020 (which sets the minimum standard skills needed to submit for the candidature) by the aiming to use this sport event and the same sports as a vehicle to improve cohesion and cooperation to obtain a final social value increased. The use of

the project as hub of ideas, instead, is the extra-value able to close the win-lose gap, by adding even more benefits to the outcome of the event and by its nature in line with the previous requirements. In this context, having as location the greenest city in Europe and taking a chance to broadcast the event with a world-level landscape can be crucial to persuade the customer, solving unexpressed necessities of the client and tailoring the megaproject for the event's needs. Obviously, talking about megaevents, a full evaluation must assess also the economic impact to understand the *feasibility of the proposal*. The celebration of the Olympic Games in a metropolitan city like Rome involves two concepts: endogenous growth and sustainable development. Those elements, once they are triggered, are self-fuelling and do not interfere with the equilibrium of the project over time, making possible that the planning "does not devour itself" by the creation of environmental issues or causing economic and social crises. Plan's feasibility, as we previously discussed, is mainly guaranteed by the smart use of all available and suitable venues for the event and by the presence of a wide range of collateral added-values that increases the worthiness of the proposal. On an economic level, the endogenous growth of the city will be visible in the subsequent decade through an increase in regional and municipal GNP thanks to the extra-tourism mechanisms, while the sustainable development is maintained by the presence of several plans already in place to support the deployment of the event in a qualitative-high city. Indeed, the project fits all the theoretical standards to be viable: it has a strong *scope*, which is delivering the best megaproject for novelty and ideas application setting a benchmark for the future; it has an in-depth *estimation* dedicated with a model that takes into account collateral added values; its *plan* is well-defined in terms of steps required to reach the milestones and venues or infrastructure use; and it is characterized by the *creative thinking* of all external bodies (e.g. universities) involved. According to the theory, what is missing is the *Transition to the project* (we will not take into account the *bid assembly and dispatch* stage because the candidature has been submitted on time and there were no other opportunities to assess the time management), a phase that will not be ever reached due to the withdrawal of the city from the bidding.

4. Conclusions

During this thesis, I tried to reach a deeper understanding of the feasibility and the viability of the Rome's candidature case comparing this megaproject with other major cases with the purpose of highlighting the strength and the weaknesses of a project that, on paper, seems to be the reliable. The case by itself is a big challenge. As the withdrawal showed, this project was quite a gamble due to the current economic status of the city and due to the country's availability of a small expertise if related to all other competing metropolises. But, the theory that was took into account allowed to study the proposal without the influence of the economic status of the city, showing not only the ability of the candidature to be truly effective, mainly throughout a strong planning on each phase and a deep consideration of the requirements, but also by its creation of a unique added-value, which, as we saw, is the kingmaker in a bidding phase.

With respect to the first chapter, I gathered relevant literature on the bidding phase in order to create a wider picture of how to analyze a megaproject and how to understand its intrinsic qualities. Moreover, the theoretical background acted as a testbed for both the case of Rome 2024 and the others analyzed, proving how much important is to have a well-developed plan before trying to face a bid. To reach such point of view, I used Cleden bidding knowledge on each main phase of the development of a candidature file, integrating the expertise of authors like Flyvbjerg to keep in touch with the concept of Megaproject, developing as result a comprehension of the *bidding for megaprojects*. Then, I touched a common issue in project study: the sharing of knowledge. The study of experts like Bannon and Kuutti, Paoli and Prencipe, manifested the increased efficiency and the scaling of value when a project is able to access to previous know-how of each component of the developing team or on each other past project developed in a similar context. Hence, the need of finding an historical relief became mandatory. Moreover, the set-up of this theory into the concept of project framework, to foresee how the context for the bid should be handled, raised the dual vision of the bidding phase: even if the strategy of a bid, due to its uniqueness, has to be tailored for a single project, it needs to be both an appealing offer through its core values and its main benefits, and a persuasive document able to intrigue the customer. To ultimate the

theoretical picture, the statement that economic estimations are vital to the project since the early stages, was almost immediate. But, estimating is a “chemistry” task, where precision and realism are crucial, while, designing feasible solutions requires wide managerial expertise and marketing creativeness. As result of the comparison between the steps of Cleden and the project framework planning nature, and due to the need of *integrating knowledge sharing in bidding for megaproject*, the theory provided a full system of required actions to not only trying to participate into a bid, but also to win it. Indeed, following the mandatory planning purpose, respecting deliveries, and achieving a comprehension of the case and of its tailored solution, is not enough to win a bid. What truly can make the difference is a uniqueness characteristic. An added-value that no one can provide.

Only after this deep development of theory framework I had the tools to study the bidding phase, testing this theory and applying my statements. Doing so, I introduced firstly the historical background of the city and the country with an investigation on the presence of an expertise relief, that I found mandatory into the theory. Indeed, having a successful past in megaproject with a case developed in the same city (like the FIVB Volleyball’s final hosted in Rome) is a great starting point, as much as, the possibility of using the know-how of the XX Winter Games hosted in Turin to prevent most-likely to face issues. Moreover, also with the experience of EXPO 2015 in Milan, they provided to the case of Rome 2024 an important *knowledge sharing* and a vital awareness of italian capabilities. With the introduction of a direct comparison with UK’s most relevant cases, heaved my study to a world-level panorama and highlighted not only the common points with those highly-qualitative projects (like the environmental care), but also gave full support to my theory. For instance, the *cross-rail* program, which, like Rome’s, aims to be an innovative benchmark for megaproject scenario, has a stronger support by the universities system and a deeper idea sharing through its innovating processes. On a theory light, analyzing their plans and their official documents, I found the willingness of knowledge sharing, the aim to an integrated system of added-value and a core planning developed in each phase and in each detail. This project, even though is still on development can be already be taken as the best in class for managers working in this

industry and should be studied to understand how the Megaproject must be handled. Instead, the *London Olympic Case*, proved that *exhausting planning* is always a win-lose gap filler. Without it, the city would not be prepared to the surprising win and would not recover from the unforcastable venues fire. At the same way, Rome planned as a whole the impact of the event, studying a city's development plan to allow the event to take place and to preserve the environment of the greenest city in Europe, while estimating the worthiness of the project in a wide cost-benefits assessment which in some part was also irrespective to the outcome. Also in this part, I found a proof that the theory had a direct application into real cases: planning is clearly vital and, having that higher value can only be expressed thorough a well-developed process. The chapter two and its cases is a compendium of the best projects for the planning side, and wants to act as a study for managers in research for how an efficient and effective plan should be tailored for a bidding in megaprojects environment. All the cases have something strong in common: the added-value. Whether it's the extremely detailed planning for London, or the collection and application of the best-in-class innovations from all industries like in Cross-rail program, they had a unique set of benefits that each manager should seek before approaching to a bid.

In the third part, after the introduction of the case and the availability of a set of theoretical tools and skills, reviewing the Rome2024 bidding case I stated that it has certainly fulfilled all the initial requirements. The withdrawal of the city's candidature is acceptable only if focusing on the actual fiscal and economic condition of the metropolis, but, on a theoretical and empirical level, it has proved to be the most important Italian megaproject and it has proved to be able to respect the requirements found. The economic analysis showed the worthiness of the project with its cost-benefit study. With respect to the 2020 candidature of Rome, it is a deep evolution in cost management and managerial skills. Indeed, leveraging on the available expertise from the Italian case, and looking at the Olympic previous editions, the bidding team for 2024 developed one of the lowest forecast megaevent: 5.3B€ and +0.4% GNP/per year increase. But, as from theory, having great cash flows forecast is not enough to win the bid. Rome had to prove whether its bidding was consistent and if the proposal had an added-value able to win

the competition. Comparing all five hypothetical stages of the bidding with the official dossier of candidature, proved the viability of the project in analysis. It showed a full set of added-values, entirely in line with the purposes pointed out by the Olympic Agenda, and it mainly focused on social improvements and environmental preserve. To close the win-lose gap, the city took advantage of the venues with historical relevance (e.g. panoramic view on media expositions or astonishing photographic backgrounds) and of the collateral purposes of being a benchmark in megaproject management thanks to the application of important ideas shared with the *#LabRoma2024*. In this way, also Rome's case can be another lesson to learn before coming into the megaproject world: as before said, managers should seek for uniqueness, and the city's plan gave a full system of them.

The case analysis offers the opportunity to unpack the role of the bidding into a megaproject while studying a candidature for one of the most important megaevent in the world. During this paper, I pointed to some of the open questions related to the actual ability of managing this kind of project and about the approach to the candidature for an event that involves and requires world-class facilities in a context in continuous evolution. The first is the relationship between the bid and its customer. This subject, mainly analyzed by literature in the case of project bidding, is stretched to a completely new environment when it comes to the Megaproject. The dimensional and qualitative improvement needed to face the entire world (and its novelty rate) is most of the time the biggest obstacle for a proposal unable to achieve the best expression of the potentiality of a city or of a country. If related to the case in analysis, this issues became the Rome's inability of hosting a megaevent due to the infrastructural status of the city (which needs to be recovered to handle an Olympic Game), due to the transportation and facilities availability for people involved (which is no longer enough to allow hundreds of thousands of tourists to participate during the event and visit the city), and due to the economic condition of the metropolis (even if we forecast positive income, a strong initial investment is required to launch the project and to improve the city). In this specific case, the customer is represented by the Olympic Committee, that not only has a whole Agenda of requirements, but elects as hosting cities only the best in the

world to ensure an incredible and amazing show to each follower of the event and to each athlete participating. But, the potentiality of the city (novelty creations, progress ability through a deep planned of recovery and improvements, and unique landscapes and historical venues) could overcome the limitation above exposed, it only requires a strong dedication through years and a deep and clear commitment aiming to a single goal: to offer the best in class in terms of megaevent.

The second question is the feasibility of the candidature in terms of “offering that unique value that competitors does not have”. During the paper, I always highlighted the importance of having that value-added and I focused on the intrinsic worthiness of the city. In this context, the economic assessment made for the event, which exhibit positive incomes from the event, and the respect of a social improvement plan developed and widespread into each part and each moment of the event make the candidature the perfect balance between the needed persuasion to convince the customer to trust in the product and the accomplishment of all the requirements. This purpose, in line with the Agenda of 2020, finds its ground into the theoretical framework: if offering is just creating a product that answers to some demands, solving is the creation of a unique customization or set-up specifically designed and delivered for a customer, going even beyond the expressed needs and answering to those unspoken requirements. While the offering can be the core element, the way it is organised, personalized, combined, managed, adapted and shaped is what really matters. It must be unique on each of its side. Applying for a social major-quest and involving different aims, like the educational purpose or the use of sport to create cohesion among different cultures, is a strong way to both differentiate from competitors and to provide and to answer to those unexpressed requirements, providing always a positive economic benefit.

Moreover, this study wants to contribute to the growing body of researches on megaproject into a framework of innovation and novelty coming from different industries. What I want to achieve, is a synopsis of studies and analysis to all managers acting in this framework and trying to have an effective bid in each of its stages. Due to the difficulty of megaprojects each case is an expression of astonishing ideas and an

accomplishment of deep know-how. But, answering to the requirement of a megaproject's client is never an easy task.

To sum up, the project can be absolutely classified as strong "lesson learnt" not only for the bidding team, but also for the country that found in this event a chance to prove its managerial value understanding the importance of the added-value of all the historical-relevant venues available to provide unique landscapes that would probably have been the kingmaker in the fulfilment of the win-lose gap with other metropolises around the world. In conclusion, even if the bidding will not be carry on, its benefits are already tangible: Rome gave to the world the prove of being again able to handle a world-class project leading the innovation movement and aiming to be benchmark for the future; Italy as whole has been already exposed under the media light and will probably have an important role in next bidding for a similar event. Hence, what we can hope is to maintain such qualitative high level also for the next bidding and the next megaproject development.