

POLITECNICO DI MILANO

Como Campus

Master of Science in Management Engineering



***Analysis of Mega Events from Multi-Projects
Perspective***

Case Study: Expo Milan 2015

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1 Executive Summary

Mega Events are events typically associated with large-scale expenditures, infrastructures building, multi-years development process and high number of stakeholders involved. While they are often implemented in order to generate long and short term benefits for the hosting country (region or city), there are many doubts about their ability to meet expectations: they often incur in delays and over costs, they are frequently opposed by citizens, they generate long-term debts and burdens for the countries hosting them.

The reasons why there is this difference between expectations and results are multiple, but they can be traced to the magnitude and complexity of Mega Events, which require adequate approaches and tools to be managed.

In 2015, in Milan, there will take place one significant example of Mega Events: the Expo 2015. As all the Mega Events, Expo Milan 2015 is characterized by huge investments (more than €10 billion), huge expectations (20 million of visitors, €20 million of value created for Italy) and a long and complex organization. On the other side, as all the Mega Events, Expo 2015 is accompanied by criticism and skepticism, it has already accumulated delays and additional costs, the expectations about its results have been downsized several times from the first forecasts, and it is considered as an unnecessary expense for the nation.

With this research, we would like to use the Expo 2015 case in order to gain a greater comprehension of Mega Events and to contribute to the literature and the practice of Mega Events management collecting insights and development an instrument(s) able to help in overcoming, or at least reducing, issues of Mega Events development process.

In particular, we would like to do that focusing on one peculiar characteristic of Mega Events, which is identified by the literature but it is poorly studied: the multi-project composition of Mega Events. Mega Events have a wide set of heterogeneous goals to accomplish, and this is typically done developing a wide set projects and initiatives. This element, a key component of Mega Events organization, as we will see is never in depth analyzed in the literature: we claim instead that it can be a characteristic of Mega Events that, if on one side adds complexity, on the other side can be leveraged by organizers to better understand the event and to better manage it.

1.1.1 Objectives

The purpose of our research it to analyze the nature of Mega Events as networks of projects in order to collect insights and information that can improve overall decision-making. The main objective can be deployed in four sub-objectives:

- To provide a comprehensive literature analysis of Mega Events field;
- To assess and analyze the main case study (Expo Milan 2015) according to general characteristics, governance and network composition.
- To assess and analyze the case study on the base of the sub-projects composing the Mega Event, according to their relationships, priority, complexity, benefits, importance for local area (territories, businesses, communities etc.) and for Expo.

- To develop guidelines that can enable a better and more structured analysis of a Mega Event in general and that can, in particular, support the planning phase, according to the main characteristics and issues of Mega Event (given the results of the literature).

1.1.2 Literature analysis

The first step of the research is the literature analysis, which has been structured according to three main streams of research:

- Mega Projects;
- Mega Events;
- Project Management.

We started with Mega Projects because the literature addresses the frequently while considering Mega Events a “special case” of Mega Project. For this reason, Mega Projects literature is more abundant and it investigates many elements of interest for Mega Events research.

As a consequence, the first two “streams” of research have been structured in correlation to each other. We have identified, for each of them, definitions, objectives, and possible risks during the life cycle. At the end, we developed comparisons between the two entities.

The first comparison regards the characteristics of the two entities:

Characteristics of Mega Projects	Characteristics of Mega Projects and Mega Events	Characteristics of Mega Events
<ul style="list-style-type: none"> • Use of new and complex technologies • Possibility to change deadlines, delaying them 	<ul style="list-style-type: none"> • International scope • Wide and complex scope • Long-term Nature • Number of actors involved and not completely alignment of cultures and objectives • Dynamicity of project by itself and of surrounding environment • Large scale of the project • Potential ability to affect the surrounding environment • Multi-project nature of the main project 	<ul style="list-style-type: none"> • Short-term nature • Higher time pressure • High media coverage and therefore higher media pressure • Very diverse network of not-related initiatives and projects • Complex governance composition • Complex legacy planning • Trend and topics dependency • Repetitiveness and simultaneously dissimilarity of the same event on its different editions

Table 1: Characteristics of Mega Events and Mega Projects

While the second comparison regards the issues in their development, that we clustered on the base of their emerging at different stages of the lifecycle:

Stage of Life-cycle	Mega Projects	Mega Events
Planning	<ul style="list-style-type: none"> Absence of the significant penalties against breaking the rules of Low accuracy in demand and cost forecasting Promoter disillusion (implicit bias of project consultant or appraisal bias of 	<ul style="list-style-type: none"> Legacy planning Alignment of the objectives of the event and of the host country (city) Assignment of the efficient and transparent governance structure Proper Topic selection

	project promoter) Inefficiency of resource allocation Absence of defined system of KPIs for stakeholders to measure success of the project Absence of a proper problem analysis and analysis of alternatives Ambiguity of scope and objectives Poor risk management Lack of clearly defined roles, lack of the stakeholders involvement especially from private sector Democracy deficit Cultural aspect consideration in the planning phase	
Implementation	Lack of transparency during implementation phase Lack of clear definition of regulatory regime and policy risks Need of involvement risk (private) capital Delays and further overruns Accumulation of scope changes (scope creep) Illusion of control	Tourism management Threat for some local businesses Time management because of the existence of the solid time-frame (high time pressure) Media pressure.
Close-out	Absence of proper audit Poor knowledge management Inability to reuse and re-elaborate old data	Legacy control and execution
Event		Difficult management of the physical implementation (in terms of management of crowd, supply chain during event, risk safety management) Operations Management & Logistics

Table 2: Issues of Mega Events and Mega Projects

The first observation from the literature was that, despite many similarities, Mega Events and Mega Projects should be considered two separate entities. While Mega Events and Mega Projects have several common issues and characteristics, Mega Events are characterized by:

- A short-term implementation, contra posed with a long term legacy;
- A heterogeneous multi-projects nature;
- A more complex governance, due to higher number of actors and higher variety of objectives;
- A theme that characterizes the overall event development.

These characteristics, as it will be later explained, lead to a series of consequences for Mega Events management that are not part of Mega Projects management settings.

Regarding the phases of development, the most problematic and discussed phase among scholars is the planning phase, which is the one that also delivers the most value added to the overall event. Therefore, it became a central point of our thesis.

There was the need to better understand how to face these issues. The third part of the literature analysis is dedicated to the Project Management, as it considered it the discipline that can help us the most in understanding the development of complex and wide events or projects.

The main goal of this chapter is to demonstrate current development of Project Management and the applicability of its tools in order to manage Mega Events and Mega Projects. Project Management results to have very low performances in managing complex projects because of a too strict planning & controlling approach, which lacks of flexibility and which does not focus on goals of the projects and its stakeholders, but also because of a lack of proper instruments. As results, there are poor capacity of developing complex projects, developing plans that consider many different objectives, in setting a project organization that can react to unexpected events and in managing and controlling complex and dynamic scopes.

However, exploring areas of Project Management like Programme Management and Multi-Project Management, we also found new opportunities for Project Management in Mega Events settings: given their multi-projects and multi-objectives nature, Mega Events can be consider a Programme, composed by many projects oriented to reach a certain group of objectives.

Another interesting finding from Project Management literature regards the need for classifying projects. Tools in Project Management tend to be “one-size-fits” all, ignoring peculiar characteristics of specific projects: models should instead be tailored on project objectives and characteristics, so to find optimal management model, but also in order to be able to put in relations and prioritize projects in a multi-project environment.

1.1.3 The Case Study

The case study, as already mentioned, is Expo 2015. Expo 2015 is a Mega Event that will be held in Milan from May to October 2015. It is developed around the topic of food and nutrition and it is expected to attract 20 million of visitors while generating € 20 billion for the Italian economy in a 10 years time span (2011-2020).

Expo 2015 is composed by many elements: site construction, event organization, development of many different infrastructural projects in the Lombardy region and in general and a wide range of economic, sustainability, touristic, technological objectives to reach.

This case study is optimal for our research because it has all the relevant characteristics and issues of Mega Events. Only to mention the main ones:

- High number of expected visitors;
- Huge investments and expected economic impact;
- High number of actors involved;
- High number of heterogeneous objectives;
- Complex governance settings;
- Opposition of Citizens;
- Delay, over costs, decrease of expectations as the event develops;
- Influence of politics.

Obviously, a Mega Event like Expo needs to be fully understood in all its characteristics and issues. In order to do that, a two-steps empirical analysis has been performed.

1.1.4 Methodology

We needed then to perform a proper analysis of the event, using the findings of the literature to shape and address an adequate empirical research.

The empirical research is fed by two data sources:

- Documentary Analysis;
- Interviews.

Documentary analysis has been fundamental in order to understand the event in terms of its characteristics, size, objectives and stakeholders. It was carried on using data from about 200 sources that can be classified in 4 groups:

- Official documents of Expo 2015;
- Italian laws and regulations;
- Reports of projects involved in Expo 2015;
- Academic researches and analysis regarding Expo 2015;

The starting point of the documentary analysis was a timeline of events and decisions, which has been used to investigate topics like governance, stakeholders and Expo 2015 evolution (projects development, evolution of expectations), paying attention both to high level and low level dynamics characterizing the event.

However, this first analysis was not enough to fully explore relevant topics like multi-projects composition of the event and to fully understand governance dynamics and issues.

We decided then to conduct interviews to relevant stakeholders of Expo: these stakeholders are involved at different levels in the development of projects that are directly or indirectly related to the exposition: we interviewed 15 actors involved into sub-projects of Expo 2015 and in general organization of the Event, covering 12 different initiatives and discussing both with organizing authorities of the event, both with actors which are external to the governance of Expo.

Projects have been analyzed mainly in terms of actors (decision makers and stakeholders), scope (topics and activities of the projects), scale and impact. Moreover, we have investigated perception of the different actors of event organization, its progress and its possibility to meet final objectives.

The results of Documentary Analysis and Interviews have then been merged and enriched with contributions from the literature (models and findings have been used for a more structured analysis, in particular in analyzing governance and sub-projects). The results have been presented in the chapter 5, developing the model that is the final outcome of our research.

1.1.5 Framework

Given the great amount of the literature considered in the analysis, we identified the most important areas of Mega Events that were highlighted by scholars and were considered for a more in depth research.

First of all, since our model should be tailored on the analysis of a Mega Event sub-projects, we focused on the characteristics which distinguish the most Mega Events from Mega Projects.

- Heterogeneous Multi-project nature;
- Legacy of the event in contraposition with the long term implementation;
- Governance of the event;
- Theme of the event.

The choice of focusing on relevant components of Mega Events come from the Project Management literature, where different scholars highlighted the need to develop models that are tailored on the specific characteristics of the entity analyzed.

We decided to focus on the first three points because we observed that the topic of the event was a relevant element only during the candidature of the hosting country (or city), while during the development (from the planning phase) the theme became a sort of constant for the management. As a consequence, we considered relevant for the development of a managerial model only the first three elements.

We looked then at the issues of Mega Events to be tackled in our research, and we observed that the most relevant were:

- *Goals Definition and Alignment*: This topic regards the strategic setting of the event, the analysis of problems and how to solve them, the definition of the Event objectives and the analysis of possible scenarios and alternatives. This topic is identified as critical both by Mega Events research, bot by Project Management research for complex settings.
- *Project Planning*: With project planning we mean how objectives are deployed and how activities are organized (which resource are allocated, how plans are developed, which deadlines are set). Scholars often identify planning as the phase adding more value to the final events.
- *Stakeholders*: With stakeholders we mean all the actors directly or indirectly involved in the event. The dimension tackles stakeholder analysis and how stakeholders are managed during the Mega Event development. Stakeholders' management is addressed as particularly critical in Mega Events management because of the variety and high number of stakeholders involved.
- *Governance*: With governance we refer to the organizational structure of Expo 2015, analyzed according to actors composing it, their roles, their power and the relationships among them. The complex settings of Mega Events, with high number of actors, goals and projects to be developed, make this topic particularly significant.
- *Legacy Management and Planning*: In this dimension we want to identify the Legacy of the event and to understand how it is planned and who is involved in this process. Legacy is the main output of a Mega Events and it includes all the long-term goals. Its wideness and heterogeneity make it very difficult to be planned and managed.
- *Project Control*: We want to understand how Mega Event development is controlled, which means how performances are evaluated. Project control is seen as a weak point in Mega Events (as in Mega Projects) research, again because of wideness and heterogeneity of the scope.

Starting from these elements, we developed a classification model and a visualization tool for sub-projects that can support Mega Events development. These instruments are supposed, according to our analysis of the literature, to address the issues mentioned above.

One of the observations on which we based the development of the models is that projects composing Mega Events have different levels of importance, according to their impact on the goals of the Event:

- *Essential Project: group of projects that has dramatically impact on the feasibility of the main project.*
- *Supporting Projects: projects which influence success of the main project but which are not fundamental for its viability*
- *External Projects: projects developed and managed externally from the main event development, which arise in order to satisfy local and specific needs. From their point of view, the project or the event is seen as an opportunity to exploit.*

External Projects, in particular, is a category that we shaped observing literature and starting to explore the Expo case.

We decided the to analyze projects in order to better understand projects in order to better understand them and also in order to understand to which category each project belongs. In doing that, we identify some major areas on which projects should be assessed:

Actors: The main decision makers which are	Public institutions Private (profit/non-profit) entities
Scope: The main activities to implement the project:	Technological research Construction project (development, building, restoration) Networking project (development of the relationship among actors involved) Marketing (ads, campaign, promotion) HR (stuff, personnel) Software development (IT sector) Coordination
Scale: An indicator according to which the impact of the project can be estimated. This indicator will be developed combining:	Budget Number of shareholders Dimension of the area (physical, digital, etc.) on which the project will have its impact
Topics: The area(s) in which the project is developed:	Transportation and Accommodation Energy and Environment Funds (financial) Agriculture Health Art and culture Social sustainability
Legacy of the project	Temporary (on the time while the project in on going) Permanent (oriented on the post-event time)

Table 3: Dimensions of Mega Events Projects

A classification system can in performing structured analysis of the projects composing an exposition and then in developing optimal managerial models, as we will see.

The classification system is then coupled with a visualization tool that can support users in understanding relations between projects and goals. The visualization tool has been developed in particular to enable a better visualization of goals, projects and their alignment.

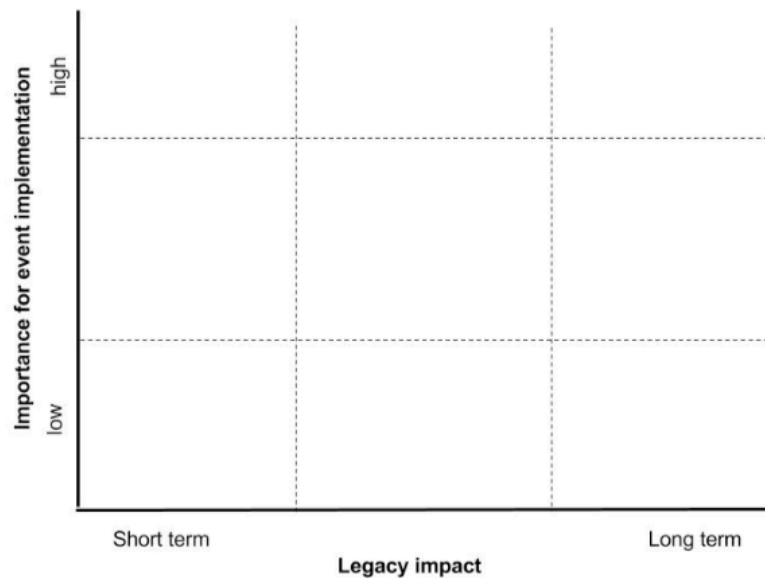


Figure 1: Visualization Matrix

In order to apply and test these models, a two-steps empirical analysis has been necessary. This analysis is performed on a central case study (Expo Milan 2015) and multiple sub-projects related to the event (as explained in the methodology chapter), in order to test this theoretical setting, to adapt it to the real world and to extract an added value from this analysis.

1.1.6 Results

Initially, we conducted a documentary analysis with which we developed:

- A timeline of the facts of Expo 2015 going to 2006 till early 2014. This timeline has showed use evolution of the exposition in terms of:
 - Actors;
 - Roles;
 - Expectations;
 - Governance;
 - Projects arising around Expo 2015;
 - Decision-making process and factor affecting it (like political dynamics).

Through this timeline, we observed an exposition that is carrying several delays and inefficiencies, which needs for continuous re-planning and re-organizing of scope and governance. Public actors dominate Expo 2015 and its decision-making process, while important stakeholders are excluded. For several years (till 2012) only site construction and infrastructural projects have been managed by central organization of Expo while

other initiatives, pursuing other relevant objectives of the Exposition, were mainly developed autonomously.

- Analysis of infrastructural projects of Expo, from which we understood the reasons of delays, but from which also emerged an inability of setting priorities and developing alternative plans of Expo organizers. As results, the infrastructural projects of Expo were significantly reduced from 2008 to 2014: some of them were cancelled, others were reduced in scope.
- Governance analysis, from which we observed instable governance, dominated by few actors and that, after years of delays and lack of direction of Expo 2015, needed to be changed in order to overcome obstacles threatening the Exposition.

After the documentary analysis, we moved to the interviews, where we collected data regarding sub-projects of Expo (then used in developing models) and we confirmed observations from documentary analysis:

- The wide and heterogeneous set of objectives of Expo is managed mostly by projects in which governance of Expo is only partially or not directly involved;
- The lack of governance, the lack of directions of Expo organizations before 2013 severely harmed also these projects;
- There is a lack of a comprehensive plan considering all relevant short and long-term objectives of Expo.

Summarizing, through documentary analysis and interviews, we have been able to observe that Expo 2015 is characterized by a significant amount of issues:

Lack of Goals Definition and Alignment	Goals of Expo are not well established, defined and inserted in a comprehensive plan. Expo 2015 had managed for a long time only event organization and infrastructure constructions.
Lack of wide and comprehensive Strategic Plan	Lack of a wide and comprehensive plan, able to consider all the goals, issues and actors of a Mega Event. Central governance of Expo manages event organization and infrastructures constructions, while other actors have managed other goals in a not-coordinated way.
Wrong forecasts and optimism bias	Project composition and description changes: as we have shown final project list was strongly reduced. Moreover, it has been demonstrated that there are serious doubt about the possibility the forecasted number of visitors and economic impact. A great contribution to the reduction of the expectations is due to: <ul style="list-style-type: none"> • Late and uncoordinated development of initiatives to manage several topic of Expo 2015 (see points above); • Low performance in site and other infrastructural projects construction.
Inadequate control over project development	There is not proper control over the projects development. Frequent need of re-planning and rescheduling works is not quickly satisfied because there is no definition of project priority and there is not full awareness of the overall Expo development state.
Delays, over costs, frequent changes in	Due to normal project problems (late authorization, opposition of citizens, weather conditions, lack of funds).

projects scope	Need to change projects, re-set priorities, re-allocate funds, establish alternative solutions.
Low Involvement of Stakeholders	Mainly because goals of the event were established only by political and economic elites Governance is indeed dominated by few actors, and the decision-making process does not result to be fully transparent.
Opposition of Stakeholders	As a consequence of the low involvement, the stakeholders like citizens and other associations started to contrast projects considered harmful
Low Security	Weak controls during bidding and during implementation: 2 bids have been stopped by investigations. Need to quickly set up adequate security systems for the 6 months of the event
Political Instability	During the period 2006 -2015: <ul style="list-style-type: none"> • 5 governments parties took the • 2 mayor of Milan • 2 governors/presidents of Lombardy • Representatives of national and local institutions in Expo governance had been frequently changed
Political Dynamics	Appointment of actors inside governance based on representatives: cause of significant delays and project cancellations.
Instable Governance of Expo 2015	<ul style="list-style-type: none"> • Changed over time; • Need to merge roles, need for waiving and derogation powers • Significantly affected by political decisions.

Table 4: Expo 2015 Issues

Our models can be useful in addressing these issues and the data collected will testify it.

1.1.7 Models & Guidelines

Using the data collected, we have been able to implement the two models. Moreover, we have also been able to develop guidelines for assessing the governance of Mega Events

1.1.7.1 Governance Assessment Guidelines

First of all, it is important to observe that three main governance models have characterized Expo:

1. Bidding Committee, which supported candidature of Milan;
2. *Expo 2015 S.p.a. and double commissioner governance*, which started the planning and the development of the event and that was created from dismissing of the Bidding Committee;
3. *Unique commissioner governance*, which is an evolution of the previous model made in order to overcome weaknesses and delays that were characterizing Expo 2015.

Analyzing governance models using theoretical models, we observed that:

- Governance of Expo is mainly representative based in all its three forms, which means that roles have been chosen in order to guarantee representation of relevant stakeholders in the governance board, instead of choosing people on the base of skills and expertise.
- In the first and second settings, roles in the governance had high “Capabilities”, which means that they are very strong in terms of network and relations, but low “Skills”, which

in the theoretical model used means that they lack of vision, direction and ability to guide change. The third model has been developed in order to overcome this limit.

- The culture of the board in all of three settings is Corporatist or Consensual, which means that few actors lead a close not-transparent decision-making process, where no other stakeholders are involved.

Area of assessment	Characteristics
Board composition	Experience based Representative based
Resources of the Actors involved in the Board	Assets Skills Capabilities
Culture of the Board	Adversarial Fiduciary Consensual Corporatist

Table 5: Elements analyzed through governance assessment

As a result, Expo 2015 is:

- Dominated by few actors and few interests;
- There is low ability in driving change and affecting the network;
- Relevant stakeholders, like citizens, are excluded from decision-making and it leads to opposition to the event;
- There is constant need to involve external expertise, increasing costs, decreasing efficiency and affecting decision-making process.

These observations can play as an alert role in preventing common mistakes for the management in the initial stage of the board composition. Moreover, they highlight the need to assess the board basing not only on their power and status but also considering skills and experience in order to build a healthy mechanism for event management and control.

1.1.7.2 Classification Model

According to the literature, to classify projects is important in order to

- Understand sub-projects characteristics and, as a consequence, to identify optimal management models (for example, optimal critical success factors of projects progress measures);
- Define in a structured way how different projects are composed and how they contribute to Expo development, and so their importance.

Each of the project interviewed and four projects identified in the documentary analysis were investigated according to relevant dimensions presented in the following table:

Group	Characteristics
Activities	Topic Objectives Scope of activities
Network composition	Type of actors involved into decision making process Relevant stakeholders Ownership
Impact of the projects	Type of impact Description of impact

Table 6: Elements Investigates by the classification model

“Activities” dimension is fundamental to understand the content of the project, and it gives relevant information to optimize management and control. “Network composition” dimension helps in understanding stakeholders (and then to support stakeholders analysis) and it can provide information to optimize governance. “Impact of the project” dimension instead helps in understanding importance of the project on the base of its impact.

The main output of this classification is to understand the characteristics of the projects in a structured way and to be able to define their belonging to the following categories:

- *Essential*: projects which are essential for the development of the event itself;
- *Supporting*: projects that can support the event and that can significantly affect its success, but which are not determinant for its viability;
- *External*: projects developed and managed externally from the main event, which arise mainly in order to satisfy local and specific needs. From their point of view, the event is an opportunity.

The model can in this way tackle the following issues:

- Planning and control cycle: here the model can help in identifying typology of projects involved. As observed in the literature, this helps in understanding:
 - Relevant success factors for projects;
 - Optimal management model for each projects (for example need of coordination of the project with the central organization) and optimal project progress measures (deadlines, budget, percentage of work completion), as observed in the literature;
- Stakeholders Analysis and Governance settings:
 - This analysis force to reflect on stakeholders, identifying decision-makers, stakeholders like citizens and acknowledging areas of expertise;
 - Coupled with the analysis of the governance previously presented, this structured identification of stakeholders can potentially lead to a better overall governance structure for the even.
- In general, the model can help in conducting structured analyzes of actors, goals and network of projects, identifying relevant elements and enabling classifications and comparisons of them.

However, the model is not useful to quickly visualize projects in relation to each other and to goals. In order to overcome this limit, a visualization tool has been coupled with the classification.

1.1.7.3 Sub-Projects Map

After assignment of the types to projects there is then a second stage: to insert them in to the matrix according to their importance for the event implementation and to their overall impact.

A matrix is the developed putting in the x-axis the impact of the project in the short and long-term goals of the event and putting in the y-axis the importance of the project for the event implementation.

In this way, we want to focus on goals of the event. Projects importance, relations and priorities are considered on the base of the goals they tackle, while the instrument shows a high-level image of the overall event.

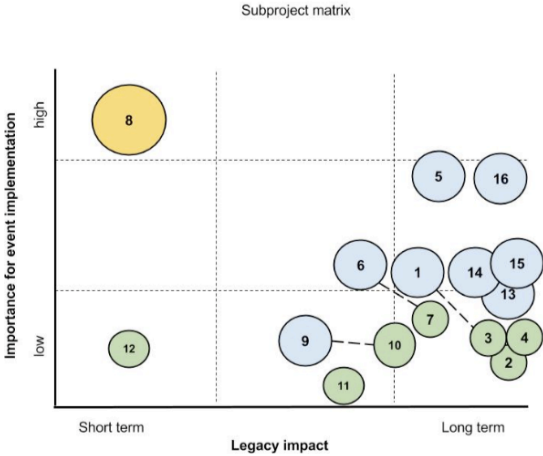


Figure 2: Distribution of the Projects on the visualization tool

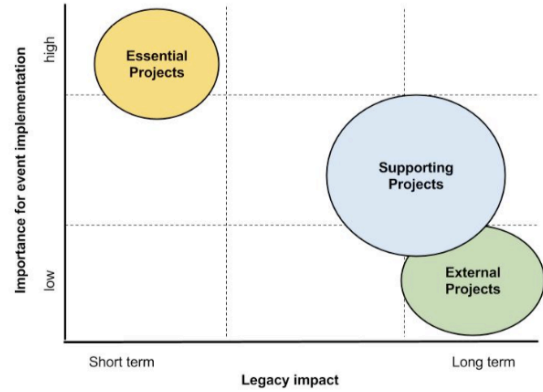


Figure 4: Distribution of the main categories of projects

Thank to this matrix it is possible to prioritize project according to their importance for the event. It plays the role of visualization tool of the map of the projects, and demonstrates (in case of Expo 2015) an “event planning” paradox:

- The biggest value of the event implementation is brought by its long lasting legacy; therefore it can be considered as the primary goal of the event, with the same importance of the event itself. As shown into the case study, most of the external projects have long lasting legacy and they can potentially generate a long-term value added. However, in Expo 2015 these external projects are not mentioned in EXPO classification and are not considered by the central organization.

There is the need to better include these external projects in the event planning, a to consider value that they generate without only focusing on the short-term implementation of the event

In the literature the need for wider plans is often highlighted, balancing trade off of goals (in particular long and short-term goals) and considering a wider range of initiatives and projects.

This model can help in doing that, showing in quick way high-level information that can support decision-making.

Concluding, this last instrument can be used from the early phases of Mega Events development in order to:

- Develop comprehensive plans, considering all the relevant projects of the event;
- Align goals and align activities with goals;
- Give an high level view of the event that does not lose control of specific initiatives;
- Managing in a simple way the trade-off among different goals, and in particular between long and short-term goals.

In particular, our models can improve this aspect of Mega Event management if inserted in the development process of the Mega Events from the initial stages:

- Once Goals of a Mega Events are defined and initiatives for reaching them are proposed, they should be inserted in the classification system and in the project map in order to:
 - Verify that all relevant goals are covered;
 - Verify that projects and goals are aligned and balanced in long-short terms;
 - Assess areas of expertise and impact of the projects, so to define from the beginning relevant stakeholders and to use this information for defining optimal governance settings.
- Once projects are chosen, the classification system will help in defining:
 - Budget, deadlines, success factors;
 - Establish priorities and relationships among projects;
 - Optimal governance and stakeholders involvement for each project. At this point, we have however to distinguish:
 - Projects like Metro Lines and Highways, which exist before Expo candidature and which have their own governance and stakeholders already defined, will provide a constraints for Expo 2015 organizers in terms of stakeholders;
 - Other projects, generated for the event, could be instead developed optimizing stakeholders composition;
- At this point, having a clear view of the network of projects and having a comprehensive plan, which considers in a balanced way relevant goals of the event, central organization of the event will be able to:
 - Have a full control of the event development, being able to maintain a high level perspective but without losing control on the single initiative;
 - Being always able to verify project progress in relation to different goals;
 - Being able to establish priorities and relationships among projects and to re-plan and adapt plan if necessary.

2 Literature Analysis

In this chapter we would like to present our literature analysis and, as following, conclusions which will bring us to the reasonability and actuality of the topic of our research. Moreover, through the literature analysis we would like to show the demand for the current and following future investigations in this field of research, highlighting its importance for Project Management and for Event Management development.

The literature that will be analyzed in the following chapter has been concentrated mainly on three topics: Mega Projects, Mega Events and Project Management. Since all the research is based on this first chapter, we consider very important to explain why literature analysis has been conducted in this way.

The reason why the literature analysis starts with the research on Mega Projects is because, in many cases, Mega Events are considered as special or particular cases of Mega Projects. Research on Mega Project results then to be wider but many of its findings are applicable to Mega Events (in some cases, findings of Mega Projects research are starting points of a more focused Mega Event research). We are interested in understanding then, in this first stream, what is a Mega Project, by what is characterized and what problems it usually has. Moreover, we would like to understand which kinds of projects and which topics authors analyzed in order to build a complete but profound picture.

In order to do that, key words of the research have mainly been: Mega Projects, Infrastructural Projects, Planning & Controlling, Governance and Accountability in Mega Projects, Mega Projects development, Mega Projects Life Cycle, Decision Making in Mega Projects Networking, Multi-issue games.

The Mega Events are our main focus, and in this chapter they will appear as a second line of analysis. The research, as in the case of Mega Projects, is focused on understanding the main characteristics and problems appearing in Mega Events. Moreover, we would like to identify the most typical topics of Mega Event research.

Key words have been: Mega Events, Sport Mega Events, Hallmark Events, Decision Making in Mega Events, Policy in Mega Events, Tourism Planning and Management in Mega Events, Strategic Settings in Mega Events, Planning & Controlling, Governance and Accountability in Mega Events, Events Management, Mega Events development, Mega Events Life Cycle, Housing, Legacy planning, Impact analysis, Security Management, Best Practice Analysis.

The next step has been to combine the two streams. In this way it will be possible to have a complete academic view on Mega Events: having a clear view on Mega Events and being able to compare them with Mega Projects will enable us to understand which topics, characteristics and issues exist only for one entity or for the other, which are in common and which findings from one stream of research can be applied to the other (and vice-versa).

The final stream of analysis has been Project Management, as the main discipline that allows managing this kind of projects. In this stream we want to identify tools and methodologies used in projects. Moreover, we want to identify limits of Project Management and to understand how they are coupled with characteristics and issues of Mega Events. This research was initially planned as a wider research (how the topics of accountability, strategic settings, planning & control etc. are managed in project contexts? How they are managed in Mega Projects and

Mega Events?). However, after having initiating the analysis it has been easy to identify that, except of few cases, usually all these contents were related to a more general research in Project Management, applied to various contexts (projects, events, multi-projects, complex and dynamic environments etc.). As a following, we decided to focus on Project Management in all its variants, in order to discover key topics of this discipline applicable for Mega Projects and Events.

The key words of this stage of the research were initially general: Accountability of the projects, Project planning, Strategic Setting and project control. After founding the main focus points of the literature the key words became the following: Project Management tools, Project Management lifecycle, risk management, event management, forecasting methodologies, assessment tools in Project Management, project performance, complexity and uncertainty management, multi-Project Management, and Programme management.

The following journals, given the topics investigated and the key words used, had been the most important sources of literature:

Topic	Source
Mega Projects	<ul style="list-style-type: none"> • City, Culture and Society; • Construction Management and Economics; • Environment and Planning; • European Journal of Infrastructure and Transport Research; • International Business Review; • International Journal of Project Management; • International Journal of Project Organization and Management; • Project Management Journal; • The International Journal of Managerial Science; • Transportation Research.
Mega Events	<ul style="list-style-type: none"> • City, Culture and Society; • Event Management Theory and Practice; • Event Management; • International Journal of Event Management Research; • International Journal of Project Management; • International Journal of Project Organization and Management; • International Political Sociology; • Journal of Business Research. • Journal of Economic Psychology; • Journal of Sport and Social Issues; • Journal of Urban Affair; • Marketing & Communication; • Social Research; • Sport Management Review; • The editorial board of the Sociological Review; • The Review of Policy Research; • Tourism Management.
Project Management	<ul style="list-style-type: none"> • Administrative Science; • Association for Project Management; • Building Research and Information; • Construction Management and Economics. • Environment and Planning;

- European management Journal;
- International Journal of Information Management;
- International Journal of Project Management;
- Journal of Management;
- Long Range Planning;
- Project Management Journal;
- R&D Management;
- Strategic Management Journal;
- The International Journal of Managerial Science.

Table 7: Journals used for the literature research

It interesting to notice how, while research on Project Management and Mega project are mainly in Project Management journals, specific research on Mega Events is easier to be found in publications regarding Urban Planning, Sport Management and Tourism management and marketing.

The literature research has also been supported by Project Management manuals and by publication from associations involved in Mega Projects and Mega Events development (COHRE, Organizing Committee of 2006 Fifa world cup, African Institute of Mining and Metallurgy, International Risk Governance Council to make some examples) and by the PMI (Project Management Institute).

The findings are presented in the sub-chapters in the following order:

- Mega Projects: definitions, characteristics, issues;
- Mega Events: definitions, characteristics (deepening the analysis of peculiar characteristics of Mega Events, which distinguish them from Mega Projects), issues;
- Comparison among Mega Events and Mega Projects, where findings on the previous two topics have been summarized and compared;
- Project Management, where we have presented tools and instruments of Project Management and limits of the discipline.

2.1 Mega Projects

2.1.1 Definitions and examples

The literature defines ‘Mega Project’, a multi major infrastructure project with a value greater than \$1 billion (Flyvbjerg et Al., 2003), usually commissioned by government and implemented by private enterprises, characterized by uncertainty, complexity and political sensitivity. It involves a wide range of business partners, industry, politicians (Clegg et Al., 2002), and has strong economic, social and environmental impact for a long time (Bruzelius et Al., 2002).

Mega Projects category touches a large number of different fields: transport infrastructures, telecommunications infrastructures, power plants, aerospace, oil and gas extraction, transportation and many others. (Flyvbjerg, 2003)

Mega Projects can also be defined as “large-scale manufacturing or infrastructure undertakings, which transform landscapes rapidly and profoundly in very visible ways”. (Kardes et Al. 2013) Going on with the definition, the authors identify what a Mega Projects require: “they involve coordinated applications of capital, sophisticated technology, intense planning, and political

influence. They require the engagement of numerous contractors, often from various countries, and take years for completion.” Moreover, he categorizes mega projects into four types: infrastructure, extraction, production and consumption.

Van Marrewijk (2007) describes them as “characterized by and high degree of uncertainty and by mixtures of joint-organizations and sub-contracting of elements of the workflow to legally separate partners, which together make for an high degree of complexity”

Miller and Lessard (2007), defining Large Infrastructural Projects, say that they are “high-stakes games characterized by substantial irreversible commitments, skewed reward structures when they are successful, and high probabilities of failure. Their dynamics also change over time. The journey from initial conception to ramp-up and revenue generation takes 10 years on average”, a definition that clearly wants to focus on the criticalities of Mega Projects.

2.1.2 Objectives

According to Flyvbjerg (2003) in the modern economies infrastructures are often the core of activities of production and consumption, eliminating distances and enabling the creation and movement of people, goods, energy, information and money. Mega Projects are a key force in order to build large and complex infrastructure, attracting public and private capitals in order to realize potential of national and international business activities and to solve issues coming from aging of existing infrastructures combined with the new, higher needs of population and economy. Below it is possible to see a brief but comprehensive list of the high-level objectives of Infrastructure realization through Mega Projects:

- Realize potential cost and time savings thanks to more modern infrastructures (roads, tunnels, bridges);
- Realize potential of the industry in order to enter new markets (gas pipelines);
- Solving traffic problems on existing infrastructures (roads, metro lines, airport) (Peters 2008);
- Enlargement of the capacity in order to bring cost saving in future (Peters 2008);
- Seize the opportunity to attract and invest large amounts of capital to re-plan urban transportation and to reorganize urban policies (Peters 2008).

However, beyond the “official” reasons behind Mega Projects development, it is also easy to find a wide research about “unofficial” and symbolic Mega Projects Objectives. Jennings (2012) highlights how technical, economic and rational motivations come often after high politics. For example Flyvbjerg (2003, 2007) claims that Mega Projects can be “White Elephant” which politicians realize not looking at economic or social needs but looking at the return in terms of image and consensus which may be generated.

2.1.3 Characteristics of a Mega Project

As stated above, Mega Projects are projects characterized by high degree of complexity, given their scope, their scale, the high number of actors that they involve and the uncertainty that all this brings.

Talking specifically about the complexity, it is reasonable to track evolution of definitions. The Webster’s Collage Dictionary says that complex means “composed of many parts” and complicated means “composed of many elaborate interconnecting parts”. The subtle distinction

between complex and complicated is the nature of the relationships between the parts (Maylor 2008). Baccarini (1996) says that key aspect of complexity is the number of physical elements of the projects and their interdependency.

The definition proposed by Cicmil & Marshall (2005) focuses instead on complexity as an attribute of a project. It says that complex projects are “projects involving complex communicative and power relations among actors, ambiguity, and equivocality of performance criteria, and changes over time”. Later a framework was proposed by Maylor (2008) explaining complexity in project-based businesses from five different points of view (Mission, Organization, Delivery, Stakeholders, Team) and highlighting that all elements have both structural and dynamic qualities and that the elements are interdependent. Maylor, observing the results of his research, says that Managerial Complexity in project environments comes not only from individual structural elements and their interactions, but also from dynamic effects of each of this changing and then interacting with the overall system as they change. This fact allows to say that not all of the projects are complex because of an intrinsic structural complexity but most of all because of a dynamic interaction of their element (Whitty 2008).

Dynamism of a project and easiness to change are considered so determinant that in certain case they have been the focus of Project Management research: with “Dynamic Project” we would like to use the definitions of Collyer & Warren (2009): while Dynamic means characterized by multiple changes, “Dynamism of a Project” means how much projects are affected by changes (internal and external). The research observes that different projects have different degrees of dynamism and according to Collyer and Warren Mega Projects (as well as Mega Events) have typically high degree of Dynamism.

Dynamic complexity has been explained by Flyvbjerg (2007) also in terms of multi-actors decision-making process, which the author states to be characterized by conflicting interests and that generates further causes of changes in the projects. All of the above mentioned issues were fully described by de Bruijn & ten Heuvelhof (2008) who covered the topics of high complexity of the decision-making process in terms of uncertainty, high costs, dynamic environment, huge network of actors, heterogeneity of actors, uncertainty of project/process environment.

Different authors attempted to identify reasons of complexity of Mega Projects. Kardes et Al. (2013) identify as reasons of complexity the international scope, the long-term nature of these projects, the participation of numerous partners and contractors with divergent interests, the fluid nature of technologies deployed, and dynamism in the external environments. Kardes et Al. also observes “this topic (complexity) has received little attention in the academic literature” because “Mega Projects have mostly been a topic in the Project Management literature”. Vidal & Marle (2008) introduced instead as elements of complexity: size of project system, variety, interdependencies within the projects and interdependencies between project and the context.

Another interesting observation of Kardens is the division among “technical complexity” (size and scope of the project” and “social complexity” (personal relationships). Other authors, like Marques G. et Al. (2010) prefer instead to differentiate between uncertainties related to the operational activities or the environment, and the structural complexity related to project organization (management).

Uncertainty is an element often mentioned and analyzed in project and Mega Project literature, often in connection to research on complexity. Uncertainty is both the cause and the consequences of the complex setting of Mega Projects. The most important area of uncertainty is usually related to objectives and relationships between the key stakeholders, particularly the internal stakeholders, and especially within the project owners. Challenges are presented in particular by multi-owned projects, where more than one organization share ultimate control over fundamental aspects of a project, as in joint ventures, privately-financed projects, internal governmental projects or bidding consortia. In these contexts, key issues are governance arrangements and to maintain incentives for cooperative behaviour as the project evolves (Millar, 2007). According to this perspective it is possible to conclude that stakeholders are a major source of uncertainty in projects. This uncertainty encompasses who relevant stakeholders are, how they could influence a project, and which are their goals and objectives as their actions affect project activities (Ward & Chapman 2008). In relation to all key stakeholders, involvement in the uncertainty management process needs to be seen as immediately useful and valuable for an effective project and Mega Project Management (Koppenjan & Klijn, 2004).

It is reasonable to say that the main distinguishing characteristic of Mega Project is complexity and, as a following, all of the other characteristics influencing and determining complexity in different proportion.

2.1.4 Issues in Mega Projects Development

Before to analyze issues in detail, it is important to mention the existence of the phenomenon known as “the Mega Project Paradox”: as many infrastructural projects record poor performance in terms of economic and environmental impact and public support, more of them are continuously proposed and built around the world. Typically, costs are higher than budgets, while performance and utilization of the structure are lower than forecasted ones:

1. According to Flyvbjerg (2003) cost escalations occur in 90% of the cases, with an average cost increase of 28%. Considering different sectors it is possible to see that in rail projects average cost overrun is 44,7%, in bridge and tunnel construction 33,8%, in roads construction 20,4% (Flyvbjerg 2007). The author observes that significant differences in the amount of overruns occur, so there is need for specific analysis on each sector but, on the other end, causes of overruns can be generalized for transportation sector and then they can be extended to all construction projects. This data relies on studies on international projects (20 countries involved) over 70 years (fact that proves absence of improvements).
2. Optimistic Demand Forecast: typically actual usage of the infrastructure (or actual attendance of the event, in case of Mega Event) is much less than forecasted. It is possible to observe that 84% of rail passengers estimations are wrong by +20%/-20%, as the 50% of road traffic forecasts, and these figures are constant in 14 nations over a time span of 30 years (Flyvbjerg 2007, Peters 2008).

The direct consequences of optimistic costs and benefits forecasts are, always according to Flyvbjerg:

1. Inefficient allocation of resources

2. Delays and further overruns (needs for negotiations, re-planning, gathering of new funding)
3. Destabilization of policy, planning, implementation and operations of projects
4. Increase of probability and impact of issues as projects grow in dimensions

Moreover, another important consideration needs to be done: looking at the literature analysis it is easy to see how many authors agree on the fact that Mega Projects are typically characterized by low performance, where with low performance authors typically address the delays and the costs overruns of Mega Projects. In the literature, however, it is also possible to observe authors that assume a different perspectives: Toor et Al. (2010) try to understand which can be the KPIs important for stakeholders in order to correctly measure the success of large-infrastructure project. According to this research, looking at the literature there is no common agreement of which are the most important KPIs in project development, but the authors also recognize the difficulties to create and generalizing a taxonomy of KPIs. The need for new indicators, according to Toor, is advocated by other scholars (Quareshi et Al., 2009), which distinguish Project Management success (that can be evaluated with the “Iron Triangle” of cost, time and quality) and project success, that should include many other aspects: customers’ and stakeholders’ satisfaction, technical performance, implications for the company involved (change in business performance, managerial and organizational implications, motivation of employees), problem solving ability of project team, safety of the project. The performance measurement in project development, according to Toor, should move from the Iron Triangle to a mix of qualitative and quantitative indicators. The point of view of Toor is not unique, since other authors, like Frame (2002) say that one of the main problem of Project Management is the fact that the success of a project, and so the focus of project manager, is valued against the Iron Triangle instead of being evaluated against customer satisfaction.

The causes of the low performances are different. Their analysis will be carried out clustering them according to phases of the lifecycle of the projects. This choice has been done in order to simplify the collection and the merging of the researches of authors very different from each other.

2.1.4.1 *Planning & Organizing*

(This phase of the life-cycle regards all the activities made in order to define the objectives and, the strategic setting and approach, the initial demand forecasting and market analysis, the choice and allocation of resources, the scheduling of activities and the analysis of risks and uncertainties)

Starting from the legislative and norm setting of Mega Projects, Flyvbjerg (2003) highlights that there is no any significant penalties (in comparison with the total cost of the project) for delay or not accomplishing of the project at all: the development of incentives and penalties structures from the initial phases are, according to the author, fundamental in developing a Mega Event.

Authors like Koppenjan et Al. (2010) directly accused the project approaches in facing Mega Projects management, distinguishing between “Predict and control” approach, which needs to be supported by risk management introducing buffer and contingencies, and “Prepare and commit” approach, in which actors are committed to a certain output, being aware of the high

probability of occurrence of changes. “Predict and control” is the more frequently used but, due its low flexibility, often does not fit for Mega Project’s complexity.

As said by Flyvbjerg, low accuracy in demand and cost forecasting is a major issue. According to different scholars the causes are multiple: methodologies used (inadequacy of the methodologies: Trujillo (2002) says methodologies are the main problems), poor databases, discontinue behaviour, exogenous factors change, political activities (or not realization of complementary projects), implicit bias of consultant and appraisal bias of project promoters. The later phenomenon is also known as “Promoter’s Disillusion”. Another issue in estimating demand and costs is the manipulation of strategic data: according to Locatelli, Flyvbjerg was able to include and complete contributions of previous authors (Wachs (1990) Trujillo et Al. (2002) Lovallo and Kahneman (2003)) demonstrating that estimations are often biased, while estimation process and decision-making process are fragmented among different actors, who often have incentives in modifying or adjusting values, also under the pressure of cognitive biases and organizational pressures. Also Jennings (2012) claim that decisions, especially in initial phases of Mega Projects, are not rational and economical or socially efficient, but they are instead decisions generated by high politics and economic interest of economic elites: it is interesting to observe the contrast, highlighted by Jennings, among the rational and technical assessment of Mega Projects often performed by scholars, the rational management used to develop them and the non-rational and non-efficient political reasons and interests often underlying the Mega Projects.

This initial misinformation about costs and benefits, according to Flyvbjerg (2007) is the cause of a phenomenon called “survival of the unfittest”: among many different possible projects, Mega Projects and Initiatives, the wrong initial estimations lead to the selection of the worst, most expensive, most complex and more risky ones. Priemus et Al. (2008) talk instead about projects that are not the solution for existing goals or needs: the project starts and it becomes a goal in itself instead of being the best solution for specific problems and needs.

Flyvbjerg (2007) suggests methods and techniques to avoid the factors that he identified as causes of poor Mega Project Performance, as the use as forecasting methodology of “Reference-Class Forecasting”, a technique that can avoid biases and reduce inaccuracies in estimation, or to increase accountability in projects, also using systems of incentives and penalties. Reilly (2004) to avoid typical causes of mistakes in forecasting (included optimism bias) suggests to use a forecast methodology based on the development of a range of costs and scenarios, taking in account in this way more elements.

Priemus (2010) addresses the problem of forecasts talking about market dynamic: mega projects are subjected to those dynamics that can seriously harm assumptions and trends on which initial estimation are based. Continuing in the exploration of this topic, Priemus claims that Mega Projects given their dimension have the possibility to create their own endogenous market dynamics.

Priemus (2010) focuses on the initial phases of Mega Projects development, claiming that they are the sources of the main issues. In these phases, the absence of a proper problem analysis (“what is or what are the problem(s)? And then: what is the problem now and what is it likely to become in the short and the long term? And finally, who is affected by the problem?”) is very important in determining poor performance regarding management of aspects like risks

and stakeholders involvement. Priemus (2010) also observes that in the initial phases of Mega projects development (also another consequence of the previous point) there is not a proper analysis of alternatives, and there is no definition of criteria to judge alternatives and the overall project, as well as there is no clear definition of objectives of the project and of the stakeholder involved, or of boundaries and constraints of the project: ambiguity in the scope (boundaries, content) of the project are other issues according to Priemus. Given this ambiguity of scope and objectives, Priemus claims that it is important to think in terms of “functional requirements”. In this way, it can be easier to formulate and evaluate alternatives. Similar considerations are easy to be found in other research, like the one of Phi et Al. (2014): multi-actor policy-making is seen as the cause of wicked problems, where the identification and prioritization of goals, needs and issues is difficult and generate problems in the planning and management of an event.

As just claimed, poor risk analysis and underestimating complexity and uncertainty of Mega Project during initial phases can be seen a consequence of what said above: risk management plan should be a part of feasibility study (identifying which are the risks, how to face them, who has the responsibility for it) (Flyvbjerg, 2003, Miller & Lessard 2007, Peters 2008, Priemus 2010).

Always according to Flyvbjerg (2003), the main reasons behind the increasing number of Mega Projects built despite poor performance record of old projects are the inadequate deliberation about risk and the lack of accountability in the project decision-making process. Flyvbjerg claims that risk in Mega Projects needs to be acknowledged much more explicitly and managed with better accountability. That is why we would like to pay additional attention to the possible risks during the project life cycle.

It can be useful, before to analyze other elements of Mega Projects, to draw a list of the main risks identified by different authors regarding Mega Project development.

Type of risk		Details
Project risks	specific	Construction cost overruns and other risks connected to implementation: <ul style="list-style-type: none"> ○ Risk of not meeting functional design, operational or maintainability requirements; ○ Risk of injuries (personal injuries, in some kinds of projects loss of life) or catastrophic failures (extensive material or economic damage) (Reilly, 2004; Miller & Lessard, 2007).
Financial risk		Increased financing cost, caused by changes in interest and exchange rates and by delays, by change in government and regulations, etc.;
Capital risks	market	Economic risk for citizens due to high public investments: financing through public capitals does not reduce risks, but it enable to transfer risks toward taxpayers and civil society (as claimed by some authors, less informed about risks and less able to manage it) (Flyvbjerg, 2003).
Market risks		<ul style="list-style-type: none"> • Variation or unexpected events which can influence all economy of sector, and, as consequence, that can affect the Mega Event (Miller & Lessard, 2007)

- Lower than expected revenues, produced by produced in changes in demand (traffic, attendant, etc.) and payment for access (Flyvbjerg, 2003)

Legal and Contracting Risks	Risk that the official rules of the project (as deadlines, contractual rights, not clear role definition, etc.) are unclear or will be broken or changed (Emery 2009).
Sector policy risks and Institutional Risks	These risks are coming from laws, regulations, and norms that govern the taxes on returns, property rights and in general legal issues. (Miller & Lessard, 2007)
Reputational risks	Risk of losing credibility by who is involved in a project that fails or has very low performance. (Reilly 2004) This risk is particularly high for institutions, politicians and private contractors.
Risk related to the Supply Chain	In Mega Projects the supply chain suffers of low visibility (transparency, sharing of information) and high misalignment (the first among partners). (Kardes et Al. 2013)
Opportunity Failure	Risk about the capability to see and to catch opportunities. (Miller & Lessard, 2007) Too strict plans and deadlines usually limit capability to exploit opportunities.
Turbulence	The way that consequences of events are compounded in unforeseen ways, even if the initial event lies within a range of possibilities that was known in advance (Miller & Lessard, 2007)

Table 8: Risks in Mega Projects development

Kardes et Al. (2013) introduce another possible distinction for risks in Mega Projects. At a “Macro Level” the project suffers from exogenous factors that are not project related and have an indirect impact on the success of the project. On this level risk is associated with development and changes in the political, economic, cultural, industrial, and social environment. On the other hand, risk on the “Micro Level” is endogenous and associated with the project related factors such as relationship among stakeholders as well as the technical and operational side of the project

Another thing to be considered, that differentiate Mega Projects and Mega Events from “normal” projects, is that they are developed over long time spans and cross national borders, so they are characterized by a strong political discontinuity. According to Priemus (2010), “decision-makers on Mega Projects have very few weapons to wield against political discontinuity and inconsistency”, but it is however possible to face this problem better organizing, again, the early stages (e.g. alternatives, managing “Dissemination of Information”).

The choice of stakeholders and decision makers can be a key to solve the problem mentioned, but in this field we can make distinction. One issue in this field is that there is often a lack of clearly defined roles (the high involvement of the government which take too much responsibilities and plays extra roles which could be given to other actors). An example can be that governments and governmental associations, instead of having a role of control in Mega Event development, assume a role of sponsor that push the development even bypassing normal procedures and norms (Pillay et Al. 2009).

Always talking about stakeholders' involvement, private companies involvement is mentioned as a very important aspect. The involvement of the private capital is highly recommended for the development of the Mega Events and Mega Projects, however there are some advantages and disadvantages (Flyvbjerg, 2003, 2007):

a. Advantages:

- i. Increase accountability and as a following transparency;
- ii. Performance will be higher because of the media and public pressure;
- iii. Private companies are generally more responsible in respect of the deadlines and cost overruns;
- iv. Part of financial responsibilities (in terms of bonds) will be transferred from public (which means from taxpayers) to private entity. Moreover, rules will be stricter;
- v. Sales of shares will create new strategic partnerships and alliances;
- vi. Representatives of the company will be on the board of directors, in order to make situation clear for the rest of the team and protect the interest of the company;

b. Disadvantages:

- i. In case of the exogenous risks existence private companies will not be able to affect on the situation significantly (for example when economy is sluggish) and will not be able to carry significant risk and high uncertainty in terms of cost;
- ii. Since most of the projects have long return period private companies can be discouraged;
- iii. In Private Sectors few companies have experience and capabilities to manage Mega Projects scope and complexity.

“Democracy Deficit” (Flyvbjerg 2003, 2007; Peters 2008, Spilling 1996) is another actor-related issue: in order to avoid oppositions and to speed up development process, important stakeholders (citizens or local communities) are often not involved in the decision-making process (or they are involved late). This decreases legitimacy of the projects (or of the event) (Bramwell 1997). “Democracy Deficit” can lead to strong opposition by parties not involved in the decision-making process. Moreover, Bramwell (1997) claims that in cases of Mega Events, given the need for an integrated and shared plans and strategies (Bramwell addresses the problem of tourism planning in particular), lack of involvement of certain shareholders can even be more dangerous.

The international extension of Mega Projects implies also cultural issues in choosing resources. Van Marrewijk in particular focuses on this aspect, trying to explore Project Management from a cultural point of view and understanding cultural changes in projects. Looking at the case of Environ Megaproject, van Marrewijk claims that projects are characterized by certain cultures that can change and evolve during the projects. Not always the culture at a certain stage fits the needs of the projects in that stage. Moreover, van Marrewijk explores the need and the modalities of cultural changes, sustaining their importance to reach effective project results.

2.1.4.2 Implementation

(This phase takes into account all the activities that regard the control during the execution of the plan and the possibility of keep track of delays, costs overruns, variations on plans and responsibility for these variations)

Many scholars point out accountability as one of the main issues. According to Flyvbjerg, lack of accountability is caused by:

1. Transparency: government should have a central role in protecting public interests; instead often the one of sponsor of project substitutes this role;
2. Performance Specifications: not technical solution driven approach, but identification of needs and goals according to which technical alternatives will be evaluated;
3. Clear definition of regulatory regime and policy risks: identify directly and associated policies, regulations and investments can be a key to force a better thinking and discussion on overall costs and benefits, and so to reduce risks;
4. Involvement of risk capital: only if there is risk capital (private investments) the project can start, it can be seen as a guarantee of private commitment and a guarantee of better risk management.

Also classical problems of Project Management have their impact on Mega Project setting. Scope creep and scope changes are one of the main issues of “normal” projects and in Mega Projects their effect can be even more significant: always according to Giezen (2012) “Mega project often impact on many interests and many territories and those stakeholders often have particular demands in order for them to accept the plan. The accumulation of changes to the scope is called scope creep”. Even in small project (Berke 2006, Burke 2006) scope creep (and the parallel phenomena, the gold plating) is a big issues that affects time and costs without a proper management of scope change: in Mega projects, where the wideness of scope makes it difficult to fully control, this phenomena have an even bigger impact.

Obviously, implementation regards also the work “on the field”, like operative management, logistics (site logistics, resource logistics) or management of unexpected events (from potential problems with machinery to bad weather) (Burke 2006).

Approaches and biases can be the cause of problems also during the implementation. Projects, and even more Mega Projects, are influenced by “Illusion of Control”: very often Project Managers have overconfidence about their ability to affect the results of a project, while instead high uncertainties are leading projects toward failure (Kardes et Al. 2013).

2.1.4.3 Close-Out

(This phase regards the final assessment of the project and the knowledge management activities)

The necessity to focus on this phase comes to the fact that often authors observe and incapability of projects to improve their performance because of the lack of proper audit at the end of the projects (Flyvbjerg 2003), repetition of old mistakes, poor knowledge transfer and inability to reuse and re-elaborate old data (Desouza 2006).

According to the stages of life cycle of the project, to better visualize all of the discovered Mega Project issues the following table is offered.

Life-cycle Stage of Project	Main Issues
Planning and Organization	• Absence of the comparable significant penalties against overcoming the rules of contracts;

	<ul style="list-style-type: none"> • Low accuracy in demand and cost forecasting; • Promoter disillusion (implicit bias of project consultant or appraisal bias of project promoter); • Performance specification; • Inefficiency of resource allocation; • Absence of defined system of KPIs for stakeholders to measure success of the project; • Absence of a proper problem analysis and analysis of alternatives; • Ambiguity of scope and objectives; • Poor risk management; • Lack of clearly defined roles, lack of the stakeholders involvement especially from private sector; • Democracy deficit; • Cultural aspect consideration in the planning phase.
Implementation (Control and Accountability Issues)	<ul style="list-style-type: none"> • Lack of transparency during implementation phase; • Lack of clear definition of regulatory regime and policy risks; • Need of involvement risk (private) capital; • Delays and further overruns; • Accumulation of scope changes (scope creep); • Illusion of control.
Close-Out	<ul style="list-style-type: none"> • Absence of proper audit; • Poor knowledge management; • Inability to reuse and re-elaborate old data.

Table 9: Issues at different Stages of Mega Projects Development

2.2 Mega Events

2.2.1 Definitions and examples

In order to enter the field of the Mega Events it would be reasonable to introduce some definition of this term. However, since the study about Mega Events is quite young we would like to show evolution of the definition through the years of the research upon this field of study in order to demonstrate the main trends and the points that deserve higher attention.

Exploring literature about Mega Events it is possible to find plenty of definitions, as following:

Year	Definition
1984	Richie focuses on the facts that Mega Events are unique or recurring, but characterized by a short duration. Moreover, he highlights the purpose of these events to increase attention to and attractiveness of a certain area in the short and in the long term.
1994	Roche claims “Mega Events are short-term events with long-term consequences for the cities that stage them. They are associated with the creation of infrastructure and event facilities, often carrying long-term debts”.
1997	Getz quantifies that a Mega Event should attract more than 1 million of visitors and its capital costs should be at least \$500 million. A Mega Event should also be able to increase tourism, attract media attention and positively impact on hosting community.
1998, 2000	Mega Event associated with a large-scale expenditures, building of infrastructure, urban redevelopment and revitalization strategies for hosting city (hosting entity) which has long and short-term consequences for stakeholders involved into organization (Essex & Chalkley, Eisinger)

2004	Malfas et Al. firstly claimed that there are two aspects: internal characteristics – duration and scale (number of actors, number of individual sessions, and level of organizational complexity); and second: external characteristics – media and tourism attractiveness, and impact in the host city. However, after definition had been improved by adding the degree of impact and involvement of diverse entities such is government, private and public organizations.
2006	O’Brien generally defines events as “temporally limited set of opportunities to foster and nurture Long Term Output”.
2011	In the Shanghai guide of sustainable Urban Development a Mega Event is defined as large-scale, internationally sponsored, public entrepreneurship activity engaging a long-term multi-sector organization within the host city and nation with the double goal of supporting overall local and regional development and advancing universal values and principles to meet global challenges.
2012	Grabher says that Mega Events are both complex organizational ventures and urban development projects.

Table 10: Evolution of definition of Mega Event

The different definitions emphasize different aspects. Richie points out the uniqueness of the event and two of the main goals attract attention and visitors. Getz tries to define the scale of a Mega Event and once again, mentions the goals. Grabher (2012) defines Mega Event only in term of complexity and objectives. O’Brien and Roche instead highlight an important difference of Mega Event with respect to Mega project: the short-term nature, in opposition to the long-term impact. To be called a Mega Event it is not enough to have superior size, duration, budget, or form of public participation, the main emphasis is on the complexity and dynamics of these factors and possibility to benefit from these changes.

Nevertheless, even there were different opinions of building definition during the time of the research of the field, there are two very clear trends indeed. Till 2000 the common highlighted characteristic of the Mega Event was positive short and long term impacts (or and development of the long term legacy) on host cities. However after this period most of the scholars started to claim of the existence an issue about organizational complexity and complexity of the relations in governance structure of the organizational body and network of actors.

2.2.2 Objectives

All of the project and events always pursue some objectives and goals that stand beyond its development. In this section we want to offer the main objectives of the Mega Event development merging the contribution of different authors:

Area	The objectives
Economical	<ul style="list-style-type: none"> • Increase in the value of house and impact on real estate (Silvestre 2008) • Attraction of large numbers of people and generation of demand for on and off-site purchases of goods and services, including entrance, food and beverage, merchandise, overnight accommodations and the like. (Linden & Creighton, 2008, Burbank et Al. 2002) • Creation of jobs and economic opportunities. (Linden & Creighton, 2008)

	<ul style="list-style-type: none"> • Increase in employment which occurs as a result of increased financial flows (Heijman & Jongenburger 2011) • Attraction of Professional Sport franchises (Burbank 2002, referring to Mega Sports Events in American Cities) and the consequent economical and visibility advantages in long term. • New investments, new businesses, new revenues, new talents (UNDESA 2012)
Social	<ul style="list-style-type: none"> • Human Development: an opportunity for the population to growth, change social class and improve living conditions. (Hiller 2000, Andranovich 2001) • Desire to enhance international cooperation and understanding (COHRE – “Center of Housing Rights and Evictions” - 2007)
Image and Spatial redevelopment	<ul style="list-style-type: none"> • Establishing or repositioning a community, region and/or country’s image (Linden & Creighton 2008, Burbank et Al. 2002) • Urban renewal effect of thanks to the large number of construction projects for housing and transport infrastructure (Deng and Poon, 2013; UNDESA 2012) • Acceleration in the implementation of infrastructure and other improvements which, under ordinary circumstances, would not occur (Collins 2008) • Creation of big promotional and advertising engine for the territory (Larson, 2001, Lamberti et Al. 2010)
Cultural	<ul style="list-style-type: none"> • Expositions are developed with the historical objective of selling ideas (sometimes, in particular referring to specific topics or sectors), spread cultures and science, facilitate collaborations and cooperation’s (Hall 2006)

Table 11: Heterogeneity of Objectives of Mega Events

However, there was discovered through the literature analysis that Mega Events have short and long-term goals and objectives. Therefore, it can be useful to represent the objectives of Mega Events in the following way:

Short-term Objective	Long Term Objective
<p>Tourism</p> <ul style="list-style-type: none"> • Attraction of large number of people <p>Economic Effect</p> <ul style="list-style-type: none"> • Generation of demand of products and services • Revenues in industry of Entertainment and tourism • Sport franchises for sport mega event <p>Territory</p> <ul style="list-style-type: none"> • Promotion of territory image • Promotion of local culture 	<p>Imagine-Branding</p> <ul style="list-style-type: none"> • Change the image of a region or of a country • Change the “value” of the territory (e.g. real estate) <p>Tourism</p> <ul style="list-style-type: none"> • New infrastructure • Higher quality of services <p>Economic Effect</p> <ul style="list-style-type: none"> • New job places • New companies • Impact on cost and revenues of new

<p>Theme Communication</p> <ul style="list-style-type: none"> • Communication of the theme of the event 	<p>infrastructures and services</p> <p>Infrastructures and Services</p> <ul style="list-style-type: none"> • Urban renewal thanks to large number of construction project • Development of ICT platforms, associations etc. <p>Cultural Impact of Theme</p> <ul style="list-style-type: none"> • Generate cultural changes thanks to the successful communication of the theme
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Table 12: Short and Long Term objectives of Mega Events

This distinction between long and short-term is important mainly for two reasons:

1. This is one of the main differences between Mega Events and Mega projects, as highlighted also by some of the definitions listed above. As it will be possible to see in the following paragraph and chapter, this short-term impact of Mega Event is very important in analysing them.
2. It helps to understand in a more comprehensive way in which Mega Events want to impact on different areas. Objective in short-term and in long term for tourism it is always to attract more people, but how to deploy this objective in short-term (e.g. promotional activities, enlargement of accommodation capacity, definition of tourist packages) and in long term (e.g. new infrastructures, new employees in the sector, training activities etc.) strongly depend from the peculiar characteristic of event (country, contingent economic situation, etc.) and need to be fully understood with a proper analysis. Similar considerations can be made talking about the communication of the theme, the impact on economy and the image-branding objectives. These observations are necessary in understanding many of the issues and, in general, the complexity of Mega Events.

2.2.3 Characteristics of a Mega Events

One observation that it is possible to make about literature is that it very often considers Mega Events as a particular case of Mega Projects. By the way, this (often)-implicit assumption that Mega Project is a wide category that includes Mega Event has some reasons to be reliable. In particular, it is easy to say how both Mega Event and Mega Project are “bigger” versions of common projects and events. Consequently, they can be managed as projects which difficulties coming from a bigger complexity: complexity is in fact the main common characteristic between Mega Project and Mega Event, which can be deployed in:

- Composition of the main Project/Event from huge variety of heterogeneous sub-projects;
- Large scale;
- Large impact, especially in a long term perspective;
- High number of actors involved, with different roles and interests;
- High consumption of time during decision-making and development over a several years time span;
- Wide, complex and international scope.

Nevertheless, Mega Event and Mega Projects have important differences in some characteristics. Here we present the list of those characteristics:

1. Classification

First of all, will be reasonable to start from classification of the Mega Events. In the literature scholars usually distinguish Mega Events according two main aspects: in terms of scale and content (or topic) of the Mega Event:

Classification of Mega Events	
According to the dimension of the event	<p style="text-align: center;">Roche (2000):</p> <ul style="list-style-type: none"> • National or non-national interest; • Local or non-local development O’Connor (2013): <ul style="list-style-type: none"> • Mega Events (FIFA, EXPO, Olympic Games), • Major events (BMX World Championship, World triathlon Competition), • Regional Events (Regional Festivals), • Local Events (Carnivals); <p style="text-align: center;">Wrathall (2011):</p> <ul style="list-style-type: none"> • Mega Events, • Hallmark event (conducted repeatedly in the same location), • Major Events, • Minor Events
According to the context of the Event:	<ul style="list-style-type: none"> • Cultural Mega Events (World Fairs, World EXPOs, Miss Universe) (COHRE 2007) • Political and Corporate Mega Events (IMF/World Bank Conference, Summits, G20 and G8 conferences, MICE-meetings, incentives, conventions, exhibitions) (COHRE 2007, Wrathall, 2011) • Sporting Mega Events (Olympic Games, FIFA, UEFA Championships, F1, Commonwealth Games, etc.) (COHRE 2007) • Fundraising event, events organized to raise money for local funds or charities, such as fetes and fairs (Wrathall, 2011)

Table 13: Mega Events Classifications

2. Repetitiveness

Expos, Sporting Mega Events have regular nature and are organized periodically. While it can be argued that these events are different from time to time and they are organized in a different country, however, it is possible to say that they have many common characteristics in their different editions: they are regulated for some aspects by international associations (BIE, Bureau International des Exposition, managing Expo; IOC, International Olympic Committee, managing Olympics) and regulations, which usually they require the same kind

of activities to be developed (even if how these activities are implemented is strongly dependent by contingent factors).

3. *Dissimilarity*

Despite the repetitiveness, the same event will be different (in terms of scope, scale, management and complexity) on the next implementation, given the different contingency conditions mentioned above (Damm 2010). “No matter how hard one tries, it is literally impossible to replicate an event” (Getz, 2007).

4. *Short-term nature*

Besides the long-term impact, Mega Events has the implementation stage of Event by itself. Therefore, there is a need to develop the event and to make it successful in the short-term, managing all its aspect, from the promotion until the logistics and the operative issues during the event (Roche 1994, Roche 2000, Creazza et Al. 2012, Locatelli et Al. 2012).

5. *Higher time pressure*

Generally speaking, even if a Mega Project has a fixed deadline, it can be anyway delayed and postponed, and this has happened several times in the practice. In opposite happens in Mega Event field once the decision of develop of the event in a certain city or nation is taken, the organizers have to complete all the activities to realize the event before its starting date (Locatelli et Al. 2012, Silvestre 2008). However, if this is a threat from a certain point of view, from another point of view this is an advantage of Mega Events: they force politicians and decision makers to conciliate Political Agendas and they can help in setting strict schedule for existing infrastructure projects or for solving existing issues (transportation, land requalification etc.) (Silvestre 2008).

6. *Media Coverage*

Mega Events, and in particular Sport Events, have the possibility and the objective to attract the attention of the media on the event. One of the consequence of this is a higher pressure of the media and consequently of the public opinion on the event (Jennings, 2012; Boyle and Haggerty, 2009). However, as Silvestre (2008) observes, it is important not to forget the economic revenues coming from television rights, for example, which are usually one of the main revenues streams of Mega Events. Moreover in comparison to Mega Projects, Mega Events has a great potential in changing and creating new trends, social opinion and social behavior (Hall 2006).

7. *Topics and Trend*

The topic of the event is crucial for its success. The wrong chosen topic can from the beginning turn away some participants: in EXPO 2008, mostly related to the Sea topic, countries which do not have coast access to seas were basically excluded from the beginning (Linden & Creighton 2008). Another point is affection of trends to shape the topic for events. Behind that, the topic should be appropriate to include many participants it also should answer to the global interest and touch some particular trend in modern world developments, or it should regard to some existing global issues (Damm 2010). For example, Expo Milan 2015 topic is food and nutrition, which highlight existing food crisis from one side and respond on the existing trend of the research of a healthy life style on the

other. Bellow you can see the historical trends of Mega Events topics and what was the main trigger for such trend according to Goldblatt (2000).

Year	Trend	Trigger Event/Early Warning	Response
2005	Environmental	Energy costs escalate	Use of alternative energy/power sources such as methane gas and wind to power event technical systems
2005	Technological	E-commerce achieves full penetration	Shift to on-line registration/ticket sales and tracking for many events
2005	Human Resource	Generation X and Y desire shorter work week/job sharing	Re-define role and scope of full and part-time event management positions
2010	Environmental	State, Provincial, and Federal environmental regulations impact event industry	Green event certification program through non-governmental organisations (NGO's) develop voluntary standards
2010	Technological	Internet2 provides wide band real time event opportunities	Hybridisation between live in-person events and on-line live (virtual) events improves yield management and guest interaction
2010	Human Resource	Females dominate event management executive level	Shift in organisations from traditional hierarchical systems to collaborative structures; increased job sharing, flexible time bands, on-site or nearby day care, paternity leave

Figure 3: Trends of Mega Events Topics according to Goldblatt (2000)

However, beyond all of these points considered before, there are three important characteristics that are mentioned by scholars as the biggest differences among Mega Projects and Mega Events: heterogeneity, legacy and governance. These two characteristics also belong to Mega Projects. Nevertheless, the scope and scale of them are quite different.

8. *Heterogeneous multi-projects nature*

During the development of a Mega Event, in order to develop the event and to fully realize its objectives (long and short-term) a high number of projects and initiatives are developed (O'Brien 2006). These initiatives are touristic, entrepreneurial, promotional, construction and many others. These initiatives are not only started and managed by the organizers of the event (as for Mega Projects) but they also arise spontaneously from the society and the economic system of the territory where the project is developed (Spilling 1996). As a consequence, it is possible to claim that participation of community can be a key for the achievement of short and long-term objectives of Mega Events (Lamberti et Al. 2010, Spilling 1996, O'Brien 2006). Mega Projects have the same multi-project nature but project heterogeneity and number of the project involved are much higher in Mega Events environment. The heterogeneity is not only an opportunity however: as different scholars observe in researches on multi Project Management (it will be presented later in the literature) heterogeneity of projects is one of the main difficulties in managing multiple projects.

9. *Legacy*

“The legacy of a Mega Event is all that remains and may be considered as consequences of the event and its environment” (Chappelet 2012).

The legacy is crucial for event (Silvestre 2008, UNDESA 2012, Elionor 2012, Chappelet 2012, A.T. Kearney 2005). It is a factor from which depends the success of the whole Mega Event. Only well planned long term legacy can guarantee whether the event will generate benefits, because, the main focus of the expected benefits from the event belongs to its long

term impacts on the economics, culture, society etc.: the revenue from tickets usually compose 5-10% of the total event cost (Stiftung 2011) and also partnership and private investments have only limited impact on event costs. Legacy is the main output and the main benefit of the event: a well-planned long-term legacy of the Mega Event can event move nations to the next stages of the development” of the country (A.T. Kearney 2005).

“Large international events work as trigger for local development and bring tangible advantages to the host city and country” However, beyond tangible there are also benefits that do not have physical appearance and that have not easily calculable value (UNDESA 2012).

As declared in numerous studies (UNDESA 2012, Elionor 2012, Chappelet 2012, A.T. Kearney 2005) legacy should be divided on soft and hard, physical and spiritual legacies, however we would prefer to use the terms of tangible and intangible legacies in our work:

Type of legacy	Composition of this type of legacy
Tangible	The future usage of infrastructures built to host the event (exposition sites, sport stadium)
	The improvement of transport connection
	The improvement of environmental attraction (constructions of waterways and parks)
	Reconstruction and enhancing of the city (monuments, maintenance, etc.)
	Introduction or diffusion of technological infrastructures (applications which will be a legacy for citizens and for tourists)
Intangible legacy	Informational legacy: reinforcement of managerial competencies, knowledge and data about the event, creation of the knowledge base
	Creation of new job positions
	Tourism - is one of the main intangible legacies on which organizers rely on. This legacy can be clustered on two main categories <ul style="list-style-type: none"> ○ Short-term increase (during an event) ○ Long-term increase: considered as more important because has long lasting effect and beneficial for a city or a country generated by the new interest to the host country during the main event.
	City identity and image can be improved through the redesign of the city image and infrastructure.
	Development of the social and environmental sustainability (new certification, social responsibilities, increasing of the social standards)
	Theme legacy: initiatives which have been provoked and inspired by the topic of the Event: demonstration and festival effects (Olympic games can provoke enthusiasm in sport, Expo 2015 Nutrition topic can provoke healthy way of living behaviour, etc.)
	Cultural legacy: increase of the historical and cultural curiosity of the inhabitants
	“Feeling good Factor”: increased enthusiasm and excitement among general public (tourists, citizens)

Table 14: Legacy of Mega Events

Legacy can be expressed also in terms of scale, namely the geographical area affected. The legacy can cover one city, several cities, or whole country UNDESA 2012. For example EXPO 2010 in Shanghai involved another city Ningbo as an opportunity to position their center of information technology innovation (smart city). As an opposite, Expo 2015 in Milan used the same concept of smart city but only inside of the region of Lombardy and Milan by itself. Therefore, Mega Event is not only the opportunity for the host city but it can be considered as an opportunity for several cities and for whole country as well. For example, an organization of Olympic Games and FIFA Championship can be done into 5-10 different cities. In this way it is possible to affirm that the scale can range from local to regional, national or global depending of the Mega Event Context (Chappelet 2012).

Another important group of the clusters of Mega Event legacy can be directly related to the event (like stadium for Olympic Games) or not directly related (as transport system, which is mostly unrelated for direct achievement of the goals of event and more important for a city where event will take a place). Chappelet in his study called them Personal (direct) and territorial (indirect) in addition to the distinction tangible and intangible, focusing on the example of Olympic Games.

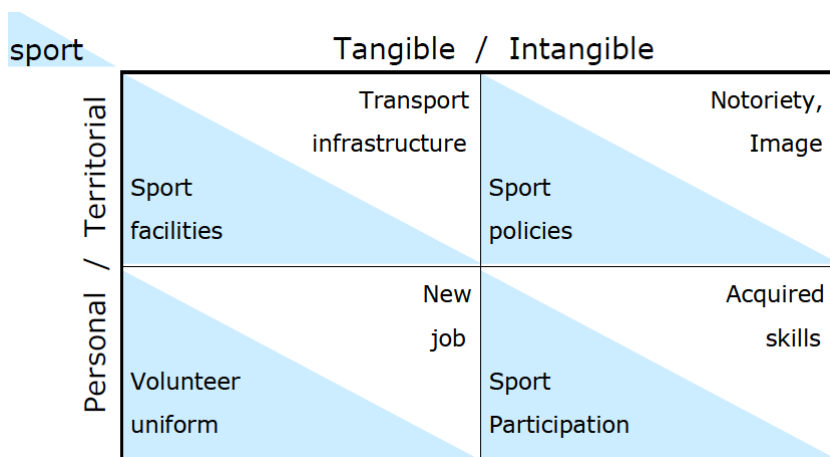


Figure 5: Classification of Legacy

As many scholars highlighted (UNDESA 2012, Elionor 2012, Chappelet 2012, Linden & Creighton 2008) the importance of long-term legacy is crucial, because short-term legacy can bring just very small part of the planned benefits, and on the front of the costs its contribution can be really limited. The main goal of the Mega Event organizers is to achieve a “long lasting legacy” benefit, which will be fully obtained after the event implementation and execution. For example, infrastructure should be built already with planned post event usage after the event, with proper forecast of the demand of its usage. The example of the bad legacy planning can be construction of the stadium in Cape Town for 2010 FIFA Championship, which is not used currently by inhabitants on the full capacity and have very high maintenance expenses for the city.

The legacy also can have a negative effect beyond the positive one. For example, certain facilities can be expensive to maintain, or there can be a negative housing effect (which will be fully described in the following, dedicated to Mega Event issues) (Chappelet 2012).

In order to achieve a sufficient legacy planning there is a need for establishing clear roles and responsibilities across different group of actors involved into organization of Mega Events, as well as a need of setting clear strategies and objectives in order to keep legacy plan focused as well as to maintain clear, reliable and transparent communication channel between actors involved (Elionor 2012).

In order to fulfill all of the issues mentioned above there is a big need for well-organized mechanisms in order to manage, control and execute Mega Event. For this reason Governance is another major aspect to analyze in Mega Event studies.

10. Governance

After taking a decision about hosting city, an important issue for the whole organization of the Mega Event arises – to build (or to collaborate in building) a proper governance structure.

Governance of the Mega Event is “a flexible, collaborative and representative organizational framework for a Mega Event” which is crucial for “its success and is a major influence upon the achievement of legacy goals”. Also governance is a mechanism of shaping all of the entities involved into form of the public and private partnership to deliver the main project (MacRury & Poynter 2009). Moreover, governmental structure in Mega Events built in order to provoke faster changes and development, plus should increase effective community involvement (Burbank 2001).

2.2.3.1.1 Goals

The main goals of the governance in the Mega Event are the following:

- Meet goals and objectives of the event holder (city, region or country hosting the event);
- Achieve optimum outcomes for stakeholders (obviously this require a stakeholder analysis, which results can change from one event to the other);
- Minimize planning, delivery and financial risks of the event;
- Minimize the risks for the event owner or right holder

2.2.3.1.2 Main executive body

As O’Connor (2013) claimed that Mega Event is a business and therefore should be structured accordingly. Therefore, the governance represents the board of directors, which must be able to create policy, strategy and direction setting to serve the needs of an event. It has responsibilities in the following areas (O’Connor 2013):

- Business and Environment;
- Impact on the Event Characteristics;
- Transaction Process: clarity in financial relation to the transactional process;
- Critical Success Factors: set the assessment system and establish goals;
- Stakeholders Management;

- Board Competencies: to assess performance of the Board Team;
- Culture and Standards: Setting the culture and operation environment for the Event organization;

Since the event organization is considered as a business organization, there is as well need of the hierarchy and person who plays the role of the chair man in such organization

The Chair is a leader who oversees the work of the board, sets culture of the organization and maintains the collaboration and relationships between Board and Management Team. The Chairperson should be independent and does not belong to any stakeholder involved into organization of an event.

Moreover, the composition of the board is determinant and one of the criteria that can be used in order to analyze it can be the “base” on which board is built. According to the O’Connor (2013) there are two main “bases”:

a. Expertise based board:

The crucial selection characteristic is the quality, the skills and experience (obviously relevant to the purposes, objectives, challenges and responsibilities of the Event) of the people assigned for board representative. Main characteristics:

- Appropriate mixture of skills and experience
- Clarity and focus in setting policy and strategies
- Effective decision-making
- Accuracy on functional level of governance operations

However, this kind of composition, ideal for any kind of organization in different business settings, and for any kind of events, represents the best practice.

b. Representation based board:

Assignment of the board members is based upon stakeholders’ interests. In general this kind of composition involves the bigger stakeholders, has relevant sector knowledge and can exert direct influence on some critical external issues. However, there are some disadvantages:

- Expertise gaps in some spheres;
- Typically, too many Boards members, which brings to:
 - Conflict of interest: stakeholders objectives against event objectives;
 - Political game, because stakeholder represents its own interest.

Therefore, this kind of composition brings higher risk than in the previous composition type.

Another characteristic of governance can be divided in the following way:

- Internal: control of the Mega Event within existing organization, in sense that all of the governance and management is organized within the current legal structure. For example, creation of the Committee as operating structure and responsible for singular events (FIFA);
- External: in this case separate legal entity is established, ad-hoc for the event, in order to control the event on the organizational field (ex. EXPO).

2.2.3.1.3 *Network*

As claimed by Surborg (2008), there is a niche on the “market” for Mega Events, which includes companies (or institutes and associations) specialized in organization of Mega Events (in terms of public relations, event management, real estate, construction companies, etc.), and often these kind of organizations are strongly connected to international committees and federations responsible for the bidding process and monitoring the events.

For example Olympic Games rights and management belong to International Olympic Committee (IOC) but the main event is planned and delivered by others actors. IOC holds monopoly over the Olympic brand, the sales of the Olympic emblem, and all of the associative production, as well as it holds monopoly above the event. However, the franchise can be granted to the host city at the time of the event, in order to build the organization to be a temporary representative for the event (the same policy also implemented for the EXPO). As a consequence, National Olympic Committees cannot represent their own countries without IOC recognition and permission (Theodoraki 2009).

Moreover, there are many diverse actors, for example companies and other entities specialized in touristic sector and media, which have an interest in investing in Mega Events. Usually they play important role in shaping the final choice regarding projects to implement (Varrel & Kennedy 2011), as well as they can be determinant in deifying partners of the event.

This kind of actors involved into Mega Event, generally defined stakeholders, can be described as socially organized groups which are affected by and/or are able to effect on the outcome of the event and its activities. Stakeholders can generate opportunities or can be sources of risks. According to Renn (2005) inclusion and selection of actors is an essential part of decision-making and governance in Mega Events. Renn also specified the four major categories of actors (political, scientific, business and society players), which should be jointly engaged in decision-making process.

As has been proposed by De Melo (2013), that governance structure in Mega Event consists of organizations and agencies of two main types: those of a decision-making (executive) nature and those of an advisory nature. Moreover, he claimed that it is possible to distinguish among them governmental and non-governmental organizations (de Melo 2013).

Almost all of the Mega Event organization board includes some institutions associated with private companies (de Melo 2013). However, De Melo proposed three main settings of the main entity standing at the head position of the Mega Event organization:

- Decentralization: from the point of view of responsibility there is a sharing among main organization and other actors, as a consequence deflation of the society participation appears in decision-making process.
- Closed from public and not transparent: the mode of exclusion is dominant
- The majority of the head actors belong to the public institutions.

From the historical cases, the most successful Mega Events were those governance was built in close collaboration between the public and private sectors, in order to obtain additional financing, offer specialized expertise, and better manage risks (UNDESA 2012, Elionor 2012).

2.2.3.1.4 *Characteristics of stakeholders involved into decision-making process*

For the building of a proper and capable governance structure, in order to enhance performance and decrease risk on events, Renn (2005) (according to Paquet (2001)) offered to consider tree main value for assessing institutional capacity of the entities involved into decision-making process:

Characteristic	Details
Assets – social capital for effective management:	<ul style="list-style-type: none"> • Rules, norms, regulations; • Resources; • Competencies and knowledge; • Organizational integration.
Skills – quality of the institutional and human performance	<ul style="list-style-type: none"> • Flexibility; • Vision; • Directivity (possibility to drive the change instead of to limit the change).
Capabilities – possibility of the entity to translate assets and skills into successful policies.	<ul style="list-style-type: none"> • Relations; • Networks; • Regimes (possibility to establish the “rules of the game”).

Table 15: Renn (2002) Model for board members skills

This model not only enables to understand the main prospective of the involvement of diverse actors, but also provides assistance to improve capacity of the network of actors and assist in building KPIs to evaluate the risk of a governance structure (Renn & Graham 2005).

2.2.3.1.5 *Forms of Stakeholders’ Relations*

Behind necessary characteristics of the stakeholders, it is important to illustrate possible forms of institutional relations and cooperation (MacRury & Poynter 2009):

- State centered – state governance produces the policies, defines norms and attributes roles to the others non-governmental institutions.
- Public/Private partnership – the way in which private companies have a privilege to participate into process development.
- Network of stakeholders – everyone’s interest is represented in the governmental structure and goals of the project.

As a lot of scholars wrote, the ideal structure will be the one which represents the involvement of everyone's interest or full community involvement, but sometimes it cannot be possible because of lack of the resources (assets, skills, capabilities: this can be an outcome from the level of the development of the country, for example 2010 FIFA World Cup in Cape Town the involvement of the host city representatives into decision-making and into negotiation process was limited (Stiftung 2011)) In other cases, involvement is not pursued because of the fear of a too complex decision-making process, involving too many different actors and different or contrasting objectives (Flyvbjerg 2003, 2007; Peters 2008, Spilling 1996).

2.2.3.1.6 *Types of the Executive Culture*

Moreover, Renn (2005) claimed that not only composition of the governance affects on the future performance of the event, but also political culture (governmental style) influences it significantly. Because of this he proposed the following classification of the governmental regimes:

Adversarial approach: the way of open forum, where everyone can propose and compete. In this context the involvement of the stakeholders is mandatory.

- Fiduciary approach: the type where public can provide suggestions and can address directly to chairman of this organization, even if it is not involved into negotiation part or policy formulation.
- Consensual approach: negotiation in the elite circle behind closed door. Involvement of stakeholder is limited.
- Corporatist approach: quite close to the consensual one, however perceived as more transparent to public.

Style	Characteristics	Risk Management
1 <i>Adversarial approach</i>	<ul style="list-style-type: none"> • open to professional and public scrutiny • need for scientific justification of policy selection • precise procedural rules • oriented towards producing informed decisions by plural actors 	<ul style="list-style-type: none"> • main emphasis on mutual agreements on scientific evidence and pragmatic knowledge • integration of adversarial positions through formal rules (due process) • little emphasis on personal judgement and reflection on the side of the risk managers • stakeholder involvement essential for reaching communication objectives
2 <i>Fiduciary approach (patronage)</i>	<ul style="list-style-type: none"> • closed circle of „patrons“ • no public control, but public input • hardly any procedural rules • oriented towards producing faith in the system 	<ul style="list-style-type: none"> • main emphasis on enlightenment and background knowledge through experts • strong reliance on institutional in-house "expertise" • emphasis on demonstrating trustworthiness • communication focused on institutional performance and "good record"

3 <i>Consensual approach</i>	<ul style="list-style-type: none"> • open to members of the „club“ • negotiations behind closed doors • flexible procedural rules • oriented towards producing solidarity with the club 	<ul style="list-style-type: none"> • reputation most important attribute • strong reliance on key social actors (also non-scientific experts) • emphasis on demonstrating social consensus • communication focused on support by key actors
4 <i>Corporatist approach</i>	<ul style="list-style-type: none"> • open to interest groups and experts • limited public control, but high visibility • strict procedural rules outside of negotiating table • oriented towards sustaining trust to the decision making body 	<ul style="list-style-type: none"> • main emphasis on expert judgement and demonstrating political prudence • strong reliance on impartiality of risk information and evaluation • integration by bargaining within scientifically determined limits • communication focused on fair representation of major societal interests

Figure 6: Culture style of the Governance according to Renn (2005)

Closing the analysis of governance for how it is presented in the literature, it is interesting to notice a distinction made by Sonserson (2012) in his research. The author made in fact a very interesting distinction between “Governance” (which the author claims is very frequently mentioned, as the material identified above shows) and “Governing” (which is the analysis not of ex-ante organizational settings of a project or a event – the governance - but which is an analysis of the ex-post processes and changes that affect governance settings). While there is little or no analysis in the literature of this aspect, we consider this an important and useful observation in the view of fully understanding Governance of an event.

2.2.4 *Issues*

As for Mega Projects, issues of Mega Events will be analyzed according to their lifecycle, also in order to compare them more easily. However, for Mega Event it is necessary to consider an added phase, the one of the event execution.

2.2.4.1 *Planning & Organizing*

As for Mega Projects, the issues for the Mega Events start with wrong forecasts during appraisal and planning phase. In Mega Event case in particular organizers need to estimate number of tourist and their expenses: as Lee & Taylor (2005) claim, mistakes in this estimations often lead to overestimation of impact and bad decision-making in the further phases, Mills and Rosentraub (2013) observes how estimations about tourist and visitors (main source of revenues during the event) don’t typically consider displacement effects and substitution, Locatelli et Al. (2010) demonstrated how the feasibility study and estimation for Expo 2015 have high probability to be too optimistic, being based on weak (or wrong) assumptions: the authors also observe how this is a frequent issue. The consequences of this are ineffective allocation of resources, low participation at the event, owner revenue, higher costs, not-utilized infrastructures ant many others.

But impact of the event is not only economic, or touristic. Different authors claim that there is a necessity for methods able to evaluate impact in term of sustainability, and in particular in term

of environmental impact (Collins et Al., 2009): this necessity has strongly emerged since 1984 Olympics and it has been recognized by events organizers (Collins et Al., 2009, Laing & Frost 2010), but despite the growing importance attributed to this topic, literature does not often address the issue of the environmental impact, nor in terms of ex-post analysis, nor with the proposed models for analysis, planning and control (Laing & Frost, 2010).

As Laing and Frost are focusing on Green Events, it is however important to notice that sustainability is not only environmental, and also social sustainability often find space in Mega Event Literature. Cohre (2007) identifies another issues that can be solved through a better planning. He claims that over the year, Mega Events in different countries of the world have seriously threatened housing rights and diversity of communities because of the people forcibly evicted (for example, in order to build roads or buildings) and because of operations like “streets cleaning” (made in order to hide homeless from the eyes of media and tourists). Moreover, poor and homeless people and all of the people who were on the way of development of the Mega Event infrastructure were forced to leave their houses and apartment. For example in Seoul, 720,000 people were forced to move from their living places for Olympic Games in 1988. Or in Barcelona because of the increased land cost after Olympic Games a lot of low-income earner had to leave the city zone Cohre (2007) concluded that not always bad planning is responsible for this phenomenon, but also the lack of international norms and rules regarding this specific topic. Also Silvestre (2008) focuses on Social Legacy of the event, developing a framework which considers the long term effect of a Mega event on different elements: Community Participation and Openness, Land & Housing, Employment and Business Development, Recreation and Leisure Accessibility, Transport, Human Rights and Taxes and Social Budget.

However, despite all the considerations about forecasts and planning of sustainability issues, often Mega Events are generated not by rational considerations or objective economic opportunities, but they are generated from high political games and economic elite’s interests (again, as in Mega Projects). Gurseay & Kendall (2006) talk about a decision-making process dominated by politic power and politic issues. In general, political leaders and strong economic groups and lobbies endorse Mega Events and have fundamental role in proposing and supporting their development (Andranovich 2001). Burbank et Al. (2002) talk about a real rise in the *Mega Event strategy*, as a response used by cities (the study cited is addressed to American cities) to face “particular political and economic circumstances”. As and more than Mega Projects, indeed, Mega Events can align political agendas.

As already mentioned by Flyvbjerg regarding Mega Projects, however, the role of government is often ambiguous and this adds complexity and uncertainty to Mega Events management. Pillay et Al. (2009) focus on the contraposition among the government as Mega Event promoter and the same government as Mega Event controller.

Talking about planning, it is also important to mention the role of community and to evaluate the decision-making process in term of stakeholders’ involvement. Phi et Al. (2009), Gurseay and Kendall (2006) and many other authors mention the importance of public participations (Gurseay and Kendall focus on understanding factors determining and factors affected by public support in Mega Events), concluding that, even if a more collaborative approach can only have positive effect on many phases (planning, risk management, etc.) often there is not

participation: event organizers, in order to reduce complexity and to reduce the need for negotiating and matching different goals and needs, prefer to limit the participation in the decision-making process. In this way, however, some goals are not considered; it is easier to have oppositions by communities and many other negative effects.

Bramwell (1997) focuses on strategic planning, claiming that in tourism, and in general, in Mega Events, is fundamental for short-term and even more for long term objectives. According to Bramwell, clear forecasts and cost-benefits analysis are necessary as well as the definition of a real strategy. Bramwell continues saying that a long term perspective and the involvement of important actors can enable the creation of broader and more comprehensive plans that can be much more effective given the objectives and the characteristics of Mega Events. The contribution of Silvestre (2008) about the planning for the future usage of infrastructures created during the event can be inserted in this perspective of broader long-term plans.

The effects of Mega Event can exert in unexpected fields. Boyle and Haggerty (2009) include in the long-term plans the security planning. They state that since the Mega Events are opportunities to modernize and revolutionize the urban fabric, their design can (and several successful cases are listed) and must also be thought of in terms of facilities and services that enhance the safety, and not only during the event (when this is especially needed, as also says Jennings, 2003).

As in the Mega Projects, Risk Management plays crucial role in the planning of the Mega Event. Nevertheless, in this area there are significant differences, which one more time shows the reasonability to study as separate entities Mega Projects and Mega Events.

In the following table will be represented some risks are typically related to Mega Events:

Group of Risk	Details
<i>Timing</i>	If an expo is in operation during a time period when other major events are taking place, particularly nearby, then attendance can potentially be affected (Linden & Creighton 2008).
<i>Inefficient Legacy planning</i>	Another major area of potential risk pertains to the planned legacy or post-expo use of the site and facilities (Linden & Creighton 2008)
<i>Risk of low attendance</i>	Many factors of influence: average day-off price, hotels, days of week, etc. (Linden & Creighton 2008). For this reasons, scholars like Bramwell (1997) encourage an integrated planning that considers the main event as well as parallel promotional event, city branding and promotional touristic initiatives: “Integrated planning around a Mega Event should encourage the building of connections, identifying common concerns, capacity building, and coordination of efforts and planning which is related to an overall vision of the area. Timing can affect this risk.
<i>Uncontrolled crowd</i>	Inability to manage Crowd (Emery 2009), with a lot of consequences for local population in terms for example of overload of transportation system. Moreover, higher difficulties in managing security (Jennings 2003)

<i>Security Risk</i>	As the Mega Events attract large numbers of people and the media attention, they are likely to be the ideal stage for protesters, but also it is easier that clashes occur (between protesters, sport fans etc.), This is true also for attacks of terrorism. (Jennings, 2013; Boyle and Haggerty, 2009)[95,96]
<i>Theme</i>	According to The EXPO Book choosing a theme is the first step in order to develop a successful event. Wrong topics can eliminate participation of some counties or actors from the very beginning, because they will not be interested or they will not be able to fit inside of the theme definition.

Table 16: Risks in Mega Events Development

In some mega Events, like EXPO, a theme (or topic) plays very important defining role. In some cases a topic can be perceived as controversial may deter potential exhibitors from participating. This fact makes careful planning of the topic of the event very important. A typical list of evaluation criteria in selecting a theme would be as follows (Linden & Creighton 2008):

- Appropriateness to the Expo location;
- Simple and flexible;
- Neither requiring an overly technical or academic presentation, nor a disproportionate investment in presentation technology;
- Easy to translate into different languages (and across cultures);
- Fresh: not used in recent expositions;
- Embodying a beneficial attempt to improve man's knowledge;
- Having world-wide appeal and a concept sufficiently universal as to have potential application for every participant;
- Providing opportunities to exhibitors to present themselves in a meaningful way;
- Not dependent on a political climate.

The planning in Mega Events must consider a particularly wide variety of aspects. According to Silvestre (2008), for example, the planning of number of volunteers and the level of salaries are determinant of the ability of the events to generate economic value and job places. Moreover, he claims that it is necessary to control and monitor the presence of big International and multi-national companies, so to ensure that local activities are able to take advantage from the events and that they are not excessively damaged from competition.

Given its importance, also Legacy planning should be carried out: to have a clear view of the long term evolution of the initiatives developed during the event is fundamental in order to avoid negative legacies. For example, in the case of Montreal Olympic Games the debt of the event was paid just 25 years after the conclusion of the event. A similar situation happened in the recent Greek Olympic Games (Athens 2004), which was one of the worst example of Mega Events, because the government is still bearing the expenses of the most expensive Olympic Games in the history, which were even able to affect European economy (de Melo 2013). Another example of the negative legacy can be housing problem as well as environmental problems.

Alignment of goals and objective is another significant topic, since it is the cause of many problems: goals of stakeholders, organizing companies, visitors, hosting country (or region) and citizens must be aligned. Moreover, even the goals of the event itself, with the double nature (long and short-term) and with their heterogeneity must be coordinated and aligned. For example, during 2010 FIFA World Cup in South Africa there was a need of FIFA to build a stadium with superior capacity for visitors, however after it was not used on the full capacity and was very expensive in maintenance for city (Stiftung 2011).

In general, as a lot of scholars claimed and concentrated their attention specifically on this stage, the earliest phases and the planning activities are acknowledged as fundamental to achieve the success of the event.

2.2.4.2 *Implementation*

Implementation phase of Mega Event is characterized by a higher time pressure and constant media pressure, with respect to Mega Projects. Pillay et Al. more than other, point out the pressure for delivering facilities in time in Mega Events development as a cause of secrecy, lack of transparency and use of less clear and controllable procedures. This has consequences in term of accountability as well (Pillay et Al. 2010).

Moreover, there was found out an existence of the phenomenon of fast track decision-making, which occurs when there is lack of time to implement projects according to all official rules. Nevertheless, the project will be implemented with temporary norms that enable breaking existing ordinary laws because of its importance for the implementation of the whole event (Varrel & Kennedy 2011).

In general, regarding this phase of events development, the literature is very poor. Many of the issues of the Mega Events are studied as coming from wrong approaches and poor initial planning so, despite many authors claim for the need of accountability and control during events development, it is very difficult to find research about how classic Project Management models address this issue or proposal of new models. The only exception is Locatelli et Al. (2012) which develop a model for controlling Mega Event on the case of Expo 2015: in the research, however, the author highlight what just said that is the poverty of the literature in this field.

2.2.4.3 *The Event-phase*

This stage makes the main difference of Mega Events lifecycle from lifecycle of Mega Projects. Number of scholars considered as a very important issue of this stage is providing security during the whole event, starting from crowd management and till provision protection against terrorists. However, Silvestre (2008) claims that the need for security and the increase of controls, combined with the need of controlling the (frequent, as observed also by Jennings) protests of associations and organizations (citizens, environmental associations etc.) can lead to a decrease of human (how criminals or simple protestors are treated by authorities (Cohre 2007) and civil rights.

However security is not the unique issue. Creazza et Al. (2012), studying Expo 2015, have developed a model for analysing the Logistics needs during a Mega Event like Expo. This research explores a topic that is not described in literature about Mega Event, a topic that

actually is not even mentioned very often: logistics and operations during Mega Events. Creazza et Al. (2012) highlight how the high number of participants, highly concentrated on spatial and temporal terms, and the high number of non-repetitive activities that characterize operations in events management, make very complex to model a management and logistic system, with related sizing and organization of infrastructures (e.g. warehouses), people and means of transportation. From this research it is possible to conclude that even operations management can be an important issue during Mega Events.

An interesting phenomenon can be noticed during Sporting Mega Events where the presence of tourists of different nations can change dramatically according to the results (positive or negative of their team). The easiest example can be FIFA world cup, where in the first phases of the competition half of the teams are eliminated, which reduces the participations of tourists coming from the countries represented by the teams eliminated (Lee and Taylor 2005).

Another interesting observation, is there is a risk of local food (drinks, services, etc.) providers suffering because of the existence of the “official provider” for Mega Event. For example, in the case of the 2006 Football World Cup in Germany, the local sausages and beers providers were blocked from availability and possibility to sell their products in the stadia and also in the most of the public places in the host cities, because beer and fast food right as “official providers” were held by McDonalds and Anheuser Busch.

The low uniqueness of each event, the necessity of high performance (given the already mentioned media pressure and the high visibility) and the temporal focus of these needs obviously is an added factor of complexity in managing this stage of mega event development.

2.2.4.4 *Close-Out*

Many authors, talking about Mega Events, claim about a difficulty in properly evaluate those projects for their extension and the great number and variety of direct and indirect impact. Bramwell (1997), judging the experience of the Sheffield 1991 Games, claims that even 6 years are not enough to measure in a enough precise way the impact of this kind of events. Lee and Taylor (2005) considering different cases and different model to assess and evaluate Mega Events, notice how is difficult to find a complete model that is able to consider all the variables that characterize their impact.

Kavtsos G. and Szymanski (2010) tried to focus on the impact on wellbeing of Mega Events, developing specific indicators in order to estimate it. They claim that their findings do not support the expectations of positive impact of Mega Events. In particular they observed those drawbacks:

- Employment and Wages after sport events are subjected to a set of negative effects that offset the positive effect due to the increase of job places before and during the events;
- Sport stadium and facilities: their construction often leads to “unfulfilled promises of reviving the economy”;
- Tourism: it is difficult to fully understand impact of Mega Event on tourism, especially if the events cover a large territory.

The association COHRE (2007), always focusing on housing right issues, identifies as another consequence of Mega Events the decline of housing stocks and of low costing housing, that heavily affects the weakest and poorer parts of the populations and the marginalized groups.

This is one of the reasons why not everyone agrees on the benefits that Mega Events can generate. As Hiller (2000) claims, often Mega Events promoters are consequently accused of choosing the wrong public priorities investing in Mega Events, and facilities produced by Mega Events are often considered irrelevant, talking about their utility at the end of the event.

As a short summary of the Mega Event Issue chapter the following table is proposed:

Life-cycle Stage of Project	Main Issues
<i>Planning and Organization</i>	Legacy planning Alignment of the objectives of the event and of the host country (city) Assignment of the efficient and transparent governance structure Proper Topic selection
<i>Implementation (Control and Accountability Issues)</i>	Better tourism management Threat for some local businesses Time management because of the existence of the solid time-frame (high time pressure) Media pressure.
<i>Close-Out The Event</i>	Legacy control and execution Difficult management of the physical implementation (in terms of management of crowd, supply chain during event, risk safety management) Operations Management & Logistics

Table 17: Issues of Mega Events according to Life Cycle

2.3 Mega Projects vs. Mega Events: Similarities & Differences

At this point of the literature, it can be interesting to do a direct comparison between Mega Project and Mega Event. This comparison can be useful later in the chapter, when presenting issues of Mega Events and when explaining drawbacks of Project Management practices in managing Mega Events. A table with the list of characteristics of Mega Projects and Mega Event will follow.

Characteristics of Mega Projects	Characteristics of Mega Projects and Mega Events	Characteristics of Mega Events
<ul style="list-style-type: none"> • Use of new and complex technologies • Possibility to change deadlines, delaying 	<ul style="list-style-type: none"> • International scope • Wide and complex scope • Long-term Nature 	<ul style="list-style-type: none"> • Short-term nature • Higher time pressure • High media coverage and therefore higher media

them	<ul style="list-style-type: none"> • Number of actors involved and not completely alignment of cultures and objectives • Dynamicity of project by itself and of surrounding environment • Large scale of the project • Potential ability to affect the surrounding environment • Multi-project nature of the main project 	<p>pressure</p> <ul style="list-style-type: none"> • Very diverse network of not-related initiatives and projects • Complex governance composition • Complex legacy planning • Trend and topics dependency • Repetitiveness and simultaneously dissimilarity of the same event on its different editions
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Table 18: Comparisons between Characteristics of Mega Projects and Mega Events

Also looking at the table, common issues of Mega Projects and Mega Events can be summarized in the following points:

- Extremely high complexity during whole life-cycle of the project; (Hans de Bruijn 2008, Flyvbjerg 2003);
- Multi-project nature (consist of smaller sub-projects, typically sets of infrastructural projects) (Locatelli 2010);
- Require a lot of investments usually starting from \$1 billion (Flyvbjerg 2003);
- Long term (positive or negative) impact (Linden & Creighton 2008, Peters 2008);
- Create political game field (Hans de Bruijn 2008, Jennings 2013) in order to satisfy main issues of the most important actors that are crucial for implementation of a project/event.

Despite of all similarities between Mega Projects and Mega Events it is however possible to highlight some key differences, which are crucial for developing a proper analysis of these complex projects. Mega Event has a short-term stage of the implementation that Mega Project does not have and since Mega Events have a short-term effect on tourism and economic growth, and medium-long term effect due mainly to the infrastructure created and the image/brand of the hosting area or city, their impact is much more difficult to understand than the one of a Mega Infrastructure Project (Linden & Creighton 2008).

One more important point of difference is that Mega Projects does not have rigid deadlines within which the project must be delivered and they can be postponed at relatively low cost (if compared to the Mega Events). This is not true about Mega Events, which usually have a strict deadline, the opening date of the date, that put considerable pressure in delivering stadium, infrastructures and facilities (Grabhen, 2012; Pillay et Al. 2010).

To systemize the previous topics (Mega Projects and Mega Events) it would be easier to put all of the issues into the table according to the stages in project life-cycle in order to visualize and to highlight the main similarities and points of differences.

<i>Life-cycle Stage</i>	<i>Common Issues</i>	<i>Mega Event Specific Issues</i>
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of Project

<p><i>Planning and Organization</i></p>	<ul style="list-style-type: none"> • Absence of the comparable significant penalties against overcoming the rules of contracts • Low accuracy in demand and cost forecasting • Promoter disillusion (implicit bias of project consultant or appraisal bias of project promoter) • Inefficiency of resource allocation • Absence of defined system of KPIs for stakeholders to measure success of the project • Absence of a proper problem analysis and analysis of alternatives • Ambiguity of scope and objectives • Poor risk management • Lack of clearly defined roles, lack of the stakeholders involvement especially from private sector • Democracy deficit • Cultural aspect 	<ul style="list-style-type: none"> • Legacy planning • Alignment of the objectives of the event and of the host country (city) • Assignment of the efficient and transparent governance structure • Proper Topic selection
<p><i>Implementation (Control and Accountability Issues)</i></p>	<ul style="list-style-type: none"> • Delays and further overruns • Lack of transparency (e.g. visibility on project progress, communication of expenses and delays) • Performance specification • Lack of clear definition of regulatory regime and policy risks • Involvement risk (private) capital • Poor project control (e.g. accountability of results, accumulation of scope changes - scope creep) combined with “Illusion of control” 	<ul style="list-style-type: none"> • Threat for small local businesses • Tourism management • Time management because of the existence of the solid time-frame (high time pressure) and media pressure.
<p><i>Close-Out</i></p>	<ul style="list-style-type: none"> • Absence of proper audit • Poor knowledge management • Inability to reuse and re- 	<ul style="list-style-type: none"> • Legacy control • Execution of plans regarding Legacy

elaborate old data	
<i>The Event</i>	<ul style="list-style-type: none"> • Operation Management (in terms of management of crowd, supply chain during event, risk safety management, transportation etc.) • Tourism management

Table 19: Mega Events Issues, compared with Mega Projects issues

2.4 Project Management

The research done till now is focused on infrastructure and transportation projects, since the main interest of the analysis regards Mega Projects and Mega Events. However, in the literature is possible to find failures of projects also in other situations: for example, according to Desouza (2006) IT projects in organizations fail in 50%-80% of the times, because of delays, over costs or inability to meet customers' expectations. These means that Project Management limits do not occur only in the field of Mega Project and Mega Event. It is therefore interesting to make a deeper analysis of the field of Project Management in order to understand the main streams and bottlenecks of the existence researches.

2.4.1 Technique used for Mega Events

According to Kerzner, a project is defined by its objectives, its budget, its start and ending dates, its resources (in particular human resources) consumption and its multi-functionality (its development takes place across sectors and company's functions) (Kerzner 1997). Burke (2006), with a definition that incorporates the elements listed above, defines it as a temporary endeavour where resources are used to create an output characterized by high uniqueness, in order to reach specific objects not reachable in the ordinary operating cycle of the company (Burke 2006).

Consequently, success of a project typically depends on the possibility to achieve objectives within time and cost, utilizing efficiently and effectively assigned resources, with the desired performance/technology level and producing results accepted by the customer (Kerzner 1997).

Project Management is the set of activities, tools and methodologies to complete successfully a project (Burke 2006): planning, organizing, directing and controlling of company resources for a relatively short-term objective that has been established to complete specific goals and objectives (Kerzner 1997).

A project is typically developed following the life-cycle phases (Kerzner 1997):

- Conceptualization, where from general goals and objective the need for a project is obtained;
- Feasibility Study, in which companies decide whether to undertake a project;
- Preliminary Planning, where scope, objectives of a project, resources used and other elements are roughly defined;
- Detail Planning, in which, using Project Management techniques the information above are better defined and turn into a flow of scheduled activities;
- Execution of the project;

- Testing and Commissioning phase, which concludes the project with the final approval of the customer (“Closeout Process”, as it is defined by PMBOK).

These phases can be managed together as a single process (process approach), or each one can be managed as a single project, whose output will be delivered as input to the following stage, without communication among actors involved [64, focusing on absence of communication among who manage design and who take care of implementation].

In developing this life-cycle different document, tools and techniques are used (Burke 2006)(Kerzner 1997). The most famous and common are:

- Project Charter and its more detailed definition, the Project Scope Statement, documents that in the preliminary phases of the project give an idea of the scope, the resource, the objectives and the budget of the project in order to decide if to undertake the project (Burke 2006);
- Economic Project selection criteria, once a project is defined, techniques like Payback period, DCF, NCF, IRR, PI are used to decide whether to undertake the project or not (Kerzner 1997);
- Work Breakdown Structure, where, starting from the deliverables and the milestones of the project it is possible to “break down” the project in Work Package, small activities that will become the unit of planning and control of the project (Burke 2006)(Slootman 2007);
- OBS, RAM, RACI link the work packages, identified by WBS, to their executor, responsible and in general to any human resources that will have a role in their development (Burke 2006);
- GANTT chart, that represents the activities of a project distributed over time (Burke 2006), similar technique is the Milestones chart;
- The Network Scheduling techniques (PERT, CPM, PDM, GERT etc.), which are an improve version of the GANTT chart: they consider precedencies and relationships among activities, they enable the calculation of time with probabilistic duration of activities, they enable “what if” and scenario analysis, they are better in identifying critical activities and risks. (Burke 2006)(Kerzner 1997)(Frame 2002);
- S-Curve, typically a mathematical model or an approximation that represents the project development over time, enabling the understanding of the consumption of resources. This tool is important during planning and budgeting as well as during controlling (where budgeted -the related curve is called BCWS - and effective figures - BCWP, ACWP - are compared through the use of EVMS) (Burke 2006)(Frame 2002);
- LCC (Life Cycle Costing), used in particular in new product development project, to evaluate the costs of a certain decision in the early stage of a project according to its forecasted impact on cost over lifecycle (Kerzner 1997);
- Quality Management tools (data table, Pareto analysis, Cause effect analysis, trend analysis, control chart etc.);
- SWOT, Risk Impact Matrix, Risk Map, Monte Carlo technique, Project Handling Techniques, Lesson Learned (Post-Mortem review): qualitative and quantitative techniques used for risk management (Burke 2006)(Kerzner 1997).

Besides these diffused techniques, it is possible to identify a set of modern tools and trends that practitioners have recently started to develop and use:

- Project Management Maturity Model (PMMM), which is not a real technique, but it is an approach to Project Management that companies can use to enhance their performance in developing project going through 5 phases of maturity (Kerzner 1997);
- Capacity Planning model, to use resources in a better way (Kerzner 1997);
- Competency models that, in a world where projects are more and more complicated and interdisciplinary, instead of describing job requirements draw a model of skills and competencies to face projects (Kerzner 1997);
- Multiple Project Management, so to develop a set of principles and an approach that enable resources and companies to participate effectively to multiple contemporary projects. The manager of a company should be able to develop and manage a “Critical Chain of Project”(Kerzner 1997);
- Construction Driven Project Management, that focuses on increasing communication among actors (in particular, among contractors) and designers), so to solve problem like constructability of design and quality of the final facilities. It is interesting to notice that the author claims that successful implementation of CDPM is always based on network scheduling technique (Slotman 2007);
- Lean Construction that wants to reduce wastes and increase utilization rates, basing on the Japanese philosophy used (initially) for manufacturing cars. However, many criticized this philosophy in Project Management because of the uniqueness of projects and the temporary and multi-organizations structure of the on site project development (Slotman 2007);
- Workface Planning, defined as “*The process of organizing and delivering all elements necessary, before work starts, to enable craft persons to perform quality work in a safe, effective and efficient manner*” (Slotman 2007). This is a method that combines best practices and it is based on the WBS tool.

These methodologies are often acknowledged for the fact that or are very simple but difficult to apply to real cases in a totally reliable way (Gantt, Network Methodologies), or are very complex, but require data and computation time that the project teams do not possess (e.g. Monte Carlo-Simulation) (Marques 2010). Frame (2002) however argues that rarely a project fails because of these tools, he rather claims that the problem is that they should be coupled with a major focus on customer needs, employees satisfaction and motivation and political issues in project.

2.4.2 Limits & Opportunities of Project Management in Mega Events Settings

Given the purpose of our study, it can be useful to understand limits of Project Management in order to grasp which techniques and methodologies and tools can be transferred, modified or combined in order to be used in the management of Mega Events

According to many scholars, Project Management literature, not only regarding Mega Projects and Mega Events, has several gaps that need to be filled. The discussion indicates that Project Management research is in the fruitful moment of revolution of paradigms (Kuhn, 1996). The point is that Project Management cannot exist as a solid discipline. First of all because, project managers strive to create order, and are partly successful (Brown, 1997), as “we” know project rarely goes under planned schedule. Secondly, this is diversity that is present in research of PM (Geraldi, 2008), which means undefined solid models and continuously development.

If we understand Project Management as a positivistic discipline, dreaming of order in the chaotic nature of a project, then its existence is significant. Perhaps it is time to accept, that “all models are wrong, but some are useful” (Box, 1986), and consequently, it is not that one does not need some of traditional tools, such as Gantt charts or WBS, even though practitioners and academics know that these tools do not display the reality of the project. This means that the phenomenon of a project demands more than just dreaming of structure, it demands a “non-discipline”, which looks into the chaotic reality of projects and proposes feasible ideas to deal with this reality. In other words the Project Management as a knowledge field should include more than only “traditional discipline”. Because the conventional, linear rational approach is insufficient, and what “we” need is an approach that recognizes the social structuration of the projects that is better able to deal with complexities (Geraldi, 2008). Only very few organization can utilize comprehensive PM theory to provide high-level management performance in construction industry (Zheng Hang 2011). Other authors, like Bramwell (1997) simply asks for more flexible strategies and plans in developing Hallmark Events, understanding the complexity and unpredictability of Mega Events. Also Sloodman (2007), concluding his analysis on Mega Project development cases, claim that a “dynamic planning”, that plans and defines Work Packages not in advance, but during execution, can help in solving planning-execution conflicts and to enhance the performance of the overall project.

The contrast between Project theory (Projects as execution of plans, environment planned and analyzed looking at risk) and project practice it is also highlighted by Soderholm (2008), who observe how Project Management often fails as a “scientific” discipline and therefore the study of issues like management of unexpected events should be carried out in a quantitative way. In his study, he observe that the typical strategy for managing unexpected are Innovative actions (go outside plan, re-assign and re-schedule), detachment strategy (isolate difficult parts of the project from the rest), intensive meeting (increase control and fast tracking) and negotiating projects (negotiate with competitors, stakeholders, functions).

For many authors, strategic settings and approaches are fundamental in understanding development and success of projects. Collyer and Warren (2009), talking about projects in dynamic environments, distinguish three approaches: *Instructionalism* (from the problem I decide a plan and I execute it), *Learning Approach* (from every problem occurring I find a solution, even using a trial and error approach) and *Selectionism* (I make multiple experiments and I select the best solution from a pool of trials).

For other authors, like Frame (2002), Project Management lacks of focus on customer satisfaction. Moreover, Project Management should be based on “soft disciplines” as well as on technicians’ tools and practices (the one of “classic” Project Management). Moreover, given the complexity of the environment, as said above, project managers should stop to think in a “positivistic way”, they should be more aware of the complexity of the environment and to move from being *implementer* of a plan to be more customer focused.

In 2006 PMI added “Complexity Theory” to the list of discussion, considering it as a discipline of Complex Project Management, which was unofficially launched at the 20th IPMA World Congress in Shanghai (Whitty 2008). In this new setting of research, traditional Project Management methodologies (PERT, WBS, etc.) are often considered not adequate and

criticized for their inability to cope with complex environment and fuzzy systems (Marques 2010).

Marques et Al. (2010) state that with the current methodology “project performance reports are based on working level data but are intended to provide an overview of current trends and status a snapshot of” where you are now” compared to “where you should be”. The critic toward Project Management regards the inability to “analyze the path followed and the choices made”. A similar critic to Project Management comes from Collyer & Warren (2009) who state that the current definition of Project Control is to guarantee the respect of the plans, while Project Control should mean to guarantee the achievement of objectives.

Koppenjan et Al. (2011) claims that the Project Management body of knowledge and, more in general, the research about Project Management stress too much of planning and controlling approach to Project Management that should be supported by extensive Risk Management so to include uncertainties in the analysis. In contraposition, the authors identify a less diffuse stream of literature that tries to analyze Project Management only in order to deal with complexity and uncertainty, which emphasize importance of flexibility and which is completely disconnected from the previous research stream.

Continuing their observation on literature and basing on the works of Gerardi (2008) and de Bruijn & ten Heuvelhof (2008), Koppenjan et Al. claim that Project Management tools are often ineffective in managing complex, ambiguous and changing situations.

Talking the issues of complexity and dynamicity, but focusing on the role of Project Manager, Frame (2002) claims that this is the figure that should manage the trade-offs between seeing big picture vs. pay attention to details, firmness vs. flexibility, being hard vs. being soft with people, use of analytical skills vs. use of instinct and experience. Davidson arrives to mention cases in which the duality of characteristics of project manager was solved using two complementary project managers in the same projects. Focusing on dynamicity of the projects and looking more widely at the decision-making process, also Collyer and Warren (2009) highlight the continuous existence of a trade-off between quality and speed of decisions, especially in dynamic environments.

Another issues often-managed regards the involvement of other actors. Slootman (2007) analysing Mega Project case study, claims for the necessity of early involvement in the project of its executors (the contractors). In general, Slootman claims for the necessity of better communication among stakeholders.

Modern project environment requires a much higher degree of customer orientation (in terms of stakeholders expectations), considering both perceptions and expectations. Furthermore, many modern projects do not have tangible outputs (Maylor, 2001). According to Thomas & Mullaly (2007), the existing conceptual approaches to the “value creation” question can be categorized as: return on investment (ROI) approaches, balanced scorecard metrics and organizational competency approaches. However, only considering the monetary return of Project Management is obviously not enough, since Project Management also brings intangible benefits to corporate culture, organization efficiency, and the satisfaction of clients, and so on (Thomas & Mullaly, 2008), and this is particularly true for Mega Projects and even more for Mega Events.

We have already cited Toor et Al. (2010) trying to answer to the question about the necessity of new performance measurement for Project Success. Marques et Al. (2010) try instead to further analyze the topic, answering three major problems: (1) What are the different performance measurements that allow a complete analysis of the performance of the project? (2) What are the dimensions of project performance needed to obtain a complete overview of the project situation? (3) How can project performance measures be aggregated and published to meet different stakeholders' needs? Marques et Al. with these three questions want obviously to investigate on measurability and communicability of project performance.

Other authors, like Quareshi et Al. (2009) try to move the analysis from Project Performance to Project Management Performance, developing methodologies to analyze and improve the effectiveness of Project Management. Dvir et Al. (2003, 1998) define three perspectives of success of Projects: Project Management Success (the quality of implementation and the compliance with plans), the Value of the Project (the commercial success and the future potential of the project) and the Customer Satisfaction (Satisfaction of final customers of final users). These last researches are particularly interesting for how they connect project success dimensions to project categories defined by the authors. Shenhar et Al. (2001) evaluated instead four success dimensions: time & budget, benefit to the customers, benefits to performing organizations and long-term value.

The researches of Dvir and Shenhar (Shenhar et Al. 2001, Dvir et Al. 1998, 2003, Shenhar & Dvir 1995) deserve a note for focusing on an issue that is not always mentioned in Project Management: the authors, in their researches, paid a lot of attention to the characteristics of the projects, defining classifications based on different projects dimension. As it will be mentioned later talking about multi-Project Management, Project Management often misses the ability to develop instruments, which are based on projects characteristics, trying instead to developing "one-size-fits-all" models.

Another relevant author, Van Marrewijk (2007), questioned instead about the lack of literature regarding a completely different topic: the cultural issues (cultural perspective on project development), gap that he tries to fill. Van Marrewijk sustains the importance of this element saying that "is widely recognized how national cultures of alliance partners, professional cultures and project cultures influence the realization of project goals".

Knowledge management is another interesting issues: auditing of past projects, data transfer and good practices are seen as a way to achieve better results. Flyvbjerg (2003) stressed on the inability to learn from past failures, Desouza et Al. (2006) suggest as a good solution in company environment to establish a Project Management Office to take care also of knowledge management regarding projects. Marques et Al. (2010) claim that the need to deal with a large number of information is one of main the elements of complexity: for this reason they try to develop a framework for modelling projects and key performances so to improve decision-making.

Another stream of research trying to understand and correct the weakness of Project Management is the one about integration (vertical and horizontal) and coordination of different projects, which includes Project Management, Program Management, Portfolio Management and Multiple-Project Management. Moreover, we want to add the "Hearthbeat" Projects, mentioned by Pellegrinelli (1997), which slightly differ from the other three categories of

multiple Projects management. The interest is explained by the fact that organizations are increasingly using projects as a mean to achieve their business objectives through projects rather than through common operations, which increases the number of projects and therefore creates the need for program and portfolio management (Blomquist, Muller, 2006) ZhengHang developed a vertical integration model highlighted the following needs in order to explain reasonability to apply for this model in modern Project Management:

- The objective of Project Management has different barycenter, such as quality, cost, schedule or security. However, the main aim is to deliver product or service;
- Compared to Project Management, Programme management has dual objective of providing product or service and developing synergistic capabilities, between different projects in order to satisfy main strategic objectives of the program to which belong several projects (ZhengHang, 2011);
- Portfolio management aim is to select and support projects to ensure the project compliance with corporate strategic objectives and achieve maximum business benefits, through evaluation of projects or project portfolio selection, multi-portfolio organization with limited resources and guidance of enterprises' strategies (National Natural Science Foundation).

It is however important, before to continue the discussion about management of multiple projects, to distinguish among Programme Management, Portfolio Management and Multiple-Project Management:

- Portfolio Management: group of projects interdependent and characterized by similar theme (e.g. a common technology), resources and skills employed and oriented to similar goals. (Pellegrinelli 1997, Hans et Al. 2007);
- “*Hearthbeat*” Projects: groups of projects embedded in operative business structures with the aim of listening and managing needs and requests coming mainly from inside a company. These requests are typically competing in terms of goals and resource needed (coming from different functions and organizational levels): “*Hearthbeat*” Projects manage them in an holistic way, looking at long term strategy and plan but also with the ability to re-schedule and reallocate resources. “*Hearthbeat*” is used inside a company to carry on incremental changes.(Pellegrinelli 1997);
- Multi-Project Management: according to Patanakul and Milosevic (2009), multi Project Management is a setting in which projects are managed together not because they share goals or characteristics, but because inside the organization(s) managing the projects there is an higher need of coordination and efficiency. Always according to Patanakul and Milosevic, indeed, the measures of the quality of Multiple Project Management are resource productivity, organizational learning, time to market (or, generalizing, quickness of the project), customer satisfaction and personal growth and satisfaction of personnel Involved;
- Programme Management: Pellegrinelli (2011) says that Programme Management is a “mechanism for coordinating a directing related projects”, since “projects and portfolio facilitate managerial sense making and control in complex organization, where projects are the principal unit of work” but all the different projects must be oriented to a unique goal (Patanakul & Milosevic 2009). PMIBOK defines Programme Management “group of

related projects managed in coordinated way to obtain benefits and control not available from managing them individually” (PMI, 2008). The APM Body of Knowledge definition is very similar, but emphasizes the importance of Programme Management as vehicle for complex changes in organizations. According to Pellegrinelli, Programme Management is necessary since are arising several forms of “*projectized*” organization, where projects are the primary mechanism to work achievement. P2M (2008) instead emphasizes the utility of Programme Management in Mega Project development: according to Pellegrinelli, Mega Projects are composed by component projects, which are the “work packages” of the Mega Project. Locatelli et Al. (2012) make the same considerations, developing a Project Control Methodology based on both Project Management Tools and Programme Management principles.

Pellegrinelli et Al. (2007) however highlight also some issues of Programme Management: framework and models are difficult to be defined, because they have to be very contingent oriented (they must be designed for specific business cases, specific goals and projects, paying much attention to Cultural, Political and Business Environment settings). The “One size fits all” does not work for Programme management. Focusing on Programmes developed inside companies, Pellegrinelli et Al. observe how Organization Structure and rules and stakeholders’ analysis are fundamental. Moreover, they claim that grouping and prioritizing projects are the steps that most characterize a multi-project setting (with respect to single Project Management) and that mostly affect project effectiveness.

Pellegrinelli (1997) in previous research is the same able, despite the impossibility to build a general model, to define phases of Programme management (initiation, planning, delivery, renewal and dissolution) and to define the principles that should be used in using Project Management tools in Programme Management:

- Looking at “Project Completion” tools, WBS is not effective. Better to use paths, alternatives scenario and likelihood. More flexible approach;
- “Network” approach for activities planning is too complex. Project should be planned and controlled looking at milestones (this concept is also later presented by Turner and Payne, 1999);
- Risk management must be wider. In companies setting, it should be based on benchmark and competitors’ analysis;
- Management and Control should be based on continuous feedbacks, looking at project effectiveness and at an evaluation of competitive advantage and value created.

Often Programme management results in an improved cost predictability, enhanced cost effectiveness, better schedule predictability, faster project delivery (schedule effectiveness), optimized scope, and better operability and safety performance (Van Der Weijde, 2008).

Through a higher vertical integration with business strategy, Programme and portfolio management increase the project’s exposure to governance which links deliberate and corporate strategy earlier in the study phase lifecycle, thereby increasing the chance of project success (Mintzberg, 1987; Bowman, 2001).

Programme Management, Portfolio Management and Multiple-Project Management have also some drawbacks, however. For van der Merwe (1994), the key points in Multiple Projects

Management are Organizational Structure, Control and Prioritization of Projects. Payne (1995) claims that multiple projects carry with them higher instability and greater variations, because multiple projects mean higher complexity, higher number of interfaces, higher need for communication and coordination.. In general, many authors, across Programme Management, Portfolio Management and Multiple-Project Management studies, claim that prioritization of projects and resources sharing are major issues in these settings. Patanakul and Milosevic (2009) claim that switching from one project to another and to keep track of different schedules and needs it is also a cause in a lower effectiveness of Project Managers activities.

All the issues are made more difficult to manage by heterogeneity of projects (size, urgency, content and skills employed). (Van der Merwe 1994, Pellegrinelli et Al. 2007, Payne & Turner 1999). In particular, Payne & Turner focus on developing a method to approach projects heterogeneity in Programmes: the method should be tailored on the project. They analyzed big projects in contraposition with small projects (the former with the problem of complexity and scale, the latter with the problem of priority and resource allocation) and Infrastructure vs. product Development vs. ICT vs. Organizational change projects (the main projects in a company, according to the author). Payne & Turner define three level of planning and control: Integrative (standard reports to define comparable data and measure across different projects), Strategic (analysis based on milestones and project responsible) and Tactical (eventual added level of planning if project content or scale requires it).

Given the interesting insights that multiple Project Management can give to the study and the research of Mega Projects and Mega Events, it is also important to observe how research on Programme Management, Multi-Project Management and Portfolio Management are strongly embedded in a business environment and often it is focused on very specific typologies (or range of typologies) of projects (Hans 2007, Locatelli et Al. 2012).

2.5 Results of the Literature

2.5.1 Synthesis of the Literature

In modern economies, Mega Events have a strategic role and great potential in creating infrastructures, economic value, in improving the conditions and quality of life of inhabitants and population of a country and in improving territories. They have a potentially enormous and wide impact, since they act both the short and in the long run generate a large variety of heterogeneous initiatives.

Despite their potential, however, they often fail in delivering effective results and, as it has been discovered, they deliver instead some typical “*issues-diseases*” (problems which always repeats from project to project and from event to event).

Mega Events are studied very often as a particular category of Mega Project because of their familiarity of the project environment and basic nature, so, in studying them, it is also important to face literature about Mega Projects.

Mega Projects can be generally defined as major infrastructural projects, commissioned by government and implemented by numerous contractors and which involve high number of businesses, industry and stakeholders. They can be implemented in different sectors, but they are typically characterized by a wide scope, high capitals requirements, sophisticated

technology, high need for intense planning and political involvement. They have long impact, long decision-making and multi-year development processes. All the characteristics above imply high complexity, high stakes, virtually irreversible commitment and high possibility of failure.

Complexity, uncertainty, dynamism are considered the typical characteristics of Mega Project. Existing issues in Mega Projects development are consequences of those characteristics.

Because of these characteristics, despite the high potential, often Mega Projects deliver results below expected. Many scholars address this as Mega Project Paradox: the number of Mega Projects is higher than in the past, however their ability to deliver efficient results is limited. Analysing Mega Projects on the base of their phase, it is possible to see a wide range of observation about the issues mentioned in literature analysis.

During the planning phase, uncertainty is high. Often there is high optimism about the project, not considering the many examples of failures of similar projects in the past. In some cases, projects start more for politic reasons and interests of elites rather than for an evidence of a need or an opportunity for the project. Consequences of these approaches are a not proper risk analysis, with a low preparation to face unexpected events, but also a limited accountability over future development of the event. Methodologies are suggested to overcome this limit: wider problem analysis, better forecasting methods to avoid biases, scenario analysis able to better capture complexity and to draw a more realistic image of the possible developments of the event, considering the overall long time span over which the project is developed.

In this phase, also management of stakeholder is a typically addressed issue: definition of the governance and of role and involvement of stakeholders, participation of citizens and local communities, involvement of private stakeholders are fundamental decisions.

Regarding the implementation phase, the wideness and the long time span imply limited accountability of the project and limited control possibility over the plan development. This is caused by two main reasons:

- The poor planning phase, which doesn't work in order to develop project settings able to manage the complexity and face the uncertainty. Wrong estimation, wrong resource allocations, ambiguity in goals and governance settings damage the project implementation.
- Mega Project is affected by problems of "average" projects, meaning that a lot of case studies showed that the managerial approach, which has been taken in many Mega Projects, was not much different from regular projects. This can lead to the very dangerous consequences in the project implementation and, in the worst, case it can lead to abort a project.

Closeout phase is another often invested phase. Old projects are not properly analyzed and there are not really used to improve practices and management.

Mega Events are instead defined as large events (for investments required and visitors expected) with a double nature: they have a short-term implementation and duration that is contra posed to a long-term impact. They deal with many objectives, from infrastructures realization to urban renewal, from tourism development to business enhancement. As Mega Projects, they are associated to a high complexity and high uncertainty.

As Mega Projects, Mega Events comes with realization of new infrastructure but in this case this is only one element of an impact made of short and a long-term effect in terms of Economic, Social, Touristic and Cultural Development.

With Mega Projects, Mega Events share development complexity, huge scope, high number of actors but there are also many differences among the two: a Mega Event is repetitive and however it is always different (locations, size, theme, etc.), it has a short term implementation, it has high time pressure (because of the existence of the strict deadline, which is not possible to postpone) and higher media attention, it is characterized by a certain topic, which management affects final success but, most of all, the Mega Event is characterized by an heterogeneous scope with a number of heterogeneous issues to manage and objectives to match, a long term legacy in many sectors, a different governance setting (due to, for example, the existence of international committees), the heterogeneity of activities and the peculiar short and long term perspective of the events.

Issues of Mega Events are slightly different from the one of Mega Projects. Organizing again issues according to development phase:

In the planning phase, forecasts and estimations, as well as a decision making process affected by politic games are common for Mega Projects and Mega Events. For Mega Events however the planning phase is more complex, since there is a need for broader planning, which must be able both to deliver short (the event itself) and long term results (the legacy of the event) while considering a large number of different elements: infrastructure, tourism, businesses, social rights, security etc.

In the implementation phase as for Mega Projects, Mega Events implementation has the issues of Events implementation, but the complexity, the heterogeneity of activities and objectives, the large number of actors make the original issues much more complex to face. However, typical characteristic like a bigger time pressure and the media pressure add difficulties that usually does not appear in small events and Mega Projects.

In Mega Events, there is also the event phase. Logistics, operations on the location(s) of the event, management of spatially and temporal concentrated flows of visitors, security and other elements need all to be carefully planned and then managed during the event. The low uniqueness of each event, the necessity of high performance (given the already mentioned media pressure and the high visibility) and the temporal focus of these needs obviously its an added factor of complexity in managing this stage of mega event development.

Finally, there is the closeout phase. There are some objective difficulties that make almost impossible to opportunely execute closeout. The Long Term impact (or Long Lasting Legacy) of the event and the variety of its effects make really difficulties to define criteria and methods to assess and evaluate the event.

Mega Projects and Mega Event are from many points of view similar (size, complexity, multi-project nature) but it is easy to notice how Mega Events have an added phase (the implementation of the event), a major and more heterogeneous impact (which is translated in a much larger number of different projects, initiatives and activities), and a longer list of issues and potential problems caused by these (from the tourism management to the security

management during the event, from the time and media pressure to the operations to be managed during the event).

Project Management is probably the discipline that enables us to understand which tools and methodologies are used in Mega Events (and Mega Projects) planning and development and in which aspects those methodologies have limits that, eventually, cause failures of the event.

Project Management is generally criticized for being a too strict and “positivistic” discipline, based on the idea that, even in a very complex and dynamic setting, it is possible to develop an initial plan and to carry on a successful project only executing it. Moreover, Project Management often fails in defining the criteria for evaluating a successful project: compliance to plans is still the main indicator, often making executors losing focus on quality of the final output and customers’ (stakeholders’) satisfactions.

Another typical problem of Project Management is that the tools developed are “One size fits all”, which means that they had the ambition to be effective in every situation and environment. However, a significant amount of Project Management research claims that there is the need for project-specific models, tailored on the characteristics of the specific project. The characteristics of different projects (sector, size etc.) significantly affect its management and its success factors, and this should be relevant information in developing Project Management tools.

Classical methodologies and tools of Project Management, given previous observations, result then to be more adapt for very well know, structured and controlled situation, with small projects and low-complexity scopes, where the execution of a well-defined initial plan lead to a successful output in terms of quality, effectiveness of the Project Management and satisfaction of stakeholders involved and where peculiar characteristics of the projects have a limited impact in the effectiveness of the practices and the tools.

However, Project Management in complex and dynamic environments, when wide and heterogeneous scopes are present, like the ones of Mega Projects and Event Management, requires more a flexible approach: many authors claim that Project Management needs to be a “non-discipline”, able to adapt, to consider and to enable a better view and comprehension of the contingent projects characteristics, not carrying on a detailed plan but following clear vision and objectives. Discipline like Complexity Management try to contribute in this direction, looking not only at the specific project, but at its relations, the environment, the actors and many other element.

As the most modern solution for managing complexity in wide, multi-projects settings, the literature presents Programme, Portfolio, Heart beating Management and Multi-Project Management. Those are Multi-Projects techniques that try to address some drawbacks of classical Project Management, looking at a business world made by companies that, in order to reach different and ambitious objectives, need to work with multiple coordinated projects.

Therefore, we can state quite confidently that this field of study is particular interesting for our research on Mega Event Management, since it enables to address specific issues of Mega Events: multi-project nature, multiplicity and heterogeneity of objectives and activities. As a consequence we can conclude that the main methodologies and branches of Project Management, which can be used for managing Mega Events, is Programme management

integrated with portfolio and multi-Project Management. As number of authors claimed that there is a need not only to make decomposition of the complex (Mega) projects but also that it is crucial to give to these sub-projects classification and prioritize them for the success of the main projects.

2.5.2 *Conclusions & Considerations on the Literature*

Literature about Mega Projects is much more abundant than literature about Mega Events, especially because very often Mega Events are considered as a sub-group of Mega Projects with peculiar characteristics and, as a consequences, typically there is no emphasis on their existence as a separate field of study.

Regarding the topics of the research we can observe many common points between Mega Projects and Mega Events literature. In both cases, in fact, the research often starts from the low performances of these two entities: delays, cost overruns and inability to solve problems for which they are designed are the typical issues of Mega Projects, while for Mega Events the focus is mainly on the inability to deliver the expected economic impact, the inability to attract visitors and to stimulate tourism and the risk of generating negative effects in terms on urban and social texture.

Both of them are also criticized for being usually characterized by a closed decision-making process, lack of transparency and inability to proper balance public and private participation in decision-making. All these factors can potentially lead to exclusion of important stakeholders giving in this way whole power and responsibilities the hand of a limited number of actors (typically public entities): this leads to inability to consider and evaluate interests and goals of the different stakeholders, inefficient risk allocation, opposition of excluded group of actors.

Typically these problems started in the initial phases. Planning phase is identified as the one where many of the issues find their origin: wrong (or non-optimal) strategic and managerial settings, inefficient resources and activities scheduling, lack of risk and scenario analysis. For other authors, the problems start even before, when an event of a project is selected: wrong initial forecasts and dominance of elite's interests lead to the selection of the "wrong" projects and events and harm planning and development phases. However, even central and final phases of the project or the event life cycle are not managed properly: control and accountability are often poor-performed, closeout phases and *ex-post* analysis can be completely absent.

These poor performances are caused from poor decision making (politics, dominance of certain objective, biased decisions), but also from the lack of proper instruments, not able to grasp the complexity of Mega Projects and Mega Events: Project Management literature analysis testifies that there is a common perception, among scholars and practitioners, of the inadequacy of Project Management in defining right managerial approach and in supporting management of complex and uncertain situations with efficient tools and methodologies.

Other common points between Mega Project and Mega Events can be found in how the research is conducted. In Mega Project studies, typically authors analyze in details a single case study, or make transversal comparison of peculiar elements of a Mega Projects among different case studies: in both case, we can see a literature very grounded in the practice and in real cases. This consideration can be made also for Mega Events, where typically considerations and hypothesis by authors are tested with real-case analysis and interviews. Those researches

are qualitative rather than quantitative (qualitative analysis are performed only when analyzing very specific issues or models). Another observation that can be done is that the researches are typically more focused on criticizing existing approach, identifying issues and test efficiency of existing models, rather than proposing new instruments.

This fact allows us to claim that the research stage can be considered as a beginning phase and does not present very solid propositions and quantitative solutions for existing issues. In this new sphere of Project Management innovative Project Management methodologies should be used. In particular, complexity management and multi-Project Management tools are indicated as to be the new path to address Project Management limits.

From the literature also other relevant factors emerged: Mega Events have some characteristics that make of them a very different entity from Mega Projects. Mega Events have a longer lifecycle, a wider impact, they are composed by more heterogeneous components developed in order to reach a wide set of different goals. With their variety of goals, Mega Events affect sectors and include topics that do not regard Mega Project: tourism, urban planning and effect on social texture, communication of messages, enhancement of the condition of population, international collaboration and dialogue, etc. Typically Mega Events-specific research has the limit to focus on one of these peculiar elements at the time, never giving a complete view.

However, if from one side those are added elements of complexity, from another side they offer opportunities to design *ad-hoc* analysis tools and *ad-hoc* management models for Mega Events development. The idea of our study is therefore to explore these elements not one at the time but in a comprehensive way, looking at Mega Evens as a separate entity, and to use them to address the issues of Mega Event.

The focus is on the planning phase, since it has been addressed as the one that can generate more value in a Mega Event development, but we look also at the possibility to support other phases of Mega Events development. We focus on the peculiar characteristics of Mega Events, in order to enrich a research that has its limits in being bounded on Mega projects or in being too narrow focused. Finally, we do not focus on old or pre-existing model, but we will try to propose a new tool, which can enrich the analysis of Mega Events.

2.5.3 *State of the research*

As claimed introducing the thesis, the purpose of our research it to analyze the nature of the Mega Event as a network of the sub-projects in order to collect insights and information that can improve overall decision-making for event. The main objective can be deployed in four sub-objectives:

1. To provide profound theoretical base about Mega Events with the emphasis on the differentiation of these entities;
2. To assess and analyze the main case study (Expo Milan 2015) according to general characteristics, governance and network composition;
3. To assess and analyze sub-projects composition of Mega Event, according to their relationships, priority, complexity, benefits and importance for local area (territories, businesses, communities etc.) and for Expo;

4. To develop guidelines that can enable a better and more structured analysis of a Mega Event in general and that can, in particular, support the planning phase, according to the main characteristics and issues of Mega Event (given the results of the literature).

With this first chapter, we have been able to reach the first sub-objective of our thesis. The next two sub-objectives we will regard the empirical analysis of the case study: for this reason, in the next chapter we will introduce the Expo 2015 case study.

3 *The Case Study*

We want here to introduce the case study, in order to:

- Demonstrate why it is an ideal case study for Mega Events research;
- Introduce its characteristics and relevant elements, which will be later in depth analyzed in the results chapter.

3.1 *Expo Milan 2015*

Expo, using the definition given by BIE and by Expo 2015 S.p.a., is a non-commercial universal exposition (not a trade fair) hosted and organized by a country that invites other nations through its diplomatic channels. The frequency of the event, the choice of the hosting countries and the control over the development and the quality of each exposition is under the responsibility of the “Bureau International des Expositions”(BIE). From May to October 2015, the Expo will take place in Milan ¹.

BIE is an organism founded in 1928 in Paris. Today 157 countries are its members. BIE distinguishes two kinds of Expo, a primary one and a secondary one, respectively called “Universal Exposition” and “International Exposition”².

Expo 2015 is a “Universal Exposition”, which main characteristics are ³:

- General Theme of Global Interest;
- Not defined Dimension of the Site of Exposition;
- Exposure through pavilions designed and built by the participants;
- Its frequency is every five years;
- Its duration is six months.

3.2 *The theme of Expo2015*

As was mentioned in the literature chapter and in the framework chapter, the topic of the Mega Event is one of the most important elements and it strongly affects the overall event development.

The topic can indeed be determinant during the candidature phase, it highly affects content, partners and visitors of the exposition and consequently strategies and plans depend also on it.

For these reason, we decided to start the analysis of the case study from the topic.

BIE defines Expo as a place where “education is made through experimentation, cooperation is promoted through participation and development is promoted through innovation”. Expo wants to be a “privileged opportunity for dialogue” about a certain theme and “the principal scope of a world exposition is the education of the public: it may exhibit the means at man’s disposal for meeting the needs of civilization, or it can demonstrate the progress achieved in one or more branches of human endeavor, or shows prospects for the future”³.

The theme of the Expo 2015 is “Feeding the Planet, Energy for Life”, a wide theme that includes nutrition, hunger (current food crisis) and education on cultural and ethnic culinary

¹ www.expo2015.org

² www.Milanocity.com

³ www.bie-paris.org

traditions. Also innovation and technology related to food will have a major role, as well as economic and environmental issues related to food production and its distribution process. Therefore, the central aim of Expo 2015 will be to demonstrate “that it is possible to guarantee, today, in this world, food safety, food security and sustainable development for all mankind”⁴.

Although the issue is, as already mentioned above, of global concern and in some respects very current, there are still criticisms about the event itself, and the use of a noble theme to justify “just another real estate operation, that instead of dealing with of agriculture, focusing interest on housing, urban planning and famous architects”. This criticism is then reinforced by rumors claiming that the “place on the planet where to discuss these issues is out of place it is Milan, the city that with its disorderly post-war urbanization has deleted one of the most profitable, balanced and admired the world agricultural system. ”⁵. This is however only one of the many criticisms that Expo 2015 (and in general events like Expo) has received over the years.

3.3 *The site of Expo 2015*

The site of Expo will be realized in Rho, a town positioned in the northwest of Milan and it will have an extension of 1.1 million square meters⁶. The area in the past hosted industrial facilities, but nowadays it partially hosts logistics services and it partially is an agricultural area (Locatelli & Mancini 2010).

As written in the chapter 9 of the Bid Dossier⁶ “this area was chosen largely because it has features which are particularly suited to an event of this kind, in terms of infrastructure (which provides access from the city - new Metro station -, from the surrounding regions - high speed train station and new road link to the motorway network - and from the airports - Malpensa, Linate and Orio al Serio -), and also because of its proximity to the new Rho-Pero fair-grounds”.

Moreover, two new connections, according to the Bid Dossier, were supposed (we will see later how the plans changed from 2008, when the candidature documents was released) to link Rho to Milan⁷:

- “*La Via D’Acqua*”: a water channel combining “*Naviglio Grande*” in Milan with the “*Villoresi Canal*” of Monza. The total expenditure expected for this project, which also includes the construction of cycle paths and connections from the exhibition site up to Lake Maggiore, is expected to be € 160 million (Corriere della Sera, May 7, 2013)
- “*La Via di Terra*”: a path, mainly for bicycles and for walking, which has the primary objective to bring Expo 2015 in the City Milan, so that the theme and the exhibition activities can exceed the boundaries of the site, welcoming visitors also in the urban fabric, to show them the city through the most representative places - both historical and more recent: “*La via di Terra*” from the fair will lead to places like *Castello Sforzesco* and *Corso Sempione*. (As we will see later, this project will remain only on the paper). The path will be developed on the base of thematic itineraries and it is thought as a permanent tourist attraction.

⁴ http://en.expo2015.org/sites/default/files/rich_text_editor/pagine_standard/allegati/chapter_01_pdf.pdf

⁵ <http://freeforumzone.leonardo.it/lofi/Expo-2015-Lucio-Stanca-minaccia-ledimissioni/D8553133.html>

⁶ http://en.expo2015.org/sites/default/files/rich_text_editor/pagine_standard/allegati/chapter_09_pdf.pdf

⁷ <http://www.comune.milano.it>

Talking instead about the structure of the site, it will be developed around two main streets: the “*Cardo*” and the “*Decumano*”, which will cross each other in the “*Italian Square*” (using in this way the basic structure of the ancient Roman cities). The pavilions of every country will be positioned along the *Decumano*, also called “World Avenue”. Along the *Cardo*, on the other hand, it will take place the exposition of every Italian region ⁶.

There will be 88 pavilions, to which we must add 9 "clusters" (single-issue areas in which the exposure of most nations will be clustered) dedicated to crops in the world and other 6 monothematic areas ⁶.

The pavilions will be divided into four categories: small (500-1000 m²), medium (1100-1900 m²), large (2000-2900 m²) and extra large (3000-4900 m²). The 50% of the exhibition space in each pavilion will have to be open air. They will have to be manufactured by each country according to stringent rules concerning environmental impact and energy consumption ⁶. One of the revenue streams of the exposition will be the one of the rent of the exhibition area, since each country will have to pay for the utilization of the space in the site ⁸.

The realization of the exposition site started with the “Resolution of Interferences” on the site and the construction of the “Exposition Plate”, that will be the structural base for the construction of the pavilions and every facility of Expo 2015 in the site ⁹.

3.4 Objectives Of Expo 2015

Expo 2015 is expected to fulfil a large number of heterogeneous objectives.

According to the 2nd chapter of the Bid Dossier, Expo is mainly “an opportunity for dialogue, co-operation and policy making involving all countries around the world”. In this chapter the emphasis is on the objective of communicating and enabling international dialogue on the theme of the exposition. Being the chapter of a Bid Dossier, however, there is also space for mentioning how a country like Italy has the right cultural background to host and organize an exposition focused on food, the culture of food and productive systems in food sector.

Moreover in the 2nd Chapter the “National Reasons” and “Local Reasons” for hosting Expo 2015 are listed. According to the document, the 27th of October 2006 Italian government and Lombardy’s local authorities converged on the idea that Expo would be valuable for:

National Reasons:

- Enhance Italy’s image;
- Exchange experience in safeguarding biodiversity with participants;
- Compare Italian development model with the ones of participants to improve especially in sustainability-related issues;
- Showcase Italian expertise agro-food, biotechnology and nutrition industry;
- Affirm Italian ability in hosting and organizing Mega Events;
- Promote national solidarity and balanced growth.

Local Reasons:

⁸ http://en.expo2015.org/sites/default/files/rich_text_editor/pagine_standard/allegati/chapter_13_pdf.pdf

⁹ http://www.expo2015.org/sites/default/files/rich_text_editor/pagine_standard/allegati/100423_presentazione260410_it.pdf

- Expo can be powerful in supporting urban development of city and region inspired by sustainability principles;
- Expo can help in reinforcing the image of Milan as city of Innovation, Health and Food;
- Expo can consolidate tourism in Milan;
- Expo can help in developing a more sustainable and effective mobility policy;
- Through Expo, Milan can reinforce its international profile both sharing its expertise and know-how in discussing and facing an universal theme, both proposing itself as an ideal venue for debate.

The “Local Reasons”, in particular, are based on the idea that Mega Events like Expo are (as clearly expressed in chapter 6) “catalyst for a process of urban development”, so they are “unique and unrepeatable occasions for urban and transportation development”. Expo can attract “world’s leading architects” and the city can be transformed looking at modern technologies and contemporary cultures, but without renouncing to the history and the culture of the city itself. Summarizing the concepts and goals in this chapter, with Expo Government and Local authorities wanted to catch an opportunity to regenerate urban fabric and image and to raise quality of life and services.

The general goals of Exposition will regard fostering co-operation and development, with a major involvement of growing countries, furthering sustainable development (from protecting biodiversity to improve farming practices), highlighting a new role of technologies as answer to many food-related problems, examining the link between food and health and promoting informed choices by customers (giving bigger knowledge to customer and greater responsibility to companies and public authorities). But all the debate, discussions and co-operation should only be steps in order to reach the bottom-line food-related goals:

- To fight hunger and malnutrition;
- To analyze and develop a greater knowledge of agro food system and industry in order to develop and spread sustainable practices (those analyzes are supposed to stretch from farming to retail and logistics, from greenhouse effects to use of pharmaceutical and chemicals products);
- To better understand how science (in particular, biotechnology) can help in realising previous goals;
- To understand and improve links between health and nutrition;
- To give new knowledge, roles and responsibilities to customers and companies in this process of solving food-related issues;
- To deepen “food cultural roots”: a dialogue between cultures aimed at enhancing the value of typical products.

The chapter 21 of the Candidature Document focuses instead on the long-term objectives of Expo 2015 for Milan and Italy: the economic impact of Expo and its Legacy. The impact of Expo is structured in 4 parts:

- Macro-Economic Impact, again divide in direct, indirect (supply-chain effects) and induced (wealth directly and indirectly created by Expo-related activities);
- Infrastructure (sites, transportation, “Land” and “Water” ways, the digital infrastructures);
- Non-Material Heritage (Intangible legacy), made of:

- Tourism (which consider both economic revenues from visitors and tourists in 2015, both legacies coming from new synergies, higher quality services, higher planning and organizing capacity of the touristic system, effect that the Expo should stimulate).
- City Identity: drawing a new image of the city would mean attract visitors, talents, investors. The treatment of the visitors, the quality of services, the organizations of the city, a city landscape with improved public spaces will be fundamental in these terms.
- Sustainability Best Practices and Social Development processes, which have to be improved managing in a sustainable and transparent way bidding processes and construction processes, but also involving citizens and stimulating their activities and participation.
- Social Development projects: to “change the mind-set of people and to create a legacy in terms of value, social behaviors and daily life of citizens”. This will be done through communication and sharing of Expo values and through involvement of citizens in Expo activities.
- Legacy of the Projects: projects and initiatives are fundamental to communicate messages and values to citizens, to create consensus, to reach scientific, sustainability, cultural etc. goals. The importance of this topic is confirmed also in the 5th Chapter of the Registration Dossier.

Other important themes and goals emerged in the Bid Dossiers, even if they are secondary with respects to the ones listed above (but still significant to understand the heterogeneity of the impact of the Exposition). In chapter 6 (topic then reiterated in the 4th chapter of the registration dossier), climate plan to improve Milan pollution situation is developed, analyzing current level of pollution, impact of Exposition and future actions. In chapter 20th, instead, the “Digital Expo” is presented, namely the initiatives and the plan that should be taken in order to develop ICT infrastructures to help and support tourism in the short term, as well as for increasing Milan and Lombardy ICT capacity in the long-term.

3.5 *The Economical Impact of Expo 2015*

While its very difficult to forecast the ability of Expo to meet the sustainability and image goals in the early month of 2014 (when this research has been concluded), it is very easy to see how public authorities and private companies tried and are currently trying at least to understand to which extent Expo can be successful. Forecasted economic impact job-places created and forecasted visitors flow are the most common measures used to evaluate the Event.

During the six months of Expo, the event is expected to attract 21 million of visitors, among which 7 million from foreign countries, according to the Bid Dossier ¹⁰.

LaRocca (2008), analyzing more in depth the data of the Bid Dossiers, estimated that:

- Expo will generate €20 billion of investments in infrastructures;
- €10 billion will be invested in transport infrastructures;
- Expo will generate 70000 work places in 2010-2015;
- In the Milan area, the volume of business is expected to increase by 10%.

¹⁰ http://en.expo2015.org/sites/default/files/rich_text_editor/pagine_standard/allegati/chapter_21_legacy.pdf

IMF (International Monetary Fund) and ISTAT (Italian Institute of Statistics) in September 2010 estimated that Expo would be able to generate €29 billion for the Italian economy (€18,2 billion before the event, €6,6 billion between 2016 and 2020). In particular, basing the forecasts on the experience of Torino 2006 Olympics, ISTAT claimed that Expo would generate a 0,25% growth of the Italian GPA every year between 2008 and 2015, and that this positive effect on PIL will continue after the event. Therefore higher tax revenues for Italy are expected to be equivalent to € 11.5 billion in the decade 2011-2020.

Also Camera di Commercio di Milano (CCIAA), in collaboration with Expo 2015 S.p.a. and with Italian universities, has analyzed this event and its forecasts on the Expo are considered the most reliable. The first forecast had been made in November 2010, and it has been updated periodically since then ¹¹¹².

In the first report, expectations were incredibly high: between 2011 and 2020, Expo 2015 was expected to generate €69 billion of added production, €29 billion of added value, €11,5 billion of taxes and 61.000 job places per year ¹².

In recent reports, the expectations decreased dramatically. According to the report-update published in February 2013 (the third report), if the visitors will be 20 million (as forecasted in the Bid Dossier) the Expo is expected to create 199.000 work places overall between 2012 and 2020, and to generate €10,5 billion of added value for the whole country. Moreover, Expo is expected to create €24.7 billion of added production in Italian economy. Those figures will be deployed in the following way:

	Added Value (billion of €)	Added Production (billion of €)
Direct Impact	1,5	3,4
Satellite Activities	6,5	15,1
Legacy	2,5	6,2
Total	10,5	24,7

Table 20: Expected impact on Expo in February 2013

It is important to say that, with 20 million of visitors, the exposition is expected to be able (as stated in the document application) to fully cover operating costs (costs incurred during the six months of exposition) with revenues. This forecast is based on expectations on the impact of Expo on tourism, real estate and global volume of business.

The third report is much less optimistic than the one developed in 2010 and the one developed in 2012 (it is the second report developed by the collaboration of CCIAA, Expo 2015 S.p.a. and universities). Those forecasts had been corrected specially for 2 reasons:

- The delays (both in the site and in the other infrastructural projects) and the doubts about the possibility to realize all the projects related to Expo 2015.

¹¹ <http://www.expo2015.assolombarda.it/rassegna-stampa/rassegna-stampa-13-15-04-2013/view>

¹² <http://www.fusiorari.org/local/economia/734-milano-verso-lexpo-limpatto-sulleconomia.html>

- The assessment of the real number of Job places created by Expo from 2010 to 2013: 5.000 workplaces have been generated by infrastructural projects, 2.000 by organizational, communication and marketing activities connected to the event. These numbers are lower than the one forecasted in 2010 for the same period.

Also other companies, groups and associations tried to analyze and estimate impact of Expo on Economy. Artisans associations analysis in particular it is interesting, because it does not look at the total impact of Expo but it looks at very specific aspect. In particular they had forecasted that the impact of infrastructural projects related to Expo will be very important for business in Lombardy: Pedemontana, Tem and BreBeMi are expected to generate savings for 700 million Euro, through a reduction of the time needed to travel from the major Lombardy's cities and the reduction of oil consumption ¹³.

Also the evaluation of Expo 2015 against previous editions can be useful to better understand this Mega Event. For example, the comparison of Expo 2015 with Expo Shanghai 2010 highlights how Mega Events can have important different in their magnitude and in the way in which they are developed: the area of Expo Milan is one fifth with respect to Expo Shanghai, but the number of participants countries (or companies) that will develop their own pavilion is higher (Expo Milan has 20 more countries and associations developing their pavilions). The global investment from participants in Milan 2015 would then be around €1 billion. The operative costs for the event are expected to be null (20 million visitors will generate 800 million euro revenues, which will be also the cost of the operations for the event, according to Bid Dossier assumptions). Moreover, the Expo Milan is built on €1,3 billion of public investments, that are expected to increase business volume in Italy, in combination with all the other public and private investments, by €30 billion from 2012 to 2020¹⁴.

However, forecasts of CCIAA and Expo 2015 S.p.a. are still the most precise and reliable. In the last report, the more recent (December 2013), forecasts for the Expo are updated (as the previous editions, with the collaborations of different Italian universities). The forecasted number of job places created between 2012 and 2020 is decreased from 199.000 to 191.000 new places (144.00 due to direct and indirect impact - 60 000 only during the event -, 51.000 as legacy) while the new companies are expected to be 10600 (3.900 in the area of Milan, most of them in construction and transportation sector). The production added by Expo for the Italian economy will be €23,6 billion (50% for Lombardy), 14 billion for the companies working directly or indirectly with Expo, 6 billion of pure Legacy (e.g. savings from new infrastructure for companies) ^{15,16}.

Again, we can see a decrease of the expectations, but limited if compared with the decrease from 2010 to early 2013: from February 2013 to December 2013 total added production is decreased of €1,1 billion, as well as added production for satellite activities, while expected legacy is decreased by €200 million. Same considerations can be made for the added value generated in the period 2012-2020. In the following table, data are summarized:

Added Value (billion of €)	Added Production (billion of €)
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¹³ Libero, 7/12/2013, pg. 27

¹⁴ Milano Finanza, 14/12/2013, pg. 28

¹⁵ Il Giorno Milano, 21/12/2013, pg. 21

¹⁶ http://www.expo2015.org/sites/default/files/rich_text_editor/comunicati_stampa/allegati/indottoexpo2015_dicembre2013.pdf

Direct Impact	1,4	3,2
Satellite Activities	6,1	14,2
Legacy	2,5	6,2
Total	10	23,6

Table 21: Expected impact on Expo in December 2013

Considering that the previous report was already much less optimistic than Bid Dossiers forecasts and than first CCIAA and Expo 2015 S.p.a. reports, this data enable to see an initial optimism in the effects of the Exposition.

While these last figures show a decreased optimism on Expo, other data gives more positive information. Beyond the economic and financial measures, in fact, it is also interesting to see that the number of countries and associations that officially confirmed their participation is 147¹. According to the 6th chapter of the Bid Dossier the objective was 120: this number is obviously not a reliable indicator by itself for the overall success of Expo, but, considering that the participation of different countries is translated in higher foreign investments, higher rental for exposition space and higher possibility to attract foreign visitors, at least it can be a sign of a positive perception of Exposition and of a potentially healthy and successful six months of event.

3.6 Costs & Revenues of the Event

Now that we have seen which are the potential effects of the event, it is important to understand how they will be generated: which will be the costs of the event? Which will be the main source of revenues? How the investments will be allocated?

According to the Bid Dossier of Expo 2015¹⁷ we would like to present the following figures:

	Budget	Coverage
Infrastructural investments:	€3.228 million	<ul style="list-style-type: none"> • Italian Government (€1.486 million); • Local authorities (€851 million) • Private sector (€891 million).
Operating costs:	€892 million	According to forecasts, fully covered by operating revenues
Total:		€4.120 million

Table 22: Breakdown of costs coverage

These costs are composed by multiple figures: site construction (the main cost), personnel (construction, management, administration, volunteers etc.), royalties to BIE, administration, security, contingency and insurance, financial expenses, marketing and organization of cultural events, transport and accommodation, ceremonies organization and tickets sale management.

It is important to say that the expenses listed above refer only to the construction of the site and the basic projects to connect the site with the surrounding territorial systems (“*Direct Projects*”,

¹⁷ http://en.expo2015.org/sites/default/files/rich_text_editor/pagine_standard/allegati/chapter_13_pdf.pdf

that will be better explained later).

Always referring to the Bid Dossier, the revenues are expected to come mainly for ticket sales (€522 million over the 6 months, also if this estimate is not significant, given the few certainties about the number of visitors and the fact that, writing in 2013, there is still no decision on the price of tickets) and sponsorship (€219 million). The remaining €151 million (of the €800 million that should cover operating cost ¹⁷) will come from rent for accommodation and pavilions, concessions for restaurants, licensing and merchandising and resale of assets post Expo.

3.6.1 The Flows of Visitors

In the bid dossier revenues depend mainly on the number of ticket sold (59% of total revenues) so number of forecasted visitors has a huge impact on this analysis; while the costs for the direct projects (negative cash flow) are distributed over six years (2009-2015). This situation creates a particularly critic windows of financial risk and exposure in the three years from 2012 to 2014.

The number of expected visitors presented in the bid dossier has been obtained by identifying three different geographical areas, each one generating different visitors' flows in terms of number and behaviours (e.g. number of days spent in the site) of visitors ¹⁸:

- AREA 1 (3 hours by car or train from Expo)
- AREA 2 (Remaining part of Italy and all Europe, except Russia)
- AREA 3 (Rest of the world)

Moreover, data of past Expo had been used to understand how the three different areas would contribute to the total visitors number.

The result is 21 Million of expected visitors (29 million of tickets sold, because there is expectancy for multiple entrances). Locatelli & Mancini claim that seems optimistic for three reasons:

1. The forecasts are made using the example of two events that do not fit for purpose: Sevilla Expo 1992 (too far apart according to Mazzeo, 2008) and Torino 2006 Winter Olympics (a different kind of event) (Mazzeo, 2008). Also according to Locatelli & Mancini analysis of past Expos is not relevant (given the continuously changing environmental conditions of the Expos on the basis of the localization of the exposition, the particular period of time, the logistic infrastructure, the cultural progress and involvement of communities etc.).
2. Mazzeo (2008) argues that events like Expo, for several reasons (cultural background, new technologies to put in communication people and products), are no longer able to attract the attention of European Public.
3. Despite of the fact that Milan has a limited domestic market with respect to Hannover 2000, the forecasted number of domestic visitors for Expo 2015 is 50% greater than the actual number of domestic visitors in Hannover 2000.

Locatelli & Mancini (2010) performs a scenario analysis on the forecasted data, drawing a

¹⁸ http://en.expo2015.org/sites/default/files/rich_text_editor/pagine_standard/allegati/chapter_11_pdf.pdf

“very pessimistic” and a “pessimistic” scenario, where the first is built with the assumption of reaching the number of visitors of Hannover 2000, the second assuming to reach the number of visitors of Aichi 2005 (in both cases, much lower than the one forecasted by the Bid Dossier of Expo 2015). In both scenarios, the need for a project re-definition and the preparation of a mitigation plan is suggested.

Locatelli & Mancini had summarized the previous considerations about Expo concluding that there are evidences for overestimation in forecasting (thus bringing Expo 2015 in the category of Mega Projects designed to disappoint the initial expectations, Flyvbjerg 2003,2007).

3.6.2 *The Projects of Expo*

While the revenues of Expo are mainly due to tickets sold, the costs of Expo come mainly from the projects developed in order to prepare the Exposition.

In their analysis of the event, Locatelli & Mancini (2010) divided the projects in two groups depending on the fact that projects are included in the budget of Expo 2015 and are managed by Expo 2015 S.p.a. (a company established with the specific purpose of managing the event, later in the chapter his role will be explained in detail):

- *Direct Projects*: Projects that regard the site construction and the development of infrastructures to connect the site to the city of Milan, to airports and train stations). The projects are then directly related to the Expo, they are financed with the Expo’s funds (being included budget defined in the application phase by the Candidacy Committee) and they are management by “Expo 2015 S.p.a.”. These projects are defined as “Essential” in the application.
- *Indirect Projects*: All the projects (mainly infrastructural) related to the Expo, but not included in the budget defined in the application phase by the Candidacy Committee. Expo 2015 S.p.a. does not manage them, since each of them has already its ownership (usually, private-public consortium with participation of the Region Lombardy or the Municipality of Milan). They are infrastructural projects required for the development of the territory and so necessary beyond the exposition: in some cases, the projects were already in the early phases before the candidature of Milan for hosting the event.
- The design and planning of these projects is beyond Expo 2015 and for this they are financed with funds not allocated to the Expo. These projects, defined in the application as “*Related*”, are useful and functional for the performance and the success of Expo, but not strictly necessary (Locatelli & Mancini 2010).

According to Locatelli & Mancini, the costs of Direct Projects will be €4.12 billion (the budget for Expo, mentioned above), while the costs of Indirect Projects will be €12.2 billion. The total cost will therefore will amount to €16.3 billion.

This distinction, although useful, does show in details neither the list of different projects (which are the projects and to which category their belong), nor it gives up-to-date information about their costs (since the analysis performed by the scholars refers to the Candidature Document and the Registration Dossier, and so to the costs “*on paper*”). However, since our analysis of the Expo will go through a detailed timeline of the main decisions and facts, and since some of the issues that will addressed in the timeline refer to projects, their development

and the actor involved, we think that it is necessary to list the projects that are part of Expo.

A report developed by OTI (“Osservatorio Territoriale Infrastrutture”, Territorial Observatory for infrastructural works) at the end of 2011, shows a detailed list of the projects with their costs and the actors responsible for their development.

The list of projects currently managed in view of the event are divided by OTI in 2 main categories:

1. “Opere Essenziali”, “*Essential Projects*:

- Site construction: squares (P1 and P2) and national pavilions (expository surface 10.000 m² and 6200 m²), Project n° 1a;
- Site construction: clusters from 1 to 14, Project n° 1b;
- Site construction: “Energy Tower”, Project n° 1c;
- Site construction: square P3 (ceremonies square), parking, welcoming areas and thematic pavilion, Project n° 1d;
- Site construction: park (37.000 m²), Amphitheater, Auditorium, Project n° 1e;
- Site construction: pedestrian link with “Rho-Fiera” complex, Project n° 1g;
- Procurement for services on the site, Project n° 2;
- Site adornment, perimetral park, water channels, Project n° 3;
- Viability “Via Cristina Belgioioso”, Project n° 4;
- Parking in the site, Project n° 5;
- Link SS11 – “Molino Dorino” – “Autostrada Laghi”, Lot 1 (Project n° 7a) and Lot 2 (Project n° 7b);
- Adjustment of the junction “Autostrada Laghi”, Project n° 7c;
- Link SS11 – SS233, Project n° 7d;
- Parkings P1 (Project n° 9a), P2 (Project n° 9b), P3 (Project n° 9c), P4 (Project n° 9d);
- Metro Line M4, segment “Policlinico-Linate”, Project n° 8bis (this project was not included in the candidature list but, since was clear in 2012 that the original project, Metro Line M6, would have been impossible to complete before 2015 due to lack of funds and it had then been substituted with M4);
- Water Way (Project n° 10a) and Land Way (Project n° 10b);
- Residential Village (Project n° 12) and increase of accommodation capacity (4 different projects: 13a, 13b, 13c and 13d);
- Technological projects and ICT-Web infrastructures: 14a, 14b, 14c and 14e;

Moreover, in this list of “*Essential Projects*” there should be the project “variant of SP233”, a road project, but it is not included: the lack of funds forced the exclusion of the global project, initially considered in the Bid Dossier. A part of this project, however (the northern section) will be part of the connected works.

2. “Opere Connesse”, “*Connected Projects*:

- Strengthening train line “Rho-Gallarate”;
- Provincial Road “Rho-Monza”, three lots (one project for completing the first two lots, one project for realizing the third one);
- Metro Line 5, segment “Garibaldi-San Siro”;
- Pedemontana highway;

- Extension of train line to Malpensa (to reach second terminal);
- M4 segment “Lorenteggio – Policlinico”;
- Extension Metro Line 1;
- Metro Line 5, segment “Bignami-Garibaldi”;
- Link SS11-“Torino-Milano Highway”;
- Link SS33 – SS11;
- BreBeMi Highway;
- Tem (“Tangenziale Esterna Milano” road, or “Milan Eastern Outer Orbital”);
- Works on north segment of SS233.

Moreover, OTI list projects refers to a third category of projects, the “Necessary Projects”, which are not included in the Expo budget and not listed in the Bid Dossier, but which are considered important for the development of the areas and which are inserted in larger urban renewal plans: their total cost will be €13.94 billion. As for the other two categories, these are mainly works for the development of train and road infrastructures.

The management of “Essential Projects” and “Connected Projects”, always according to the report of OTI, is ascribable to a limited number of actors:

<i>Actor</i>	<i>Project(s)</i>
Expo 2015 S.p.a.(private company led by public institutions)	Which has the ownership of “ <i>Essential Projects</i> ” from 1 to 5 and from 10a to 14e
Infrastrutture Lombarde S.p.a. (public company fully owned by Region Lombardy)	Which has the ownership of the remaining essential projects.
RFI (Rete Ferroviaria Italiana, a company fully owned by “Ferrovie dello Stato”, managing railway network)	Has the ownership over the project for strengthening train line “Rho-Gallarate”
ANAS (Azienda Nazionale Autonoma Strade, a public company managing Italian road network)	Provincial Road “Rho-Monza”. ANAS manages the first two lots through a concession to “Serravalle S.p.a.”, while the last lot is managed through concession to another company, ASPI.
Municipality of Milan	Metro Lines 1,4,5 projects
CAL (Concessioni Autostradali Lombarde)	Pedemontana, BreBeMi, Tem. All the three projects are managed through concessions, respectively to companies Pedemontana, Bre.Be.Mi. and Tem.
Ferrovie Nord (Company managing Lombardy train network)	Extension of Train Line to Malpensa
Province of Milan	Works on north segment of SS233

Table 23: Ownership of Projects of Expo

The configuration showed it is not the last one, however. The first list of projects was presented with the candidature document (2008). It was officialised the same year, with the Decree of the Prime Minister (DPCM) of the 22 October 2008 but, due to delays and problems in the

realization of the projects, this list was changed with the DPCM of the 1st March 2010: the report of OTI analyzes the state of the projects listed in this last law.

In order not to forget relevant project, we however highlighted in the list of OTI the main changes occurred from the first list decided by the Italian Government in 2008.

The “final” list (since we are in 2014, it is not certain that it will be the definitive one) was decided in 2012. If the changes of the list from 2008 to 2010 were minimum (minor changes in some projects, cancellation of Metro Line M6 and Variant on SP233 projects), the changes from 2010 to 2012 were dramatic. The most up-to-date list of projects will follow in the next sub-chapters together with project progress evolution (this dynamics, given its importance in understanding the Expo 2015 and its issues, will be fully and in details analyzed in the following sub-chapter).

3.7 Expo 2015: A Mega Event

According to the objectives set up in the introduction of this sub-chapter we would like to demonstrate the main characteristics of the Mega Events on the base of the Expo 2015. To be more precise, this chapter was thought in order to show the composition of Expo 2015 regarding scope and scale.

Summarizing, the chapter would like to highlight the following characteristics assigned for Expo 2015 mentioned above:

- Enormous budget: 30 billions of investments in city and event; 4.12 billions: cost of the event by itself;
- International scope: 150 countries involved;
- Dynamic environment of the decisions made and projects composition;
- High economic impact (value added 10 billion and production value 23,6 billion), plus tangible legacy (infrastructure, transportation, etc.);
- 21 millions of visitors during 6 months event;
- Topic with a high actuality and of universal interest: Food and Nutrition;
- Intangible legacy (tourism, city image, branding effect "feeling-good" factor, cultural changes, etc.);
- Heterogeneous multi-project nature, since it is possible to identify 30 heterogeneous projects, only considering main lists: infrastructural, technological, marketing and organizing activities are the main categories.

On this base, we can declare confidently that Expo Milan 2015 is a Mega Event.

The Expo 2015, here introduced, has been analyzed in details in the following chapters.

4 *Research Methodology*

The empirical part of our research is divided in two parts: the Documentary Analysis and the Interviews. Those two analyzes address different objectives by collecting different kinds of information.

The empirical analysis is fundamental in order to understand the Expo 2015 case in all its complexity. We can see how the analysis needed to be performed on a seven years time period, considering many different kinds of documents and contributions. However, this was the only methodology that can enable an analysis of Expo considering its dynamics: issues of Expo needed to be identified and connect to its characteristics and how they have evolved.

The empirical analysis has been performed in a qualitative way: this choice, suggested also by different examples in the literature, comes from the necessity to understand the Mega Event from characteristics that are poorly investigated by other scholars, like the multi-project nature. The research has an explorative purpose in this sense and it is not supported by previously developed structured methodologies of analysis. For this reason, it is almost impossible for us to develop reliable indicators and numerical measures. However, we claim that our research can be a first step for the future development of quantitative models.

4.1 *Documentary Analysis*

Structure and Objectives of the Analysis

The case has not been only studied in terms of official documents, but also through news reviews and Expo 2015 related publications.

First of all, Expo has been defined, stating its composing elements, its size, the objectives it is addressing. In order to do that, we had referred mainly to the Candidature Document of the event, which describes the how event was conceived in the first stages of its development.

The definition of the timeline of the main decisions and of the facts happened during the organizational and implementation process is another important step of our analysis. The following topics had then been be investigated, looking at how they evolved over the time:

1. Governance Settings;
2. Involvement of Communities, Associations, Businesses;
3. Progress of the Essential and Supporting projects;
4. Evolutions and changes in forecasts and planning.

The idea of using a timeline of decisions, and to analyze the evolution of Expo and its organizational structure, it is related mainly to two contributions in the literature, which highlighted the importance of observing processes and micro-processes characterizing Projects and Mega Projects:

- Sanderson (2012) observed the importance of analyzing “Governing” processes and micro-processes. Applying the thought of this author to our research, if we would perform an analysis of Governance of Expo 2015 based only on official documents, without looking at news and information about how the structure evolved (the *governing* processes) we will not have a complete comprehension of important dynamics of the event development.

- Marques (2010) observed how one of the major weaknesses of Project Management is the inability to understand decisions taken. The author claimed that too often project analysis is performed only looking at the comparison between plan and actual results, without really understanding the chain of decisions. In our analysis, showing the succession of the official decisions (mainly government laws) and of the relevant news about Expo over 5 years (2008-2013) we want to overcome this limit.

The selection of the areas of analysis answers instead to the findings of the literature about the characteristics and the issues of Mega Events:

- Objectives: as a fundamental component of a Mega Event, it is important to understand all the objectives that the event wants to reach. In particular, it will be important to distinguish short and long term objectives. The following step will be to connect decisions to actions.
- Governance: as observed in the literature, Governance is a critical element in Mega Events because of their complexity and the high number of actors and objectives. To understand the governance can be helpful in understanding dynamics among actors and decisions taken. Basically, we want to understand how governance of Expo works and which are the reasons why a certain governance structure has been chosen.
- Stakeholders: there are an high number of stakeholders involved, with different roles and objectives. Stakeholders are the main source of risk in Mega Events, and their dynamics determine decision-making.
- Performance: as Mega Events typically fail in delivering results and in meeting expectations so it is interesting to compare initial forecasts with plans and then with results, in order to understand how Expo 2015 is working and if the decisions made are leading to a successful event.
- Issues of Expo 2015: as an high number of issues was found in the literature, we want to understand which issues, presented in the theory, appear in Expo 2015 and how they are managed (if they are managed).
- Projects scenario in Expo 2015: we want to understand which projects compose Expo in order to improve the identification of sub-projects to be analyzed in the following phase and to better identify relevant data to be collected. This will be the input for the following part of the empirical study.

The horizon of our research goes from 2006, when the candidature of Milan took place, till February 2014.

The Sources Used

Our documentary analysis has been composed by circa two hundreds sources, belonging to different categories:

Type of Document	Purpose of the Analysis	Sources
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<p>Official documents of Expo 2015 S.p.a. or realised by other relevant actors.</p>	<p>Candidature Document, agreements, work plans, masterplan and schedules published by central authority are important in order to understand goals and priority of the events. Moreover, to observe how these plans evolve during the years can help in understanding strategic settings of the events, quality of the planning process, issues in the development of the exposition and finally the capability of the central organization to manage unexpected events.</p>	<p>Expo 2015 S.p.a. website; Camera di Commercio; Region Lombardy and Municipality of Milan documents regarding projects and initiatives.</p>
<p>Italian laws</p>	<p>As we shall see in the chapter devoted to the results of the analysis, Expo 2015 has prompted the Italian authorities to create a legal system that could establish the governance of the event and at the same time ensure its success. For this reason, it is necessary to identify and understand the laws that have been developed over the years in relation to the exposition of Milan.</p>	<p>“Gazzetta Ufficiale”; “Corte dei Conti” analyzes of expense and Expo related projects.</p>
<p>Report on infrastructures and projects related to Expo 2015</p>	<p>Using documents released by Region Lombardy and related organizations (like OTI) we had collected information about ownership, costs and progress of infrastructural projects related to Expo.</p>	<p>OTI, Corte dei Conti; Region Lombardy, Municipality of Milan, Consortia and private companies involved in projects implementation.</p>
<p>News and Press Releases of Expo 2015 S.p.a. and other relevant actors.</p>	<p>Through these documents, it has been possible to better observe overall evolution of Expo under many aspects: projects developed, plan, and laws evolution. Moreover, in Expo related news more attention is dedicated to critical issues of Expo development (e.g. citizens opposition, political issues in the governance) and to parallel initiatives related to Expo (e.g. local touristic and business initiatives).</p>	<p>Italian newspapers and press reports generated by “Assolombarda” and Camera di Commercio.</p>
<p>Academic papers and researches analysing Expo 2015</p>	<p>Those researches had been useful for understanding the organization of the event. Moreover, they have provided to us relevant analysis regarding the impact of the Exposition.</p>	

Table 24: Documents Used in the Documentary Analysis

4.2 Interviews

Structure and Objectives of Interviews

Once that the empirical analysis of the case had been concluded, we started with the analysis of sub-projects. Our idea is to analyze heterogeneous projects in terms of:

- Actors: we identified projects managed and executed by actors belonging to internal and external side of Expo 2015 central organization;
- Scope & Topics: we studied projects that are very heterogeneous in terms of sectors and kind of activities;
- Scale & Impact: we tried to analyze projects that for budget, number of actors involved and expected impact (size of impact, geographical location, time of impact) are different from each other.

The identification of the projects had been initially based, as already mentioned, on the news and on the documents collected during the documentary analysis.

To gather the input for our analysis, a significant number of interviews with actors involved in various sub-projects were conducted, on the base of the prepared standard survey. The questions asked were referred to the project classification described in the framework. The structure of the questionnaire has been the following:

General Information About the Project:

1. History of the project
 - 1.1. Origin of the project
 - 1.2. Initiators
 - 1.3. Brief timeline of events of project development
2. Activities of the Project
 - 2.1. Short and Long term objectives of the project and expected legacy
 - 2.2. Activities made and resources employed (e.g. budget, personnel etc.)
 - 2.3. Scope of the project (“size” of the project, in terms of geographical impact, number of customers etc.)

Governance and Actors of the Project:

1. Main actors involved and decision-makers
2. Eventual project partners
3. Organizational structure of the Project
4. Budget and financiers

Relationships with other Projects and the Expo:

1. Common actors with Expo 2015 S.p.a. or with other projects and initiatives related to Expo 2015 (paying particular attention to common decision makers)
 2. Partnership with other projects related to Expo 2015
 3. Relationships among objectives, activities and scope of the project with other projects related to Expo 2015
-

Table 25: Scheme of the main topics discussed during the interviews

Moreover extra-questions regarding the general state and perception of Expo had been asked, in order to enrich the analysis of the case and to collect eventual discrepancies between internal perception of Expo Milan 2015 and official documents information. These questions had mainly been about:

- Progress of Expo 2015;
- Information and perception of overall Expo 2015 organization and results;
- Perception about the possibility of Expo 2015 to effectively reach its objectives;
- Weakness and problems of the actual Expo 2015 organization.

The Interviews

The meetings made in order to complete the interviews had been 12, while the number of actors involved had been 15. During these meetings, 12 initiatives of different types had been discussed.

This part of the research was fundamental in order to understand the projects developed around Expo, their goals and their impact. The results of the analysis are then important for the development of the classification system, especially if coupled with the Expo 2015 documentary analysis.

Moreover, the added questions to the different actors can give an internal view on certain topics of the documentary analysis (governance, goals, stakeholders, projects progress) enriching then also that part of the analysis.

4.3 Data Collection and Analysis

We can divide the data analysis in three steps.

In the first step, documentary analysis data were singularly collected, ordered and assessed. Documentary analysis results have been collected in a timeline form, which have been the starting point of the analysis. In this timeline we have simply listed all relevant facts and information coming from documents and news regarding Expo.

This data have then been rearranged according to relevant topics, and in particular we looked at:

- General information about goals and activities of Expo 2015;
- Economic data about Expo 2015;
- Projects of Expo 2015;
- Governance and organizational structures, actors and stakeholders of Expo 2015.

Analyses have then been performed on the specific topics, as it has been possible to observe in the introductory chapter of the case study and as it will be possible to observe in the chapter regarding empirical results.

Regarding analysis of Expo characteristics (theme, goals), economic impact and overall progress of the event and its projects, the analyses have been based mainly on a comparison of information coming from different sources and from different moments in the development of the Exposition.

Moreover, analyzes already performed on this information from relevant sources and researches (e.g. Locatelli & Mancini on Expo 2015 forecasts of visitors) had enriched this data analysis.

Regarding other topics, like governance, the analysis was instead shaped on the base of literature research on governance models, in order to give a solid structure to the analysis.

In the second step, we collected the interviews data, according to the questionnaire showed above. We developed a short summary of the interviews (that will be presented later, in the chapter of results) highlighting the information that we obtained from each contribution. The information presented in the report refers both to the answer to the questionnaire, both to other topics discussed during the interviews in many occasions.

Thanks to this information, it has been possible to hypnotize a classification of relevant Expo-related projects.

The third step of the analysis consisted in merging the two researches in order to enrich the final results. In particular, documents from documentary analysis have been used in order to enlarge the number of projects presented in the classification and in the project map, which are the main output of our research.

The insights about Expo 2015 organizations and development from the actors interviewed have instead been used to confirm and deepen observations done during the documentary analysis, in particular regarding issues and weaknesses of Expo 2015 in terms of results and organization.

The complete results we will be showed in details in the fifth chapter.

5 Framework

5.1 Introduction

The analysis of the literature has been carried out looking mainly at four areas:

- Mega Projects characteristics and issues;
- Mega Events characteristics and issues;
- Comparison of the previous two entities, highlighting common elements and points of differentiation;
- An analysis of Project Management in terms of tools, approaches, results and how this discipline and what kind of branches of Project Management can be applicable for Mega Projects and Events.

This first part of the work has helped us in identifying on which areas of the research it could be interesting or valuable to address (see conclusions of the literature). From these observations, it has been possible to hypothesize how some of the issues affecting Mega Events can be overcome or at least limited. The solution that we have chosen is a managerial model based on multi-project composition of Mega Events, that we suppose, can be potentially useful for solving some of the main issues (which have been highlighted in the literature) affecting Mega Event Management.

In this chapter we would like to highlight what this model is expected to accomplish, how it has been developed from the beginning (hypothesis, assumptions, significant researches used) and we would also like to specify how previous literature supported the development.

In this chapter we present how the model was shaped and on which insights and principles it has been developed, before to test and assess its usefulness with the results of the empirical analysis, step of the research that is presented in the chapter fifth of the document.

5.2 The Theoretical Bases of the Model

Starting from the literature results, we have observed how Mega Events and Mega Projects have many points in common, but also many significant differences. Since the research that we are conducting has the aim to develop a model for the analysis and the management of Mega Events, with a particular focus on the planning phase, and since this model will be based on some of the elements that differentiate the most Mega Projects from Mega Events, the first important assumption to be made is that we would like to consider Mega Events as a separate entity with defined characteristics and constituting elements.

In fact, as Mega Projects and Mega Events are similar because of complexity, long planning and development and high number of actors, there are however some aspects that strongly differentiate these two entities, and in particular we are referring to:

- Heterogeneous Multi-project nature (according to the literature Mega Projects are also composed by sub-projects, however they tend to be heterogeneous among each other, as noticed by Locatelli et Al., 2012);
- Legacy of the event (especially in contraposition with the short term implementation),
- Governance of the event;
- Topic-guiding theme of an event.

These elements are fundamental in delivering successful event and for this reason from one side they are constraints and added element of complexity to be considered in the development of the event, from the other side they give the possibility to expand dimensions of analysis to Mega Events. In the following table we would like to schematize these elements, in order to clarify their importance and how they affect the development of event, but also in order to show which added value an analysis considering these elements can deliver:

<i>Issue</i>	<i>Issue composition</i>	<i>Analysis Added Value</i>	<i>Authors</i>
Multi – Project Nature	Basically, the main difference here from Mega Projects is that sub-projects are much more heterogeneous in Mega Events. As it has been mentioned before the main goal of the Mega Events is to reach long lasting legacy, but in order to implement this Legacy, different projects and initiative must be developed, trying to deploy the high number of goals (which can be both event-related and non-event-related) that the Mega Event wants to develop. Therefore, here comes an issue to manage all of these projects in order to carry on the main event in the most effective way.	As observed by Locatelli et Al. (2012, the only research deepening this topic) the analysis of the multi-project nature of the event can guarantee a more complete and comprehensive view of the event: this view can be very helpful in keeping track of the development of the events in all its single components, guaranteeing an effective control over all goals.	(Locatelli et al. 2012, Lamberti et Al. 2010, Spilling 1996, O’Brien 2006)
Short-term Realization	Before the legacy and the long-term goals, an event must be implemented in the short term. The short-term deadline is the objective that enables the attraction of capital, the construction of infrastructures and the effort by local companies and associations in order to reorganize their activities in order to be able to capture benefits from the event. At the same time a successful implementation of the event is the key to reach also long term goals, as create a new image for the territory, create new value for real estate, communicate a certain message etc.	Short-term implementation is critic, as it put strong deadlines, which cannot be postponed, for the realization of projects and initiatives connected to the event: because of this stage, there is the time-pressure that differentiates Mega Events from Mega Projects. The success of the event in term of media, Tourism, proper usage of the resources and opportunities, branding value for the territory, ability of the event to deliver its message depend completely or partially on this stage. Analysing this stage is then very important because it is the stage to which the main deadlines of the implementation of the event are referred.	(Roche 1994, Roche 2000, Creazza et Al. 2012, Locatelli et Al. 2012)
Legacy Planning	Even if the short-term implementation is very important for some goals, the biggest and widest part of the success of the event depends on the legacy’s benefits after the closure. For a Mega Event, the short-term implementation	Considerations about Legacy are fundamental in planning an event, as well as in controlling its development and understanding its impact in the later stages. Many different considerations	(Chappel et 2012, Silvestre 2008, UNDES A 2012,

	<p>is an intermediate stage, an opportunity to attract capital and to stimulate projects and initiatives that must the impact in the long term. The short term and long term view, however, can be in contrast and short-term choices can limit the value created in the long term. On the evaluation of Legacy should be based the initial estimations of the events (candidature and then planning), the planning of the event, the ex-post analysis, but Long-term impact is much wider, heterogeneous and less controllable.</p>	<p>have to be made in analysing Legacy:</p> <ul style="list-style-type: none"> • Analysis of tangibility • Analysis of the long term lasting of the legacies • Alignment of individual projects' legacies with main objectives of the EXPO • Structured and coordinated analysis of short and long term goals • Structured analysis of goals in order to have a better support in estimating impact of the 	<p>Elionor 2012, Chappellet 2012, Linden & Creighton 2008)</p>
<p>Governance</p>	<p>Governance is an issue in Mega Projects as well as in Mega Events and it is explored in literature about both entities. However, in the case of Mega Events, the multi-project nature and the high number of heterogeneous goals make governance more articulated, having to consider a wider range of elements, not always under the control of central authority or organization entity. For example, in Mega Events is easier to have a spontaneous arise of initiatives and entrepreneurial activities beyond the control of central authorities that, if not coordinated, can deliver sub-optimal results or even damage each other.</p>	<p>In order to have a positive legacy outcome, there should be established proper, healthy and transparent governance:</p> <ul style="list-style-type: none"> • Identification of the main actors involved (building the map of the main entities) • Identification of main characteristics of actors. • Central board(s) composition and analysis • Analysis of stakeholders relationships <p>This kind of analysis can help in structuring stakeholder's study and in obtaining significant insights from this practice. Moreover, it can help in better structuring the organization of the event in terms of role, responsibilities, norms and relationships.</p>	<p>(Burbank 2001, (MacRury & Poynter 2009), O'Connor 2013)</p>
<p>Theme Selection or Guiding theme of an event</p>	<p>Both Exposition and Sports Events are accumulated by a guiding theme. While for a sport event (or Mega Event) the theme is already embedded in the event (Olympics consider a wide range of sport, FIFA world-cup is about football, etc.) for expositions topic is a choice to be made in candidature phase. In every case, however, the topic is fundamental in attracting visitors, sponsor and media attention, so it must be managed wisely, integrating it with other goals and activities characterizing the event.</p>	<p>According to the literature theme of the event is crucial the initial involvement of actors and countries:</p> <ul style="list-style-type: none"> • Alignment of the topic with main world social trends; • Weaknesses and strength of the topic selected - Topic potential • Coordination of other goals and initiatives of the event with the central topic • This kind of analysis can 	<p>(Linden & Creighton 2008, Damm 2010)</p>

Table 26: Key distinguishing characteristics of Mega Event

Concluding this assessment of Mega Events elements, the characteristics on which our model will be built are:

- Multi-project nature;
- Legacy of the event - especially in contraposition with the short-term implementation;
- Governance of the event.

Guiding theme of the event, although very important, will not be considered as a pillar of our research, mainly because of the following reasons:

- It is not applicable for all of the kind of events;
- The theme selection is usually performed at the earliest stage of the candidature.

In both cases, then guiding theme can be seen as a sort of constraint underlying the management of the event. This constraint affects tourism (kind of visitors, typology and timing of flows), typology of initiatives developed, partners and sponsors involved. However, we assume, from the observation of literature about Sports Events, Exposition and from transversal literature about Mega Events, that the theme does not have significant impact on core managerial planning practices and tools used in event management and applied at different stages. Therefore, it is far from the actual focus-stage of our research and we will assume it as a constant in the building of the model. Obviously, since this is an assumption that we are not able to strongly support with literature contributions, in the empirical part we will study also the topic of the event, trying to understand its impact on governance, projects and in general on managerial dynamics.

Now we would like to introduce the issues that we want to tackle: those are the problems of Mega Events that we consider (and that are in general considered in the literature) particularly significant. Moreover, we will list also some issues that will be tackled more indirectly, as a result of an overall improvement of the comprehension of the event.

We recall these issues from the literature (which are the main problems in facing them, how the literature deals with them) and we drew hypothesis of how a model focusing on multi project nature (the main objective of our research) of events can improve management of these aspects. The topic of multi-project nature is central in our research and our model-development, but it is important to say that, in order to consider all the important elements characterizing Mega Events, it is studied not as “stand-alone”, but combined with the topics of goals alignment (short and long term – legacy) and with governance issues, fundamental from the organizational point of view. Said that, the managerial and organizational aspects ad issues of Mega Events management that the models tackle (directly or in-directly) are:

- *Goals Definition and Alignment*: This topic regards the strategic setting of the event, the analysis of problems and how to solve them, the definition of the Event objectives and the analysis of possible scenarios and alternatives;
- *Project Planning*: With project planning we mean how, objectives are deployed and how activities are organized (which resource are allocated, how plans are developed, which deadlines are set);

- *Stakeholders*: With stakeholders we mean all the actors directly or indirectly involved in the event. The dimension tackles stakeholder analysis and how stakeholders are managed during the Mega Event development;
- *Governance*: With governance we refer to the organizational structure of Expo 2015, analyzed according to actors composing it, their roles, their power and the relationships among them;
- *Legacy Management and Planning*: In this dimension, we want to identify the Legacy of the event and to understand how it is planned and who is involved in this process;
- *Project Control*: We want to understand how Mega Event development is controlled, which means how performance are evaluated.

The reasons why we state that a project-oriented model can help in facing these issues come from the literature, where different authors observe causes, consequences and interrelations among the above listed elements. Obviously, one of the aims of the following chapters (empirical analysis) will be to understand if these expectations about the potential of the models are realistic, realistic under certain conditions or completely unrealistic.

One of the points of strength of the model is that it should be developed according to the goals of the projects. This can happen if the goals are well defined, however as it is often highlighted in the literature, the problems that the Mega Event wants to solve and the goals the Event wants to reach are not defined at all, or not explicitly defined (Priemus et Al. 2008, Priemus 2010, Phi et Al. 2014), because of scope complexity (long and short term goals, heterogeneity of objectives) as well as for “political” reasons (need to coordinate different goals from different stakeholders). A model based on the observation of sub-projects will not solve this issue, but it can be a useful instrument in addressing it more efficiently: in particular, we think that identifying the goals of a Mega Events and relating them to projects and initiatives needed to realize them can be very useful:

- In having a comprehensive view of goals not only the main event, but also each of the sub-project, in order to understand their alignment with the main goals of the main event;
- Having more realistic expectations about results;
- Helping in better understanding costs;
- Helping to understand relations among goals and projects (one goal is needed to realize another one or they are competitors?);
- Helping in evaluating alternative solutions in order to achieve the same goal, through a better comprehension of the priority and of the importance of the single sub-project at the moment of selection, during the planning, but also at the moment of the urgent decision, making close to the implementation of the main event.

This last possibility of performing scenario analysis and of developing alternative solutions can be very significant, since it is seen as a critic point in many researches about different topics: Project Management, Programme Management, Mega Event and Project Management (Priemus 2010, Reilly 2004, Frame 2002, Pellegrinelli 1997).

The previous considerations can, as a consequence, help in other issues with a ripple effect:

- *Strategic Setting*: the main issues in Strategic Settings regard the ability to find proper managerial approach in organizing the event (Collyer & Warren 2009, Slotman 2007,

Geraldi 2008 shows examples of Project Management research trying to deal with complex and dynamic scenarios like a Mega Event) while maintaining the big-picture regarding the variety and complexity of composing elements of a Mega Event (Bramwell 1997), A sub-projects-based management tool able to connect goals and initiatives can overcome some of the typical limits of Project Management in complex and dynamic setting, avoiding a too accentuated stress on planning & control and planning executions (Koppenjian et Al. 2011, Marques et Al. 2010, Collyer & Warren 2009) and focusing more on goals accomplishment;

- *Planning and Control*: as stated by Locatelli et Al. (2012), sub-projects can be the optimal level of control for Mega Events development, not being too high-level but not even losing too much the overall vision focusing in the management of individual projects. Moreover, better initial forecast and better goal settings can help in the development of better plans, as already observed. Merging these considerations we can conclude that a plan based on sub-projects can give the right information to central controller, enabling better monitoring and control of results while letting right level of flexibility and autonomy to managers of different projects, who have a higher expertise in managing specific typology of projects and in this way can be more effective;
- *Stakeholders and Governance Settings*: those are different issues. The first regards the possibility to identify all the actual and potential stakeholders and to manage their needs and goals (Burke 2006, Phi et Al. 2009, 2014). The latter regards the definition of roles, responsibilities and potential impact which can be generated by properly chosen people at different levels of Event management, avoiding dangerous ambiguity or overlapping of roles that should be separated (controllers and promoters, for example: Pillay et Al. 2009, Flyvbjerg 2003, 2007). Said that, the project-based model can address both issues, enabling an easier identification of stakeholders and easing the definition of the roles that they can have in Mega Event development. This can be accomplished by better understanding goals and how they are deployed and so giving more clear and structured information about who should execute a project, who should have a control role and who can potentially help or harm the final results. This can be replicated also at a higher-organizational level: a wider and more comprehensive vision of the Events and of who will join single projects can help in defining central organizational and control role, as well as to understand who should be involved from the beginning and who can potentially be affected or to affect the Event.

We also claim that our model, expanding the research (this would not be part of the scope of our analysis and our thesis, but it can be an interesting development) could address other relevant topics:

- *Initial forecasts*, for which authors identified many causes, from lack of data and model to political and economical interests guiding and biasing results. The consequences are selections of the wrong project, wrong allocation of resources, wrong definition of priorities, poor planning and many others (Flyvbjerg 2003, Flyvbjerg 2007). A model based on multi-project nature of Mega Events can help in this field by structuring the analysis of activities that will be necessary to implement the event and to fulfil all its goals first of all, highlighting relationships among goals, projects and activities: this can be very important in having, from the beginning, a comprehensive view of the projects, of all its costs, of their importance for the main event implementation and for desired legacy

achievement, of the variety and complexity of activities. Having a more clear view of existing composing elements of the whole Mega Events will also help in identifying more tailored models and frameworks for forecasting specific results (tourism, environmental impact, workforce needed in a specific project typology) without losing the “Big Picture”;

- Risk Management: in Mega Events poor risk management is mainly due to poor initial analysis and forecast, due to a limited ability of understanding alternatives and interrelations among projects (Flyvbjerg 2003, 2007, Priemus 2010, Sanderson 2012) and due to a present of risks which are very different from the one of common projects and event (e.g. security, Jennings 2009, 2012, 2013, Linden & Creighton 2008, Emery 2009). This model of analysis enable a better comprehension of the overall Event from the beginning, it enables to structure the analysis of goals and activities and to understand alternatives: in this way, the model will address also many of the issues causing poor risk management;
- Ex-post analysis can receive similar benefits than the one received by the Initial Forecasts and estimations: a better and more comprehensive view of goals and activities from the beginning, with a better understanding of alternatives and a better comprehension of projects and goals interrelations can significantly help in monitoring and evaluating results (Bramwell 1997, Taylor 2005).

As claimed in the objectives and introducing the model, we paid particular attention to the planning phase. This model wants to address problems of Mega Events and all the issues will then be tackled focusing on the initial phase of the development. The reason for this choice is mainly because, as seen in the literature, the causes of the issues of Mega Events, even when these issues have their effects in later phases, can be connected to poor planning and poor initial decision-making (Flyvbjerg 2003, Flyvbjerg 2007, Locatelli & Mancini 2010, Lee & Taylor 2005, Andranovich 2001, Gursey & Kendall 2006, Priemus et Al. 2008, Priemus 2010). It is then possible to say that this phase is the one that can deliver a significant part of the final value of a Mega Event and for that it is very often studied, even if the studies conducted till now have some typical and recurring limitations: a lot of empirical observation but limited proposals of new models and tools (as observed also by Locatelli et Al. 2012), focus on specific issues losing the overall view (e.g. tourism, green issues, urban policies etc.), focus on the long-term (e.g. Elionor 2012, Chappelet 2012, MacRury & Poynter, 2009 etc.) or the short-term (e.g. Creazza et Al., 2012, tourism research), but not both.

However, our purpose is to develop a model that will not be only a planning tool but, developing it with the focus on Mega Events specific characteristics and recurring problems, it can be as well a tool useful for the analysis and the assessment of a Mega Event all along its lifecycle. Moreover, it can be a decision-supporting tool in case of a need to prioritize sub-projects and understand their importance for a whole viability of the event. This is the reason why the focus on Mega Events characteristics and issues is so important.

It is important to say that the model does not aim to solve political problems (economical elites goals, political goals, exclusion of citizens and other stakeholders from decision making etc.) that usually appear during goals definitions, strategic settings, stakeholders analysis and governance settings, and which have important consequences in planning and risk

management. However, the model wants to enable a more structured initial analysis that can, potentially, reduce room for unrealistic goals and expectations and for biased figures.

5.3 Model Development

The model is based on the multi-project nature of Mega Event. In order to do that, we use contributions not only from Project Management Literature, Events Management Literature but also from multi-Project Management literature (all the studies and the researches on Portfolio Management, Programme Management and Multi-Project Management). Even though after literature research and case study it seems obvious that the nature of the Mega Events is based on sub-project composition, among the literature contributors, only Locatelli et Al. (2012) have tried to use Programme management principles in order to improve Mega Events management, so their research will be seen as a reference point during our model development.

With regards to Locatelli, in particular, we consider very interesting the possibility to account a Mega Event as a Programme, given the characteristics of Mega Events and their sub projects in term of goals, heterogeneity, resources: Mega Event is not a Project *Portfolio* (similar projects characterized by similar theme and resource used, Pellegrinelli 1997, Hans et Al. 2007), it is not a Project *Hearthbeat* (because of this kind of structure is too much related with classical business organization and its internal change management, Pellegrinelli 1997) and it is not a Project *Multi-Project* (since this structure means that different projects are merged only in order to better use shared resource, Patanakul & Milosevic, 2009). The use of Programme definition is instead correct, since the idea of a coordinated set of project addressed to “obtain a benefits and control not available from managing them individually” (PMI 2008) is the one that better adapt to Mega Event.

However, being Locatelli’s study the only one based on multi-project nature of Mega Event, we think that it will be very important for our research also to establish other principles and assumptions in studying Mega Events from sub-projects point of view. Again, starting from Locatelli and from Programme Management research (Van der Merwe 1994, Pellegrinelli et Al. 2007, Payne & Turner 1999), since most of the sub-projects in Mega Events are heterogeneous, the first important step in managing a Multi-Project environment is to classify the projects and to cluster them according to their characteristics, in order to be better able to face a scenario characterized by high number of heterogeneous projects, like for Mega Events.

Our classification is be based both on the contribution of the previously mentioned studies (in particular, Locatelli et Al. 2012 & Payne & Turner 1999), which developed their own classification for sub-projects in different settings (Locatelli et Al. developed a classification of sub-projects of Expo 2015, Payne and Turner a general framework for classifying sub-projects in Programme Management), both on official Expo documents (Candidature Document, 2008) which gives a rough classification of sub-projects in Expo Milan 2015 settings, classification that can easily be generalized for Mega Events.

Moreover, a visualization tool will be part of our model. This second tool is coupled with the classification model and it has been built and tested with it on the real case application (chapter five). This tool can be helpful in order to better understand the positioning of sub-projects according to the importance on the project map of the main event.

5.4 Subprojects Study

Starting from the classification given in the Candidature Document, where we have Direct and Indirect Projects, we can see that there are different level of importance for the projects managed during an event: some of them are essential for the realization of the event (e.g. Exposition Site Construction), other are instead project which can enhance or decrease the value of the event and that can generate important effects on territories and citizens, but which are not fundamental for the feasibility of the event (e.g. infrastructural projects that can ease the connection between event locations and some strategic points).

This distinction is significant because these projects are managed in very different ways according the category their belong to: different authorities will manage them (direct projects will be manage by the temporal company that will be responsible for Expo), different financing solutions will be used (only costs of Direct sub-projects will be part of the official budget of Expo, while other project will be included in the regional, national budgets, etc.).

Looking instead beyond the official documents, it is possible to see than Mega Events generate a lot of surrounding projects which are not fundamental for the event success, but which are important because they enable citizens and business in obtaining a share of the positive effect of the event. These projects are not mentioned in official documents, and usually there is not a central control to coordinate them. However, authors like Locatelli et Al. (2012) Spilling (1996) and Hall (2006) observe their development related to the theme of entrepreneurship in Mega Events.

Said that, it is easy to draw a first classification of projects, which can be very useful also as working definition:

- *Essential Project: group of projects that has dramatically impact on the feasibility of the main project.*
- *Supporting Projects: projects which influence success of the main project but which are not fundamental for its viability*
- *External Projects: projects developed and managed externally from the main event development, which arise in order to satisfy local and specific needs. From their point of view, the project or the event is seen as an opportunity to exploit.*

One of the purposes that we tried to accomplish with the empirical analysis is to understand how these project categories are connected to each other and with the overall Event, in term of goals, resources and governance.

To clarify the short description gave above, here we will see how these three categories are deployed in the case of Expo Milan 2015:

- *Essential Projects: Site construction, personnel research, Logistics and operations during the event, event organization, core marketing activities.*
- *Supporting Projects: infrastructural projects (enlargement or improvement of the transportation system, construction of infrastructures functional to the activities of companies and organizers) supporting marketing (promotional) activities, IT-supporting tools (applications, web-pages, etc.)*

- *External Projects*: all the other projects that spontaneously arise in order to exploit the opportunities given by Expo (increase economic activity; enhance local realities, to raise awareness with respect to certain issues etc.).

According to Mega Projects studies (with the exception of really few researches), during the development only *Essential Project* and *Supporting Projects* are taken into account. However, we claim, founding our hypothesis on the researches of Spilling and Hall on entrepreneurial system, necessary to deal also with *external projects* that represent the major effort of community in “joining” the Expo and in exploiting man of the expected benefits. Since this issue has not been faced before, one of the focuses of the research will be in disclosing the external project as an existing separate entity.

The study of external project can indeed be very significant for different reasons:

- External projects are fundamental to extend and spread the positive economic impact of an events;
- External projects can be important in managing and spreading the awareness for the topic that the event wants to manage;
- External projects can be fundamental in attracting more tourists;
- External projects, as they can have a positive effect reinforcing activities of the main event, they can also have negative effects: they can damage the main event (e.g. ruin the brand of the event or the perception, organized protests under the huge media visibility of events are the best examples) as well as damage other projects (competitor projects in specific fields, like tourism, can “steal” customers to each other);
- External projects use resources that, otherwise, could be used in a more efficient way.

For these reasons, it is necessary to explore this dimension of Mega Event and to propose a formal study and a structured classification of sub-projects. As said before, Programme Management studies will help in developing a more articulated classification system (Van der Merwe 1994, Pellegrinelli et Al. 2007, Payne & Turner 1999): usually, in this research, size and scope of the projects are the main dimensions for project classification.

Our classification will then consider the main categories, which have been selected basing on the literature research and case study analysis.

However, as already claimed, multi-project structure is the main part of our focus, therefore, we propose to connect it with goals of the event and with governance of the event, as these (multi-project nature, long/short-term goals, governance) have been identified as the fundamental elements drawing Mega Events as separate entities. Our classification will then include these aspects as well.

Concluding, the characteristics of a separate subproject will be related to:

Actors: The main decision makers which are	Public institutions Private (profit/non-profit) entities
Scope: The main activities to	Technological research Construction project (development, building, restoration)

implement the project:	Networking project (development of the relationship among actors involved) Marketing (ads, campaign, promotion) HR (stuff, personnel) Software development (IT sector) Coordination
Scale: An indicator according to which the impact of the project can be estimated. This indicator will be developed combining:	Budget Number of shareholders Dimension of the area (physical, digital, etc.) on which the project will have its impact
Topics: The area(s) in which the project is developed:	Transportation and Accommodation Energy and Environment Funds (financial) Agriculture Health Art and culture Social sustainability
Legacy of the project	Temporary (on the time while the project in on going) Permanent (oriented on the post-event time)

Table 27: Characteristics of Sub-Projects

Actors and Scale will be important in order to understand the dimension of the sub-project studied. Scope and Topics will help in understand its content, in terms of expertise required and in term of complexity. Legacy of the project, together with the scope will help in understanding goals of the project and the range of its impact.

Moreover, we would like to introduce another classification: since we claimed that these sub-projects are important not stand-alone, but as a part of the Mega Event, is important to connect them with each other and with the overall event. Then sub-projects will be clustered on the base of their interdependencies, and in particular we look at relations with objectives of Expo

- Acting on Short Term Objective - Event Realization;
- Acting on Short Term Objective - Tourism, Territory and Economic Effects;
- Acting on Long Term Objective;
- No direct impact on Expo's Objectives,

These classifications will end up in the definition of clusters of projects, each one will help in identifying characteristics and optimal management. According to the information obtained in the previous two points to build the classification of discovered sub-projects based on the characteristics in order to demonstrate importance for viability of the main event, priority and complexity of implementation.

Type of Project	Essential Supporting External
Scope: Main activities to implement the	Technological research Construction (development, building, restoration)

project:	Networking (development of the relationship among actors involved) Marketing (ads, campaign, promotion) HR Software development (IT sector)
Topics: The area(s) in which the project is developed:	Transportation and Accommodation Energy and Environment Founding (financial) Agriculture Health Art and culture Social sustainability
Impact Estimated considering:	Temporal Impact: according to the period of the legacy lasting (short or long term); Number of “customers” coverage: amount of people, companies able to benefit from the project realization; Spatial Impact coverage (Geographic area on which the initiatives work) It is important to say that there is the possibility that these dimensions affecting on <i>Impact</i> will be evaluated separately.

Table 28: Possible Projects Classification

In order to systemize the data obtained from the analysis of the sub-project case study a visualization tool that will demonstrate and explain the nature of the alignment of the sub-project objectives with objectives of the EXPO has been proposed. In particular, the alignment of short-term objectives and long lasting legacy will be explored.

The tool is based on a matrix, where in the x-axis it is possible to see how the project generate long or short term effectiveness, according to which are the objectives of Expo 2015. In the y-axis, instead, the importance of the projects for the implementation of the event will be assessed:

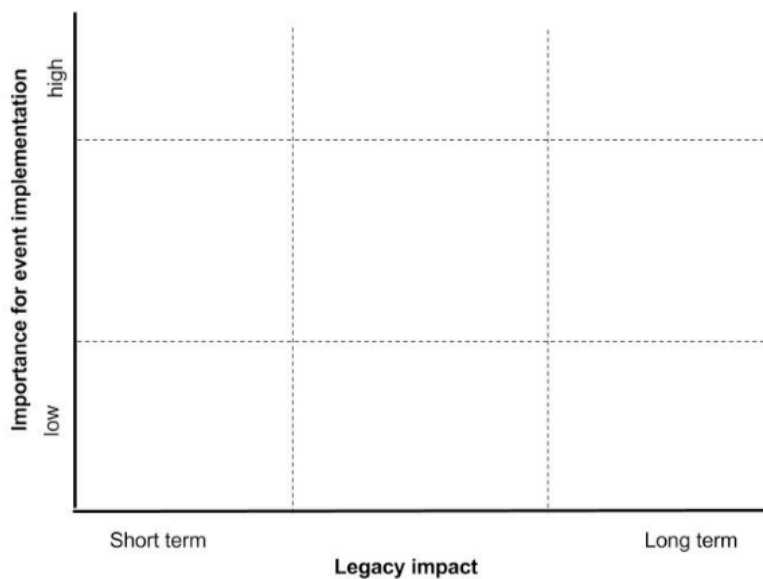


Figure 7: Matrix used for visualization tool development

We claim that this tool, coupled with the classification system, can be effective in supporting Mega Event management. As just said, it will be very useful in understanding the alignment of objectives and initiatives.

The instrument can also be useful in providing a big picture of the event that is able to overcome the trade off between short and long-term goals that characterizes Mega Event development. Moreover, if coupled with data regarding the projects (budget, progress of the single projects, actors) the instruments can be fundamental in having a full, high level control of the projects, considering also relationships among sub-projects (goals, actors).

For the realization of the model, the two-steps empirical analysis described in the previous chapter has been necessary. This analysis is performed on the case study Expo Milan 2015 and multiple sub-projects is necessary in order to test this theoretical settings, to adapt it to the real world and to extract an added value from this analysis

As it has been found in the literature, the data collection on the case studies will be qualitative. This is a choice due to the fact that the research that we are collecting is still explorative, because there is a limited number of researches that investigate this topic. Moreover, none of them came to the mathematical model yet. Anyway we think that a quantitative data analysis will be feasible only when a structured way of analysing Mega Events from sub-projects point of view will exist. Our research, in that sense, can be the first step, one of the building blocks, on the way of future mathematical model based on sub-projects network.

5.5 *Remarks on the Framework of Research*

Summarizing what just said, our research wants to deliver some instruments that can help in overcome several significant issues in Mega Events management.

The starting point of the model design is the literature, where we identified:

- Issues and characteristics of Mega Events;
- Issues and limits of Project Management and its tools in managing large and complex projects;
- “Dark spots” of the literature and the practices, which means areas of Mega Events management and Project Management that could be potentially useful in improving existing practices.

According to the findings of these analyzes, we decided to address the issue of multi-project composition of Mega Events and to use this issue as a base for the model development.

The remark that we want to make here regards the fact that, except for Locatelli et Al. (2012) it is almost impossible to find in the literature examples of instruments and tools for Mega Events management, as it is almost impossible to find research based on multi-project composition of Mega Events.

In this sense, the research we are conducting is very innovative and the empirical analysis, which results are presented in chapter five, is essential to test and assess the value of the model presented and the validity of our conclusions from literature analysis, on which the model is based.

6 Results of the Research

6.1 Documentary Analysis

6.1.1 Expo 2015 – Decisions, Governance & Projects

In order to fully understand Expo 2015, its issues and its internal dynamics we need to use public documents, official Expo documents, data and news but, since Expo 2015 has been developed along seven years, it is not possible to make an adequate analysis building a static image of the Exposition.

We have then developed, in order to improve our comprehension of Expo Milan 2015, a timeline of main events and decisions, including also some considerations on the Exposition and its development from relevant actors.

This timeline, together with the previously performed analyzes of literature and of costs and impacts of Expo and with the following sub-project analysis, helps in understanding the event, its actors, the projects performed, the progresses in its development and all the relevant issues.

After the timeline, we will draw also some observation on the progress of Expo 2015, its governance and on the general issues that are affecting Expo 2015 (again, an important part of the analysis will be based on the literature findings).

As said in the Methodology chapter, this section will be based on news and official documents.

We will here present a shorter version of the timeline, which does not face in details the topics of governance and projects development, that are tackled in details later, but that tries to mention all the important issues and aspects emerged during the development of the Exposition.

At the end of the timeline a brief scheme will highlight relevant topics, while projects and governance topics will be deepened through separate analysis.

6.1.2 Timeline of Main Decisions

The Origins of Expo

The Italian effort in order to host and to successfully develop Expo 2015 started in 2006, when the Government (at the time, Prime Minister was Romano Prodi: during the development of Expo many different parties and alliances will occupy governmental positions) gave its full support and availability to support the candidature of Milan, as mentioned in the 6th Chapter of the Bidding Committee

In order to effectively support Milan, an ad-hoc committee was established. The “Bidding Committee” (from now it will be called “BC”), had been active from 16 October 2006 to support Milan’s candidature. It was composed by City of Milan (Municipality of Milan, from now referred as “MoM” in the document), the Province of Milan (“PoM”), the Lombardy Region (“RL”), the Milan Chamber of Commerce (“CCIAA”), “Ente Autonomo Fiera Internazionale di Milano” (“FM”), the President of the Council of Ministers, the Ministry of Foreign Affairs (“MAE”) and the Ministry of Foreign Trade (“MCI”).

As written in the Chapter 6 of the Candidature Document, the Committee “proposes to promote, sustain and present Milan’s bid to host the 2015 World Exposition (“Expo 2015”) to the competent national, European and international authorities and co-ordinate and prepare the necessary documentation to allow the BIE to make its assessment. The Bidding Committee is administered by a Managing Board, formed of a representative from each founding partner (president/chairman or his delegate), while the other bodies are the President, the Executive Secretary, and the Treasurer.”

The initial commitment of the government had been really important in determining the assignment of Expo 2015 in Milan, but we will see that the government and the Italian authorities in general have always tried to maintain a constant focus on the event, having a central role in the decision-making process and in determining the governance of Expo 2015.

Expo 2015 as a “Grande Evento”: the first laws about Expo

The 30th of August 2007 Expo 2015 is declared “Grande Evento” (“Big Event” or “Major Event”, from now “G.E.”) by the Italian Prime Minister Silvio Berlusconi ¹⁹. This, in term of governance, is a very important step, since in this way the organization “Protezione Civile” (“Civil Defence”, from now on “P.C.”) is authorized to take control of the management of the event by appointing Commissioners and Delegates who, in order to complete the work in a short time, are allowed to bypass laws relating to cost controls (no intervention of the “Corte dei Conti” - “Court of Auditors”, from now referred as CdC- according to the law 90/2008, as required by the traditional public projects development process) and regarding urban planning and environmental issues (Law 225/1992 and Law 401/2001).

The declaration of Expo 2015 as “GE” occurred even before the adjudication of the event to Milan, which happened the 31st of March 2008, winning the nomination against the Turkish city of Izmir ^[1].

The day after the adjudication of the event (1st of April 2008), the Bidding Committee began “Planning Committee” and its role began the one of planning and managing any activity necessary in order to develop the event. The committee stopped its activities and it had been released only when Expo 2015 S.p.a. was formed (CdC, 2013).

However, since the beginning governance settings of Expo have not been fully stable. Following a series of scandals and widespread criticism about how the “PC” had managed some major events ^{20,21,22}, the Italian state has carried out a series of

¹⁹ http://www.governo.it/Presidenza/DICA/expo_milano_2015/presentazione_expo.html

²⁰ <http://www.ilgiornaledellaprotezionecivile.it/?pg=1&idart=2071&idcat=1>

²¹ <http://www.radicali.it/contenuto/governance-emergenziale-1-ultima-faccia-dellapartitocrazia>

²² <http://www.blitzquotidiano.it/politica-italiana/scandalo-protezione-civile-bertolaso-e-isuoi-amici-le-immagini-255667/>

measures for the re-organization of “PC” and management of major events ²³. The criticisms were due to the fact that the system of “GE” had been abused over the time to manage in a non-transparent way a large number of projects and events in the Italian territory over the years.

In any case, as it will be possible to see in the following paragraphs, extraordinary powers and the possibility to overcome normal authorization process will still be attributed to the leading authorities in the Expo in order to speed up the development process of the event.

*Budget of Expo
and the first
Governance
Laws*

Another important step for the determination of the governance of the event occurred the 25th of June 2008, with the Decree Law (“Decree Law” will be abbreviated from now with D.L.) of 25th June 2008, n. 112 converted into Law 6th August 2008. According to this (art. 14) ²⁴:

- The Italian Government authorizing the expenditure of € 30 million for 2009, € 45 million for 2010, € 59 million for 2011, € 223 million for the year 2012, €564 million for the year 2013, €445 million for the year 2014 and €120 million for the year 2015. The first €4 million will be provided the 30 December 2008 to Expo 2015 S.p.a..
- The *pro-tempore* mayor of Milan (in that moment, Letizia Moratti), with no new or increased burdens on public finances had been appointed as “Special Commissioner” (COSDE). The role will be to supervise, manage and speed up the urgent preparatory work. The role of COSDE is to facilitate and improve the candidature of Expo (Corte dei Conti, 2013).

A step further in constituting the governance of Expo took place in the end of 2008. According to DPCM of 22 October 2008, the governance of the event was supposed to be organized in the following way ^{19,25,26}:

- “Commissario straordinario del governo” or “COSDE” (The Special Commissioner of the Government).;
- “Commissario Generale dell’Expo Milano 2015” (The General Commissioner of Expo, “CGG”).
- “Commissario Generale di Sezione per il Padiglione Italia” (The Commissioner General of Section for the Italian Pavilion, “CGSPI”). ;
- “Commissione di Coordinamento per le Attività Connesse All’Expo Milano 2015” or “COEM” (The Coordination Commission for the activities related to Expo Milano 2015;

²³ <http://www.gazzettaufficiale.biz/atti/2012/20120113/012G0081.htm>

²⁴ <http://www.camera.it/parlam/leggi/081331.htm>

²⁵ <http://milano.repubblica.it/dettaglio/expo-ecco-il-testo-del-decreto/1549936/1>

²⁶ http://www.governo.it/Presidenza/DICA/expo_milano_2015/normativa_expo_2015/DPCM_22_ottobre%202008.pdf

- The Management Company “(So.Ge.) Expo 2015 S.p.a;
- Il “Tavolo istituzionale per il governo complessivo degli interventi regionali e sovraregionali” (The Institutional Table for the Governance of the Interventions Regional and Superregional).

*The Instability
of the
Governance of
Expo 2015
across the
years*

The 1st December 2008 the constitution of Expo 2015 S.p.a. occurred, according to Law 112/2008 ^[7]: the President of Expo 2015 S.p.a. is Diana Bracco, appointed by the government and that will represent the CCIAA (10 per cent of the shares). Angelo Provasoli was instead appointed by and represents the Ministry of Economy. The MoM (20 percent of the shares) indicated Paolo Glisenti (collaborator of the Mayor, Letizia Moratti). The RL (20 percent) had appointed Paolo Alli, (head of the Bureau of governor Roberto Formigoni). The PoM (10 percent) had appointed Enrico Corali.

The CEO had been appointed April 9, 2009, Lucio Stanca ²⁷. In addition, on the same meeting of the board of directors, Lucio Stanca and Leonardo Carioni have replaced the retiring Paul Glisenti and Angelo Provasoli.

The shareholders of Expo 2015 S.p.a. are in this moment:

- Ministry of Economy (40%)
- The Chamber of Commerce of Milan (10% of shares);
- The City of Milan (20% of shares);
- The Lombardy Region (20%)
- The Province of Milan (10 per cent)

It is important to say that this configuration had changed several times till January 2014 (our time-span of analysis). While the shares had been constant (even if at a certain point the willingness of RL to divest its part has emerged, as will be seen in the continuation of the timeline), it had been possible to observe several changes of role ^{[9][10]}:

- Due to disagreement with president Bracco, Lucio Stanca left the role of CEO, which will be assumed by Giuseppe Sala, appointed general manager July 1, 2009 and then CEO on July 20 2009 ²⁸.
- April 29, 2009 Expo, Fabio Marazzi was appointed as the new representative of the Region on the Board replacing Paul Alli, who resigned on April 28 by the Board of Directors o Expo for incompatibility (appointed Regional Secretary, with responsibility for the implementation of the program and Expo) ²⁹.

²⁷ <http://www.informazione.it/a/D372FB0E-490E-4180-B71BA4475EDBA0A8/EXPOASSEMBLEA-NOMINA-STANCA-E-CARIONI-ANTICIPATO-CDA-AGI>

²⁸ <http://www.impresacity.it/news/10253/expo-2015-giuseppe-sala-e-il-nuovo-direttoregenerale.html>

²⁹ <http://www.milanotoday.it/economia/expo-fabio-marazzi-nuovo-rappresentante-dellaregione-nel-cda.html>

- Michele Saponara was appointed in November 8, 2010 in the Board of Directors of Expo 2015 as “Head of the Supervisory Board”. He replaced Provasoli, who left the role for the sake of new assignment recruited outside the Expo. This resignation had been a heavy weight, slowing the onset of tenders^{30,31}.
- 27 April 2012 Italian Government selected as a member of Board of Directors Alessandra del Verme. Since the government didn't select is representative before the 25 of April, it has not been possible to appoint Alessandra del Verme in the Board before the 7th of May (for bureaucratic reasons and for the timing of Board Meetings): this delay of the government generated several controversies³².
- Law 194/2009 enlarged operational capacity of Expo 2015 S.p.a. giving it the possibility to take advantage of the services and infrastructures of trade fair organizations (they have to be non-profit, with headquarters in Lombardy, active at a regional level and participated by local authorities)^{33,34}.

*The Security
Settings of
Expo 2015*

By decree of the Minister of the Interior, dated December 23, 2009, it was established at the Prefecture (Local Government of Milan), the Section for the Co-ordination Committee for the High Surveillance of Great Works (CCASGO), implementing Law 166/2009³⁵. This agreements was a consequence of the 20th November 2009 Law on the necessity to define *ad-hoc* instruments in order to avoid presence of criminal organizations in the works for Expo (CdC, 2013)

January 13, 2010, by decree of the Minister of the Interior, was formalized the composition of the aforementioned Section. This structure operates in support of the Prefect and in connection with the Group Interagency Center for the Expo 2015 (GICEX).

CCASGO is made, as well as prefects and representatives of various public security organs, by a ministerial representative - or representatives - (Ministry of Facilities and Transportation). The section will have the tasks of monitoring, the definition of the procedures for exchanging data and information, the identification of means of preventing and detecting and signalling faults. The objects of the monitoring will be land areas, job

³⁰ http://www.affaritaliani.it/milano/inside_expo_rumors_angelo_provasoli_170810.html

³¹ http://www.palazzosangervasio.net/index.php?option=com_content&view=article&id=599:expo-nominato-massimiliano-nova-prende-il-posto-diprovasoli&catid=1:ultimenotizie&Itemid=50

³² http://milano.corriere.it/milano/notizie/cronaca/12_aprile_27/expo-ministero-economiarappresentante-alessandra-dal-verme-2004251791465.shtml

³³ <http://leg16.camera.it/465?area=23&tema=51&Expo+2015>

³⁴ <http://www.fondazionefieramilano.it/>

³⁵ http://www1.interno.gov.it/mininterno/export/sites/default/it/assets/files/18/00916_Iniziative_prevenzione_contrasto_infiltrazioni_mafiose_expo_2015.pdf

contracts and supply contracts (procurement and consulting), the structure of ownership and access to sites.

The Central Interagency Group for the Expo 2015 (GICEX) is instead composed of representatives of all the Police Forces, experts in contrast to the mafia infiltration in public works. Its main task will be the monitoring of "sensitive activities" typically subject to criminal infiltration: storage, waste disposal, etc.

The activity of these organs will be based on the guidelines published April 19, 2011³⁶.

The formation of these organs is crucial, since in function of having a faster development of the event, the controls related to criminal infiltrations will be entirely under their responsibility and in derogation from the normal "anti-mafia" procedures. The 19th January 2010, for example, the COSDE had received through ministerial decree (Ordinance of the Prime Minister, ODCM) added power in terms of possibility to waive laws. The COSDE explicitly and formally required these powers at the end of 2009. (CdC, 2013)

The registration of Expo and the Masterplan of the works

The 26th of April 2010 the *Registration Dossier* of Expo 2015 was delivered to the General Secretary of BIE Vicente Gonzales Loscertales. Lucio Stanca (at that point, already CEO of Expo 2012 S.p.a.) considered the delivery of the registration dossier an important milestone that enabled moving from the preparation phase to implementation of the project. The registration dossier indeed describes the path that will make possible the construction of the Universal Exhibition³⁷.

The delivery of the Registration Dossier started of a series of procedures for examination by the BIE, the result of which was published in the end of the Expo in Shanghai: the document was approved the 20 October 2010 and Milan was declared the official seat of Expo 2015 November 23, 2010, by unanimous vote members of the BIE³⁸.

On April 26, 2010, in Milan, the Teatro Strehler, the *Masterplan* event was presented³⁹. Infrastructures and projects presented correspond to those introduced in the *Candidature Document* and in the *Registration Dossier*. More interesting is to see the schedule of works that the *Masterplan* introduced:

- Resolution of interference on the site completed before August 1, 2012 (Tender to be finished in the summer 2011 in order to enable this work schedule);
- Construction of exhibition Plate ("Piastra") completed by December 2014 (the Tender completed before the summer

³⁶http://www1.interno.gov.it/mininterno/export/sites/default/it/assets/files/22/0925_LINEE_GUIDA_EXPO2015_MILANO.pdf

³⁷<http://vademeexpo2015.com/index.php/archivio/46-mondo-expo-2015/91-consegnato-il-dossier-di-registrazione>

³⁸<http://www.ilgiornale.it/news/expo-2015-investitura-ufficiale-bie-premier-grandemotivo.html>

³⁹http://www.expo2015.org/sites/default/files/rich_text_editor/pagine_standard/allegati/100423_presentazione260410_it.pdf

of 2012);

- Start building Halls and Pavilions started by June 2013 and concluded in April 2015.

The legislative work in order to guarantee the completion of the works

The 31st of April 2010 DL 78/2010 is signed. It regulates the expenses for the Expo by saying that for the years 2010 and beyond "it can be used in proportion to the shareholding held by the State, a share not exceeding 11% of the resources authorized by Article 14, paragraph 1 of Legislative Decree 112/2008, intended for the financing of works of which S.p.a. Expo 2015 is subject actuator."⁴⁰

Ordinance n. 3900 and n. 3901 (5th of October 2010) are other examples of laws that provided special power to Expo authorities: these measures were thought to enable the realization of the necessary works at the Expo 2015 within certain times. COSDE was authorized to take all necessary measures to ensure the availability of the areas identified in the registration dossier within the time specified by the BIE, also as exception to the ordinary rules. Even in the case of projects subjected to environmental impact assessment or subjected to protection (under the code of cultural heritage and landscape), procedure must be completed in a limited number of days (specifically, 45 days after the "Conferenza di Servizi", conference of service, a public Italian institution in charge of speed up and simplify bureaucratic processes).

Extraordinary powers are a constant in Expo 2015 management, but they are considered necessary also by Italian control authorities. CdC (as reported in the 2013 report) expressing on the legitimacy an 11th October 2010 ordinance for waiving Expo site-access laws, claimed that "peremptory deadlines and international agreements" made necessary to waive laws and speed-up normal procedures, even if this situation must remain "unique, special, rare".

Continuing on listing waiving norms, law 98/2011 (6th July 2011), in order to allow the execution of the "Essential Projects" of Expo 2015 allowed an exception to the discipline of minimum distances for the edification of the belt road and for construction in urban centers.

Again, the Law 83/2012 (26th June 2012) has set in thirty days the term that cannot be extended for the expression of the opinion of the Board of Public Works on the projects related to the "Essential Projects" with the Expo 2015 in order to speed up implementation.

Another important law made by the Italian government to support the Expo is the law 225/2010 (29th of December 2010): it has extended to the PoM, the exemption clause to the constraints of the "Stability Pact" for 2011 (Law no. 220/2010), with reference

⁴⁰ <http://leg16.camera.it/465?area=23&tema=51&Expo+2015>

to the expenses incurred for the work necessary to complete the Expo Milano 2015 for the year 2011. In this way, any additional costs incurred by the Expo in that year will not be subject to accounting and then to penalties: “Stability Pact” is in fact agreement common to the members of the European Union on the use of public resources, based on the conclusion of spending limits and penalties when they come exceeded. The fact that expenses related to Expo are exempt from the pact can give more freedom and flexibility to institutions responsible for the development of the Expo ⁴¹.

Along the same lines, the law 183/2011 (November 19, 2011, “Stability Pact” Law for 2012) provides on an exceptional basis, for the year 2012, for PoM and MoM, the reduction of penalties for failure to comply with the Stability Pact ⁴⁰.

These laws had been critical because they provided the opportunity for the MoM and PoM to provide the necessary funds to Expo 2015, beyond the states of public budgets. As for the year 2013, the absence of exceptions to the Stability Pact or attenuation of the penalties is one of the more and longer discussed issues by the authorities involved in the Expo. To make the most striking example, the municipality of Milan will support expenses of € 370 million for infrastructure related to the Expo in 2013, but no exceptions to the Stability Pact, these funds can only be found by cutting other services to the citizens ⁴².

The first contracts for the site constructions and the Governance

In April 2011, an important step in order to build the exposition site took place. The 31st of April 2011 *Arexpo* is constituted by a resolution of the RL (Governor Roberto Formigoni). *Arexpo* is controlled by PoM, RL, MoM, Fondazione Fiera and Municipality of Rho ⁴³. The purposes of this society at its constitution were:

1. The acquisition of areas of the Expo site by public and private entities;
2. The provision of these areas to Expo 2015 S.p.a. for the design and implementation of interventions of urban transformation ahead of the event;
3. The monitoring, together with the company Expo 2015 S.p.a., the process of transformation and infrastructure of the area;
4. The coordination of the development process of the urban area, in relation to the post Expo ⁴⁴.

In the same period, an important change in the governance occurred. The 14th June 2011 Letizia Moratti, after the election of Giuliano Pisapia as Major of Milan, decided to renounce to her

⁴¹ <http://www.rgs.mef.gov.it/VERSIONE-I/e-GOVERNME1/Patto-di-S/CosaeilPatto/>

⁴² <http://www.ilsole24ore.com/art/impresa-e-territori/2012-12-08/niente-deroghe-expopatto-081646.shtml?uuid=AbwOLFAH>

⁴³ <http://www.arexpo.it/>

⁴⁴ <http://www.regione.lombardia.it/cs/Satellite?c=News&childpagename=Regione%2FDetail&cid=1213433966728&pagename=RG>
NWrapper

role in Expo, despite of the fact that she was expected to keep the role of Commissioner till 2016, regardless of its eventual re-election. This is an important event for the Expo given the central role that Letizia Moratti, as COSDE and Mayor of Milan, had in shaping and affecting the first 3 years of works of Expo.

She announced her withdrawal during the General Assembly of the BIE of 14th June 2011, which examined the state of progress of the project Expo 2015. During the meeting the President of the Executive Committee of the BIE, Steen Christensen had focused attention on the possible delays. "We consider indispensable to launch the race by July, and begin work no later than October or you will not get there in time" for the opening on May 1, 2015, and "we will have to make the decisions arising from them". Roberto Formigoni, governor of Lombardy, has ensured that the company *Arexpo* had the agreement with of the owners. Formigoni said that so far Italy "has complied with all the deadlines." The CEO of the company, Giuseppe Sala, added that now "there can be no hesitation." The General Secretary of the BIE, Vicente Loscertales instead stated: "I am optimistic. Milan must work: if everything is done as expected, that the races in July and the work by October, there's still time." ^{45,46}

The 12th of July 2011 there was the agreement among Aexpo, Expo 2015 S.p.a., MoM, FM and PoM about the management of lands of the area of the exposition. By the way, at the 12 July 2011 despite the agreement there was still an open issue that blocked the definitive agreement, since the MoM asked for higher powers in deciding how the lands will be managed ⁴⁷.

Later, with a Decree from Prime Minister, the 5th of August 2011 Giuliano Pisapia had been appointed as COSDE and Roberto Formigoni as CGG. The DPCM (Decree from Prime Minister) of 11 November 2011 would then give to CGG the responsibility to appoint CGSPI.

The beginning of the rescheduling

Stimulated by the of BIE critics during the General Assembly which took place in June, the 13th of July 2011 the CEO of Expo 2015 S.p.a. (Sala) announced the new plan for the site construction: the bid for interferences removal would have been started before the 5 of August. The 25 October 2011, instead, given the International Participants Meeting Event, the ceremony for the start of the construction of the site would have took place (it then took place the 28 of October). The bid for the realization of the exposition plate was instead supposed to start in November 2011. During the meeting, Sala also highlighted the importance of solving the issue regarding *Arexpo* and the lands acquisition ⁴⁸.

⁴⁵<http://www.cronacamilano.it/cronaca/15410-dimissioni-moratti-expo-1-ex-sindaco-dimilano-e-piu-commissario-straordinario-di-expo-2015-pisapia-spiega-la-sua-expo.html>

⁴⁶ <http://www.expo2015.org/press-area/press-releases/i-vertici-di-expo-2015-al-bie>

⁴⁷ http://www.expo2015.org/sites/default/files/rich_text_editor/pagine_standard/allegati/100423_presentazione260410_it.pdf

⁴⁸<http://www.ilsole24ore.com/art/economia/2011-07-12/agosto-partono-gare-expo-231210.shtml?uid=AaZAmend>

Meantime, in August 2011 (3rd) a call for tenders for the removal of interferences on the site started. The contract will be awarded to the company *CMC* the 20th of October ⁴⁹.

This first tender had been able to raise many controversies because many of the sub-contractors, as a result of past convictions or legal process under way should not have had the opportunity to participate, according to the guidelines for the control of criminal infiltration. This has led to an investigation into bid rigging and of course, a slowdown in work, as well as raises many doubts about the existing system of Governance ^{50,51}.

On the 28th of December 2011, given delays in the bidding process, the new schedule of the works is organized in the following way:

- Interferences removal will take place in 2012;
- From the summer 2012, works on exhibition plate will start;
- From the summer 2013 the construction of the pavilion will start.

The 3rd of July 2012, the issues about the power division in *Arexpo* were solved. The control of the company was divided in the following way: 35% to RL, 35% to MoM, 2% to PoM, 1% to Municipality of Rho, 27% to Ente Autonomo Fiera. Moreover, the members of the Board of Directors are selected: L. Pilotti represents MoM, Turturiello represents PoM, C. Perobon represents Ente Autonomo Fiera Milano.

At this point, the negotiation for the purchase of acreage is finished: *Aexpo* will buy acreage giving €150 million to Proprietà Fiera and the private *Gruppo Cabassi*. The agreement needed however to become official, necessarily before 15 of July: in that date, the winner of the Bid for the construction of the plate will be selected and without the signature on all the necessary documents, any kind of work can't start.

Final agreement on the management of lands is signed the 2nd of August 2012: *Arexpo* had the role to acquire them and to transfer them to Expo 2015 S.p.a. that will realize infrastructures. After Expo 2015, area and infrastructure will be property of *Arexpo*. However, some issues are unsolved:

- The refunding of €75 million to Expo 2015 S.p.a.;
- The determination of who is responsible for cleaning up of the lands (*Arexpo* or the old owners?);
- The determination of who is responsible for the removal of the temporary infrastructure at the end of Expo 2015;
- Choice Expo 2015 S.p.a. or less will have to pay a rent to

⁴⁹ <http://www.expo2015.org/press-area/press-releases/aggiudicazione-i-lavori-inerenti-allarimozione-delle-interferenze>

⁵⁰ <http://www.sosfornace.org/infiltrazioni-criminali-nel-primo-appalto-di-expo-2015/>

⁵¹ www.bie-paris.org

Arexpo.

The 3rd August 2012 even the tender for the construction of the plate had been completed and the contractor had been chosen. Even in this case, however, controls failed and the winner of the tender (*Mantovani Group*) was late investigated (early 2013) for issues concerning its role in another Italian Mega Project, the "Mose" of Venice ⁵².

*First
Important
changes in
Governance
settings*

Meanwhile, the 14th of February 2012 Luigi Roth was appointed as CGSPI, completing the list of commissioners planned for the governance of the event.

Anyway, Luigi Roth decided to renounce to his role the 25 June 2012 because, according to him, the government didn't give to him the necessary decisional and managerial autonomy on the activities related to the Italian pavilion development: in particular, he criticizes the division of powers between the project manager of the pavilion (his role) and those responsible for the selection of contractors and consulting services (Expo 2015 S.p.a.) ⁵³.

After the resignation of Luigi Roth, Diana Bracco was appointed new CGSPI. The appointment of Diana Bracco, already president of Expo 2015 S.p.a., eased the overcoming of the limits of the role identified by Luigi Roth ^{54,55}. Her appointment took place the 19th of August, decision taken by Prime Minister (in this moment, the role of Prime Minister is covered by Mario Monti) and the Ministry of Foreign Affairs (Giulio Terzi).

Also laws about public funds allocation are obviously important for the Expo. The law 83/2012 (22nd June 2012) authorized the total expenditure of € 28,421,967 for 2012 -2015 for Expo 2015, integrating the funding planned by law 112/2008 ⁵⁶. This ensured coverage for all activities and work planned for the event.

On 19th of April 2013, the final decision of Italian pavilion project was taken: with this decision, the definition of the executive project can start. Construction of the pavilion should start in November 2013 and finish before March 2015. The total cost of the pavilion was expected to be €40 million ⁵⁷.

The 6th of May Giuseppe Sala (already CEO of Expo 2015 S.p.a.) is appointed "Commissario Unico per l'Expo" (the already mentioned "CO"), assuming all the responsibilities that were of COSDE and CGG. This decision was taken the 24 April 2012 by the Italian Government in order to speed up the procedures for the Expo development and solve some disputes arising for the other

⁵² http://milano.corriere.it/milano/notizie/cronaca/13_marzo_1/mantovani-arrestatopresidente-linguaia-expo-2114267676688.shtml

⁵³ http://milano.repubblica.it/cronaca/2012/06/26/news/lexpo_perde_ancora_un_pezzo_roth_lascia_il_padiglione_italia-37966047/

⁵⁴ http://www.governo.it/Presidenza/DICA/expo_milano_2015/normativa_expo_2015/DPCM_3agosto_2012.pdf

⁵⁵ <http://www.expo2015.org/news/diana-bracco-nominata-commissario-generale-sezione-ilpadiglione-italia>

⁵⁶ <http://leg16.camera.it/465?area=23&tema=51&Expo+2015>

⁵⁷ <http://www.expo2015.assolombarda.it/rassegna-stampa/rassegna-stampa-20-22-04->

roles (e.g. the threats of withdrawal of Giuliano Pisapia in summer 2012 ⁵⁸). The CO will have possibility to derogate environmental, urban and procedural norms (e.g. procurement) to ensure the completion of the works ⁵⁹.

Other roles have also been established to support the CO:

- Maurizio Martina is instead appointed as “Sottosegretario del Governo con nomina all’Expo” (Secretary of Government appointed to Expo, SGE), a role with the purpose to be the interface between government and local authorities. Martina took the place of Paolo Peluffo, who covered this role during Monti government ⁶⁰.
- Marta Dassù is appointed “Ambasciatore per L’Expo” (Expo Ambassador, AE), a diplomatic role with the purpose to represent Italian government. Basically, her responsibility will be the ones of the CGG, thus reducing the work of Giuseppe Sala ^[37].
- Fabrizio Sala is the new “Sottosegretario Regionale Lombardo con nomina all’Expo” (Secretary of Region appointed to Expo, SRE), appointed by current governor of Lombardy Roberto Maroni (taking the place of Paolo Alli) ⁶¹.

The laws that created the role of Commissario Unico had also another effect: the possibility to derogate normal laws and procedures for works connected to Expo were extended to other contracting authorities (MoM, PoM, RL). First of all there are the streets of connection with the exhibition area, then the Milan metro line projects (line 4,5 and 6), under the ownership of the municipality of Milan. Indirect powers of derogation were granted also for regional works: BreBeMi, Tangenziale Est and Pedemontana ⁶².

The modification of the governance structure also took place as a consequence of criticism received by a commission, appointed by the Italian President (Giorgio Napolitano) in order to evaluate some key issues Italian economy, including the Expo. In particular, after years of modifications and changes, and after observing the not-optimal level of progress of the work, two main needs had emerged ⁶³:

- To increase the stability of the governance system;
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⁵⁸ <http://www.ilsole24ore.com/art/notizie/2012-06-12/pisapia-dimissioni-expo-2015-165220.shtml?uuid=AbBJtArF>

⁵⁹ <http://www.ilgiorno.it/milano/cronaca/2013/05/24/893612-expo-sala-poteri-specialiattivi-delegati-tre-fine-maggio.shtml>

⁶⁰ http://www.lombardiaquotidiano.it/istituzione/-/asset_publisher/sGA1/content/id/330644

⁶¹ <http://www.milanotoday.it/cronaca/expo-2015/martina-sala-nomine.html>

⁶² <http://www.ediliziaeterritorio.ilsole24ore.com/art/infrastrutture24/2013-05-03/expopronto-decreto-sala-093939.php?uuid=AbIRodsH>

⁶³ http://www.ilmondo.it/politica/2013-04-12/expo-2015-saggi-chiedono-nuova-governanceformigoni-non-ci-sta_233692.shtml

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- The establishment of authorities with special powers to expedite the development process.

Delays in Expo development: worries, penalties and the need to redefine plans and priorities

In early 2013, not everyone is optimistic about the possibility to develop a successful event for the 2015. Given the many uncertainties and the risk of failure (at this date, important countries like USA, UK, Canada, Netherland, Sweden and others have not joined Expo 2015) the cost of eventually give the rights of Expo 2015 to Smirne was estimated (29th March 2013): the penalty with BIE was estimated to be €51,6 Million, while the penalties for the works already started (penalties to be paid to the companies that won bids) would be €50 million. Moreover, in case of delays or cancellation, Smirne can require a refunding up to €119 million.

An example of the not-optimal work completion can be easily found: at the current state of the work, removal of interferences is almost completed while construction of exhibition plate is expected to start in few months, so to enable construction of first pavilion in December 2013. According to the *Masterplan*, removal of interferences should have been already completed and construction of pavilions started.

According the situation in summer 2013, first pavilions were expected to be delivered at the end of 2013. Before September, works to increase viability in the perimeter of the area should be concluded. In November 2013, the construction of Italian Pavilion was supposed to start. In March 2014 excavations of "Decumano", were supposed be concluded. November 2013 was thought as the end-date for cleaning activities of the site, as January 2014 should be the end-date for all the works on the exhibition plate will be concluded⁶⁴.

In order to conclude the plate construction, however, construction site had to work from 6:00 to 22:00, six days per week⁶⁵, fact that shows a not-proper organization of the work and the need to recover from existing delays.

The 5th of July 2013 the first meeting of COEM took place. During the meeting, different topics were discussed, included some of the issues just mentioned. In particular, in a meeting involving Italian Prime Minister, authorities from government, RL, MoM, PoM and authority from Expo 2015 S.p.a.⁶⁶, the following points were mainly addressed⁶⁷:

- The need for the definition of a new Masterplan, with updated schedules of works;
- The definition of rules for the job market for 2014-2015;

⁶⁴ <http://www.expo2015.assolombarda.it/rassegna-stampa/rassegna-stampa-07-05-2013/view>

⁶⁵ Corriere della Sera, 7/05/2013, pg. 20

⁶⁶ <http://www.governo.it/Notizie/Presidenza/dettaglio.asp?d=72015>

⁶⁷ Sole 24 Ore, Corriere della Sera, 6/07/2013

- The necessity of new funds for Milan (including the need to renegotiate the “Stability Pact” for the MoM);
- The governance issue on the exhibition plate construction ⁶⁸;
- The organization of the euro-Asian summit to be held in Milan in 2014;
- The development of projects that can enhance the effect of the exposition, managed from different ministries (in particular, there was talk of the ministries of education, agricultural policies and cultural heritage).

Long-term legacy, opposition to the event and critics to the organization

Meanwhile, authorities were starting to develop plans for the after-Expo. The 14th of July 2013 *Arexpo*, since this is one of the responsibilities of the company, started to collect plans and ideas for 43 hectares of the site (56% of the total surface) ⁶⁹. At the end of August 2013, ten projects had been taken in account by Arexpo ⁷⁰. In the half of September, 12 projects for a total value of 1,2 billion of euro were selected. The Masterplan for their implementation would be developed by December ⁷¹.

As typically happens during Mega Events, it is possible to find opposition by organized group and associations. Different associations (e.g. “*Milano si Muove*” for the project of Darsena – “*Milano si Muove*” is an initiative organized by citizens to improve quality of life in Milan ⁷²) were expressing their opposition to Expo ⁷³ but at the same time, government and public authorities are continuing to go on with the development: with amendment on the law 78/2010 (identified by the media as “*Decreto del Fare*”) spending limits for the city of Milan regarding Expo budget are loosened and € 2 billion are allocated as a fund for the "strategic projects". The funds the metro-line 4 were in fact guaranteed in this way ⁷⁴.

While these funds were considered very important ⁷⁵, there were some points of discussion still open: there were criticisms about the ability to establish the right priority of the projects, given all the changes from the initial plans ⁷⁵, there was still an open question about the capability of the city of Milan to have the funds for all maintenance activities of the city not included in the plans for Expo but fundamental for the image and functionality of Milan ⁷⁶, there was not an agreement on laws considered necessary to adapt the job market to the requirements of an event like Expo.

As the development process went on, however, governance

⁶⁸ <http://www.ilsole24ore.com/art/notizie/2013-07-09/dallevento-expo-svolta-cogliere-064026.shtml?uuid=AbxE1YCI>

⁶⁹ La Repubblica, 15/06/2013, pg. 2/3

⁷⁰ Il Giorno Milano, 29/08/2013

⁷¹ Il Sole 24 ore, 11/09/2013, pg. 37

⁷² <http://www.milanosimuove.it/wordpress/>

⁷³ Corriere dell Sera, 16/06/2013, pg. 3

⁷⁴ Il Giorno Milano, 16/06/2013, pg. 9

⁷⁵ La Repubblica, 17/07/2013, pg. 3

⁷⁶ Corriere della Sera, 18/06/2013, pg.2

problems emerged not only at a management level, but also at an operative level. As noticed by Sole 24 Ore ⁷⁷, a problem that arose during the realization of Exposition Plate was to understand which company should take charge of the controls between “*Metropolitana Milanese*” (controlled by MoM and managing metro rail-network) and “*Infrastrutture Lombarde*” (already mentioned talking about the ownership of the “*Connected Projects*”, controlled by RL).

Moreover, other issues regard governance and security emerged when a manager of Metropolitana Milanese was put under investigation for bid rigging, with respect to contracts signed for work on exposition plate ⁷⁸.

In July 2013, at Villa Reale in Monza (which will be the headquarters of Expo in 2015) is launched from the highest echelons of the state the "World Expo Tour" series of promotion events ⁷⁹.

The event just mentioned, however, was subjected to an high number of criticisms: the governor of Lombardy talks about 4,000 jobs and 130 million euro that Expo will generate for the area of Monza, but the launch of World Expo tour the mayors of the area were not invited to the event and not involved in the discussions. In addition, various committees against Expo showed in front of Villa Reale. ^[89] The events will generate critics also for its costs: 500 000 euro, equally divided between RL and Expo 2015 S.p.a. ⁸⁰.

The need for new initiatives: work market and tourism

As mentioned, during the meeting of COEM, one of the important points was the development of laws for the job market place. The discussions about this had continued for a long time among Ministries, Unions and Associations of entrepreneurs. Not being able to afford further loss of time, the Minister of Labor, (at the time, Enrico Giovannini) after a meeting held on July 16, decides to set for 15th September of 2013 the deadline for the definition of joint proposals between unions and companies ⁸¹. The only step forward regarding this topic took place the 23rd of July 2013, when the contract to enable 800 recruitments for Expo 2015 S.p.a. had been signed. The discussions about a national labor contract linked to Expo will instead continue, without finding any solution ⁸².

Getting closer to the event, also the need for a better definition of the touristic offer emerged. The company *Explora* was officially established in Milan, by RL (through Finlombarda), by CCIAA and by Expo 2015 S.p.a. The company is responsible for making the most, in the months and years to come, the revival of tourism

⁷⁷ <http://www.ilsole24ore.com/art/notizie/2013-07-09/dallevento-expo-svolta-cogliere-064026.shtml?uuid=AbxE1YCI>

⁷⁸ La Repubblica, 2/07/2013, pg. 4

⁷⁹ Il Giorno Milano, 7/07/2013

⁸⁰ La Repubblica, 10/10/2013

⁸¹ Il Sole 24 ore, 17/07/2013, pg. 5

⁸² Il Corriere della Sera, 24/07/2013, pg. 3

in Lombardy, in coordination with the local institutional realities membership for Expo Milano 2015⁸³.

The number and the variety of projects related to Expo, despite delays and low performance, grow

ATM, a public transport company owned by the municipality of Milan, was meanwhile developing plan of continuous improvement of services to prepare to receive 50% more passengers. The project, which has an estimated cost of about € 524 million, included new hires, purchase of buses (250) and trains (30) and a selection process among employees to prepare the company to welcome international customers⁸⁴.

The 10th of September the works on Darsena project started. This is important because this project had been discussed for 9 years, but only with Expo it has been developed: this show one of the effects of mega events, the ability to speed up and force the pace for public projects⁸⁵.

The 23rd September the event “Comuni D’Italia per Expo” took place. 150 mayors of Italian towns met Expo 2015 in order to develop joint initiatives and promotional events for Expo. The meeting involved Expo 2015 S.p.a., Ministries and A.N.C.I. (National Association of Italian municipalities). A statement of intents was signed involving, besides 150 mayors, other 8000 municipalities across Italy⁸⁶. Agreements like this one show an attempt in enlarging the support and the involvement in Expo 2015 even if, as said in other occasions not always the involvement of associations and citizens is a priority of Expo 2015 S.p.a.

The effort for organizing a competitive touristic offer had grown during 2013. During the first "Tourist Summit", that took place the first of October 2013, there were discussions and negotiation about number and flows of visitors, tickets price and other visitor-related issues. The meeting involved 60 international tour operators. From the meeting emerged that the average price will probably be 20 €, and that several of the official partners of Expo (eg. Tim, Coop) will have a central role in their distribution. During the meeting there were also discussion on the need of regulating the flow of visitors, mitigating excessive peaks and ensuring a continuous presence. Also in the meeting the central role of Explora was confirmed: Explora will be fundamental in attracting tourists and visitors and foresee new projects to sustain and enhance the offer for foreign visitors (e.g. the internationalization of the San Raffaele Hospital ER)⁸⁷. These episodes show how management of an event like Expo requires measures and initiatives that are not usually necessary for smaller events or for Mega Projects, initiatives that need careful and

⁸³<http://www.regione.lombardia.it/cs/Satellite?c=News&cid=1213619114768&childpagename=Regione%2FDetail&pagename=RGNWwrapper>

⁸⁴ Il Giorno Milano, 31/08/2013, pg. 2-3

⁸⁵ Il Corriere della Sera, 8/09/2013, pg. 6

⁸⁶ La Repubblica, 23/09/2012, pg. 2-3

⁸⁷ Il Corriere della Sera, 2/10/2013, pg. 3

timely planning.

The projects related to Expo continued to grow in number in all Lombardy throughout the 2013. *SEA* (Società Esercizi Aeroportuali), the company managing Malpensa Airport, launches a "Chinese Friendly Airport" project, in order to better welcome tourists from China. The project it is not only functional to Expo, but it actually serves to prepare the airport for the growing number of Chinese tourists who are expected to arrive in Italy in the next few years. Another example is the initiative that plans to expand the service to Bikesharing Milan, BikeMi, of 1,000 bikes leveraging the occasion of the event ⁸⁸.

During the initial days of October 2013, there were also the first decisions regarding the Italian media coverage for the Expo, in particular RAI (Italian public television) took the decision, on the 3rd of October to place the direction of Expo media coverage (radio, television and Social Media) in Rome, raising a lot of criticism from the public authorities of Lombardy ⁸⁹.

President of ENIT (National Tourism Association) identified instead an important issue. The president which stated that flights are currently scheduled at the airports Italians were not considered sufficient to handle the expected tourists to Expo. In addition, Celli claimed the presence of a wider issue regarding the logistics and transportation of visitors and tourists in the Italian territory ⁹⁰. The alarm reappeared then even later ⁹¹, when it was highlighted the lack of tour packages that allow potential tourists to move in Europe (putting Milan and Italy in a longer European itinerary). This second alarm gave rise to an European Task Force to find solutions to the above mentioned.

The 20th of September 2013 MoM approved "City Operations", a plan considering strategic project for the success of Expo. The plan included many projects to make Milan more attractive: rebuilding of Theaters, Arenas, Monumental Cemetery (where probably also a new info point will be build ⁹²), Duomo (1 added million to the already planned 35 million euro restyling ⁹¹). However, at the 11th of October it was clear that the feasibility of the plan strongly depended on the results of discussions Stability Pact. Meanwhile, given the recent criminality alarms, the Municipality announced the development of a "Security Plan", to be completed before 2014 ⁹³.

Also initiatives about an extension of Expo outside the site of Exposition are growing: with the initiative "*Expo In the City*", presented at BIE during the last IPM, theaters and museums will

⁸⁸ Libero, 2/10/2013, pg. 47

⁸⁹ Libero Milano, 4/10/2013

⁹⁰ Il Giornale Milano, 7/10/2013, pg. 7

⁹¹ Il Giornale Milano, 8/10/2013, pg. 3

⁹² Il Giornale Milano, 3/11

⁹³ Il Giorno Milano, 11/10/2013, pg. 6

host expositions and exhibitions during the six months of exposition⁹⁴.

Moreover, Expo tried to expand not only outside the exposition site, but also toward other region: thinking about tourisms in the region of Liguria, Ferrovie dello Stato, ATM and Navigation associations started to develop an agreement on order to intensify and make faster the connections between Liguria (in particular the city of Genova) and Milan.

During 2013, also marketing initiatives were starting to get more defined and integrated. The 6th of November 2013 a three years plan, with a value of 700 000 euro, was defined by Municipality of Milan and by "Triennale Milano" in order to develop a branding and marketing plan for the city of Milan⁹⁵.

It is important to remember that Expo projects go also beyond infrastructural one: "Donne per Expo", an initiative to highlight the value of women in society and in different cultures, had been sponsored and supported by Italian ministries: the 13th of November 2013 a meeting of "Board of Woman in Democracy", with the purpose of discussing Women for Expo, is hosted by Italian government⁹⁶.

However, the ones described are only some relevant examples of the initiatives related to Expo developed in the Italian territory.

*The progress
of the works
and the crime
–issue.*

The 2nd of October, the International Participants Meeting (IPM) took place. During the meeting, which involved 800 delegates from 120 countries, Giuseppe Sala announces that the first group of the pavilions areas (30) will be delivered before Christmas, while waiting for the official projects for the pavilions from participant countries⁹⁷. Meanwhile, the president of Lombardy Maroni tried to push on the possibility to exploit the site of expo for building a sports complex to be used later as a lever for the 2024 Olympic bid by Milan⁹⁸.

The 9th of October instead *Arexpo* concludes the Bid for the projects proposals for the re-use of the land Expo. The contest, which regards the 56% of the exhibition site and that launched in June 2013, at the end took in account 15 proposals. The most accredited one is the proposal for a Sports Complex. However, the main point is the realization of a big public space. It has not been excluded that the final solution will be the merge of 2 or more of the proposals⁹⁹.

During 2013, managing company started to address more strongly the problems of delays in the schedules of projects, the lack of

⁹⁴ Il Giorno Milano, 16/10/2013, pg. 4

⁹⁵ La Repubblica, 7/11/2013, pg. 1

⁹⁶ Il Corriere della Sera, 14/11/2013, pg. 3

⁹⁷ Il Sole 24 ore, 4/10/2013, pg. 47

⁹⁸ Il Corriere della Sera Milano, 4/10/2013, pg. 3

⁹⁹ Il Giorno, La Repubblica, 9/10/2013

funds and other several issues faced in the construction projects related to Expo. Government and Lombardy region set a plan to manage the existing resources and situation: the idea was to set a "Fondo Unico" (unique funds) where all the money destined to Expo related projects will be stored. If a project will face delays or it will be stop, the funds destined to that projects will still available to Expo projects and they will not allocated to initiatives that are not directly related to the events. The funds will be managing according to a short list of works with high priority that the "Tavolo per Opere Lombardia and Milan" will have to develop before the half of November 2013 ¹⁰⁰. The fact that after five years of work there is still not a clear definition of the progress of the projects and of their priority is significant, thought.

While the number of construction sites related to Expo continued to grow, however, it was always growing the number of announcements and alarms regarding the risks related to crime, on two levels: the first one is the crimes related to corruption and criminal use of public money, the second level is the one of the small criminalities that it is expected to grow exponentially in Milan during the exposition ¹⁰¹.

At the 27th of November 2013 it was possible to have the first data regarding the effectiveness of the security controls: from the beginning of Expo Bids there had been 23 Exclusions of companies from bids and 7 exclusions from the White List. While in 2 years of work there have been only 2 cases of potential criminal infiltrations (in the first case the company was then re-admitted, in the second one the company was excluded after winning the bid for the exposition plate), there have been several complaints about the quickness of controls: at October 2013, 64% of the companies participating to the bidding processes were still waiting for the evaluation ¹⁰².

*Expo 2015 and
Political
Dynamics*

Even if government is very active in supporting Expo, its behaviour has some contradictions that can be a symptom of the lack of clear direction around Expo 2015. From one side, Expo is full supported and initiatives like "Agenda Italia", collecting projects from different ministries, which are valuable for the exposition and Italy: this Agenda would regard the promotion of the nation, the topics of Expo and the development of Economy ¹⁰³. From the other side, the inability to solve issues like the one of Stability Pact for Milan had opened new risks for the event: Milan, at the 14th of November, after approving the Budget for the year, MoM acknowledged that in order to fulfil all its responsibility regarding Expo activities there will be the necessity to increase its debt of 125 million euro for 2014. Also the delays of project like Rho - Monza depended from a slow decision

¹⁰⁰ Il Corriere della Sera Milano, 5/11/2013, pg. 3

¹⁰¹ Il Giorno, 10/10/2013, pg. 18

¹⁰² La Repubblica, 27/11/2013, pg. 9

¹⁰³ Il Corriere della Sera, 15/11/2013, pg. 5

making process in central ministry regarding final designs and authorizations ¹⁰⁴.

Meanwhile, parallel discussions continued to take place. At the half of October, President of Lombardy Region Maroni was still pushing for the candidature of Milan for the 2024 Olympics, leveraging on the construction of a sport complex as legacy of Expo ¹⁰⁵. *Arexpo* was expecting 1,2 billion euro of private investments for the site of Exposition requalification post-Expo, money that will be necessary to cover operative expenses of *Arexpo* and initial investment of 300 million to buy lands. Given the support that it is receiving, the Sport complex is the main project considered. It is important to notice that, from the site of exposition only the theatre, the central square and the "Palazzo Italia" will be conserved ¹⁰⁶. The Masterplan for the post-Expo with the list of the best projects has been presented the 28th of November 2013 ¹⁰⁷, in order to develop detailed plans and to take the final decision (and then open the Bid) before February 2014.

As already mentioned, political decisions strongly affect Expo. In November/December 2013, one of the main political discussions regarded the "Metropolitan City" law (which is respected to redesign public governance structures in Lombardy). Expanding what already said, according to this law the Authorities belonging to Province of Milan will lose their power in 2014-2015, giving greater power to Municipality and Region for the control of Milan, its province and the surrounding towns. In order to avoid confusions and overlap of responsibility in the following years, as well as in order not to damage current projects, the Italian government was discussing the possibility to pass all the participations of PoM in public companies (like for example "Milano Serravalle S.p.a.", which manages directly or indirectly different Expo projects) or PPPs to RL. Obviously, this decision strongly affects how the projects related to Expo will be managed and carried out ¹⁰⁸.

Expo can be an opportunity and a leverage in the political field: as Maroni (president of Region Lombardy) tried to use Expo as an asset to propose Milan for the candidature at the Olympic games (this was the main reason for which he pushed so strong on the realization of a Sport Center on the site of Expo). Pisapia (Mayor of Milan) was instead accused to be using the recent successes related to Expo development as a way to support his candidature for the future elections ¹⁰⁹.

¹⁰⁴ Il Sole 24 Ore, 16/11/2013, pg. 9

¹⁰⁵ Libero Milano, 15/11/2013, pg. 43

¹⁰⁶ La Repubblica, 26/11/2013, pg. 1

¹⁰⁷ Il Sole 24 Ore, 29/11/2013, pg. 52

¹⁰⁸ Il Giornale Milano, 21/11/2013, pg. 4

¹⁰⁹ <http://www.rgs.mef.gov.it/VERSIONE-I/e-GOVERNME1/Patto-di-S/CosaeilPatto/>

The continuous growth of the number of initiatives and the opposition of citizens

As the construction sites were opening, also the protests are getting more harsher: the 26th of November some protesters damaged machineries in the construction site of Darsena (part of Via D'acqua Project). They claimed that, while the nominal cost of all the activities connected to this project is 54 million, the real cost is up to 85 million of euro ¹¹⁰. As often mentioned by scholar, oppositions and negotiated figures are a common issue in Mega Events and Mega Project development. Moreover, Expo continues to raise controversy over the amount of construction projects: it is estimated that the projects related to Expo will lose 1600 hectares of farmland and forest, data which is obviously at odds with the themes of the event ¹¹¹.

In order to support foreign investments, Ministry of Revenue announced in late November the project "Desk Expo 2015" to support foreign investors in understanding the Italian laws regarding taxation ¹¹².

The Expo projects, as often happens with Mega Events and as already happened in Expo 2015, are an opportunity to unlock existing projects: for example, "Ferrovie Nord" and Lombardy use the opportunity of Expo to provide 75 million of euro to train line "Milano - Seveso - Asso", a project started in 2012 and designed especially for commuters ¹¹³. Also the project of restyling of Malpensa airport, which will cost 28 million euro, can be seen under the same light: a preexisting issue (restyling an old airport, enlarge an existing train line) is solved thanks to the funds and the projects that an event like Expo 2015 can generate ¹¹⁴.

Even if till now the Expo has not generated the expected number of workplaces ^[156], at the beginning of December was clear that the event is seen as a good job opportunity: Expo 2015 S.p.a. has received more than 60 000 CVs for 800 available workplaces. However, it is important to consider that the workplaces required are supposed to grow exponentially going toward 2015: for example, only German pavilion construction and management will require 450 people ¹¹⁵.

The previous alarms and discussion on security were generating an increasing number of discussions and initiatives, developed both to enhance security during the event both to give more tools to the City of Milan to fight crime in the future. The European project "Smart Ciber", announced on the 2nd of December was born in order to give rise to a central for controlling crime and terrorism located in the district of Quarto Oggiaro. The center will collect information and will use the DB of different security

¹¹⁰ Libero, 27/11/2013, pg. 42

¹¹¹ Il Corriere della Sera, 5/12/2013, pg. 13

¹¹² La Stampa, 29/11/2013, pg. 9

¹¹³ Il Corriere della Sera Milano, 20/11/2013, pg. 13

¹¹⁴ Il Sole 24 Ore, 30/11/2013

¹¹⁵ La Repubblica, 1/12/2013, pg. 3

organizations. The project is a partnership between the City of Milan and the other 9 players¹¹⁶. As for other cases, a project developed for Expo will be an opportunity to create infrastructures, foster collaboration and increase expertise for the future.

As the number of ideas for new initiatives and collaborations grown, older protocols and agreements started to get more defined: the protocol signed in late September by ANCI (association of Italian Municipalities) and Expo 2015 S.p.a. indeed achieves greater concreteness the 3rd of December 2013, when a program involving municipalities was signed. 200 events will took place all around Italy before 2015. Moreover, 6 days during the exhibition will actively involve municipalities¹¹⁷.

The projects are reflected also in the hospitality, where the agreement "MiPiace" Region, City and 3000 private companies in the tourism sector agreed in controlling prices, maintaining a certain level of product and service quality and enhancing the image of the city¹¹⁸. Despite the development of central organization like Explora, the touristic offer during an event like Expo can't transcend the involvement of local activities.

6.1.3 *What happened in Expo 2015*

From the observation of the timeline, it is possible to deduct and to identify relevant elements of Expo 2015.

One of the first observations that it is possible to make regards the relevant role of Italian public authorities in defining governance and development of Expo. Italian government indeed defines the governance of the Exposition and it is able to affect laws regarding procedures for construction process (the most important actors of Expo have the possibilities to waive normal authorization processes for construction and infrastructural projects). Moreover, Italian government establishes the budget for the Exposition and can significantly influence the budget of local institutions (Municipality of Milan, Region Lombardy).

Another observation regards the governance of Expo (topic that will be later deepened) that is very unstable and constantly changing. Political dynamics significantly affect appointments and roles, as well as the structure of the governance itself: this is worsened by the political instability of Italian Politics (during the seven years, we can see five different political alliances at the government, while also the Mayor of Milan and the governor of Lombardy changed).

The instability of the governance, combined with an initial confused strategy and a probable poor communication of the events outside the group of the main actors (Italian institutions, Camera di Commercio and few others) lead also to other effects:

1. Projects of Expo are late, need continuous re-scheduling and re-planning, need to be changed in terms of scope, deadlines and budget;

¹¹⁶ Il Corriere della Sera, 3/12/2013, pg. 3

¹¹⁷ Il Sole 24 Ore, 4/12/2013, pg. 45

¹¹⁸ Italia Oggi, 5/12/2013, pg. 17

2. Projects of Expo, at least till the end 2012, are only infrastructural projects. Touristic projects, projects for the business development and all the other initiatives necessary to the fulfilment of all the goals of the Exposition started to arise late and in a disordered way. There seems to lack a clear plan or strategy.
3. Legacy seems not be planned: the only long-term plans that you can have knowledge regarding the expo site (see the role of Arexpo). Outside of this, you can see only vague statements about the future of infrastructure and initiatives related to tourism and business.

Obviously, this instability and these low projects performances had impact on the data about costs and impact of the Exposition that we saw in chapter 2, introducing the event. The strong reduction of the initial expectations about the impact of the event can be traced to these causes.

As many other Mega Events, Expo is facing criticisms also for other aspects of the management:

- Security and transparency of the decision-making process is often criticized;
- Citizens and other groups of stakeholders (event groups of municipalities, for certain projects) openly oppose to Expo, mainly because of the lack of the involvement in the decision-making process, which is managed by a restrict number of actors.

This is however only a first list of what is characterizing Expo 2015. We will now continue with the empirical analysis, deepening the themes of Governance and of projects progress and management, in order to better understand Expo 2015.

6.2 *The Expo 2015 Project Progress and Evolution*

After presenting and analysing the main elements and events of Expo 2015, we would like now to give a more detailed look to the progress of the sub-projects at the beginning of 2014. This section will explain the actual state of the work and why the projects have eventually faced problems. The main objective of this section of the case study analysis is to show dynamics of the Mega Event environment and to highlight the main issues and their causes,

The project presented will be the most important of “*Essential Projects*” and “*Connected Projects*”, according to their costs, their importance for the event and their importance for the urban renewal of northern Italy.

Site Construction

The first precise schedule of work for the construction on the site was presented with the Masterplan, the 26th of April 2010. However, during the years several issues have affected the site construction. In particular, two are the unforeseen difficulties: the bad weather, which in the first days of 2013 generated weeks of delays¹¹⁹ and the legal problems related to the bids for the removal of the interferences, the cleaning activities and the construction of the plate.

These problems generated several modifications of the schedule of works and forced to work on the site with double shifts for several months. At the end, however, the delays accumulated were partially removed and latest forecasts (February 2014) say that the site construction will be probably completed in time.

¹¹⁹ <http://ricerca.repubblica.it/repubblica/archivio/repubblica/2013/03/26/il-maltempo-frena-expo-doppi-turni-al.html>

Masterplan	28th December 2011 (Re-scheduling announce by Sala, CEO of Expo)	Actual Situation (20th February 2014) ¹²⁰
Resolution of interference on the site completed before August 1, 2012 (Tender to be finished in the summer 2011 in order to enable this work schedule); Construction of exhibition Plate (“Piastra”) completed by December 2014 (the Tender completed before the summer of 2012); Start building Halls and Pavilions by June 2013 and concluded in April 2015.	Interferences removal will take place in 2012: in the Masterplan, this part of the work was supposed to start in 2010. At the end of 2011, instead, it had not started yet; Despite the strong delays in the Interference removal, however, the schedule for the successive steps were not significantly changed. From the summer 2012, works on exhibition plate will start; From the summer 2013 the construction of the pavilion will start.	70% of Interference Removal is completed 35% of Plate construction completed First 26 areas for the pavilions construction delivered to participant countries.

Table 29: Evolution of the Masterplan

Housing Project – Cascina Merlata

This project is composed by the realization of the village to host people involved in Expo (delegations and personnel of Expo 2015) and the realization of a road to connect the village to the site. The project will be completed, but in a reduced version: delays (due to late agreements on land, discussions on the project design and on the ownership of the project) and difficulties in providing funds needed necessary to renounce to a part of the accommodations and to realize instead a parking, able to host buses that will take the delegations and the personnel that will not lodge in Expo Village to the site ¹²¹.

Water Way & Land Way

The project “Water Way” is strongly obstructed by different associations, especially for environmental concerns and doubts about the transparency and the definition of certain aspects of the project ¹²². The works have already started and part of the bidding processes that will be necessary to identify all the companies that will participate to the project development have already been concluded. In February 2014, the schedule of the works says that all the sections of “Water Way” will be concluded before April 2015.

However, as the actual state of the project progress seems ideal for Expo 2015 needs, the strong pressure of the population is forcing Municipality of Milan to evaluate alternative projects to satisfy requests from citizens. This “Plan B” would be much less expensive, but also very different from the original project ¹²³.

The Land Way, instead was deleted from the list of Essential Projects in 2012.

¹²⁰ <http://www.casaeterritorio.ilsole24ore.com/art/infrastrutture-e-citta/2014-01-06/expo-2015-criticita-risolvere-163336.php?uud=Abx4tNEJ>

¹²¹ http://www.metronews.it/master.php?pagina=notizia.php&id_notizia=17171

¹²² <http://www.02blog.it/post/59241/la-via-dacqua-di-milano-i-dubbi-e-le-polemiche-sul-progetto>

¹²³ <http://www.giornalettismo.com/archives/1375765/expo-2015-la-via-dacqua-che-non-vuole-nessuno/>

Metro Lines

M1

In the meeting of “*Tavolo Istituzionale*” of the 18th February 2014, the project was eliminated from the list of one Expo-Related ¹²⁴. The project was started in 2011 and was supposed to be finished before 2014 (OTI 2013), but issues in the development (mainly lack of funds) moved the final deadline to June 2015 (OTI 2014).

M4

After that the project started in 2012, it has been reduced several times, till it reached a minimum objective of 2 stops (on the 21 planned) before Expo 2015 ¹²³. However, writing in February 2014 there are high probabilities that even those two stops will not be completed, so an alternative shuttle-bus project is under evaluation ¹²⁵.

This project is particularly critic: €500 million are still missing and probably it will be necessary to set up a Public-Private partnership in March 2014 to manage the project. Even in this way, the conclusion of the work is forecasted for the 2021 (in the report of OTI, 2013, the end of the work were forecasted for 2017, in the report OTI 2014 the final deadline was 2018). The lack of funds had large impact on the project: even in 2013, OTI observed that, despite the funds of the deleted M6 project were re-allocated to M4, the MoM needed an exception to the stability pact to sustain the works.

M5

Five stops (out of nine) was the last declared objective before April 2015, the rest of the line after ¹²⁴. However, recent news claims that a more realistic objective will be three stops ¹²⁷.

M6

The design of the metro line 6 was deleted and part of the planned stops for that line were then integrated into the line 5 ^{123,126}. The funds of the line were instead re-allocated to the project M4.

Road Projects

BreBeMi

The highway will be delivered and will be fully efficient the 1st July 2014 ¹²⁴: in February 2014, the project is at the 60% of the total works (OTI 2014). The realization of this road is a demonstration of efficiency, in contrast with the other projects here presented, even if also this project has undertook stalemates: a long segment of the road was in fact impounded by Italian authorities because of an investigation about illegal garbage dumping (OTI 2013, OTI 2014).

Pedemontana

¹²⁴ <http://expo2015.quotidiano.net/cronaca/2014/02/18/1027299-cantieri-metropolitane.shtml>

¹²⁵ http://milano.repubblica.it/cronaca/2014/02/12/news/bus_navetta_al_posto_del_metr_e_autostrade_solo_a_tratti_le_promesse_tra_dite_di_expo-78326744/?ref=search

¹²⁶ <http://www.ilsole24ore.com/art/impresa-e-territori/2012-09-13/expo-corsa-controtempo-064122.shtml?uuid=AbDDflcG>

Only the first lot of Pedemontana (15 kms) will be delivered before the beginning of Expo ¹²⁴. The delays of Pedemontana are due mainly to a period of stop of the works between 2012 and 2013 (during which the project has risked several years of delay) because of the difficulties in having the financial closing: at the end of 2012 the management of the project was not able to gather the €1,9 billion needed (OTI 2013).

Tem

Tem will be probably ready before 2015, since the declared progress of the project in February 2014 is 80%: the 30th of June 2014 works will be concluded, the road will open in May 2015. ^[182] The main problem had been to guarantee all the funds necessary to complete the works: in November 2013, however, the equity of the company developing the project (Tangenziale Esterna S.p.a.) was increased from €220 million to €465 million, in this way enabling the project to have access to €330 million allocated by “Decreto del Fare” (OTI 2014).

Rho – Monza

The road passes through several municipalities that are opposing against the project. Moreover, the authorization procedures had proceeded very slowly (OTI 2013). The environmental authorizations had been obtained only in July 2013, while the urban authorizations were obtained in October 2013 (OTI 2013). The first lot will start in March 2014, while for the other sections of the road Commissario Unico used his powers to speed the expropriations of the necessary lands. The possibilities for the road to be available for Expo are minimum ¹²⁴, also because different pressure groups are asking for redesign a part of the project as an underground road ¹²⁷.

Zara – Expo

While the first half is currently under construction while for the second half the MoM (after having allocated €60 million) guarantees an imminent start that will enable to conclude the project before April 2015 ¹²⁴. However, one of the segments of the road was completely eliminated from the projects and the project was able to obtain funds only thanks to the emergency decree “Destinazione Italia” of December 2013 (OTI 2014)

Rail Projects

Rho - Gallarate

In the meeting of “*Tavolo Istituzionale*” of the 18th February 2014, the project was eliminated from the list of one Expo-Related ¹²³. One of the biggest issues that affected the project, having a heavy role in its cancellation, is the appeal of the “civic committee” of the municipalities of Rho and Parabiago. The Italian court confirmed that there were differences between the initial project presented (and accepted, on the base of Italian environmental standards) and the definitive project. The development process of the project had consequently been stopped (OTI 2013).

Extension rail line to Malpensa Terminal 2

¹²⁷ <http://www.ilvelino.it/it/article/2014/01/22/rho-monza-ministero-ambiente-chiede-progetto-interramento-tratto-paderno-dugnano/ac7eb0ae-0d90-40b4-84af-ba30e8069c84/>

The project will be completed, but not in time for Expo: the final deadline for the works will be December 2015¹²⁴. For this reason, in the meeting of the 18th February of “*Tavolo Istituzionale*” the project was eliminated from the lists of “*Essential*” and “*Connected Projects*”¹²². It is important to notice that the project will be completed, since the funds (public and private) have already been allocated, but it will be completed only after the winter of 2015¹²⁸.

Going back to the list of “*Essential*” and “*Related*” projects, all the issues and changes explained above have dramatically affected the lists. As we will see, the lists of the projects became shorter. Another fact easily noticeable is the strong reduction in the global costs, with respect to the ones forecasted in the Candidature Document. It happened not because of high efficiency in using resources but because of a strong reduction in the number of projects to be completed.

“*Essential Projects*”, global costs €1.482 billion:

- Exposition Site construction and “*Water Way*” (the “*Land Way*” project had been cancelled at this point):
- Urbanization Work (cleaning and preparing activities on the site);
- Buildings on the site
- Cluster pavilions construction
- Thematic areas
- Water-delivering infrastructure for Exposition site
- *Water Way*
- Italian exposition pavilions construction
- Works for the connection to the site
- Link SS11 – “*Molino Dorino*” – “*Autostrada Laghi*”, Lot 1 (Project n° 7a of the list of 2010) and Lot 2 (Project n° 7b);
- Adjustment of the junction “*Autostrada Laghi*”, Project n° 7c;
- Link SS11 – SS233, Project n° 7d;
- Parking (projects 9a – 9d)
- Metro Line M4.

“*Connected Projects*”, global cost of €10.084 billion:

- Metro Lines:
- M5 and M6 projects.
- M4 segment “*Lorenteggio – Policlinico*”;
- Road Projects:
- BreBeMi;
- Pedemontana;
- Tem;
- Rho - Monza;
- Works on north segment of SS233.
- Adjustment of the junction “*Autostrada Laghi*”, Project n° 7c, and Link SS11 – SS233, Project n° 7d (which previously were both “*Essential Projects*”);

¹²⁸ <http://www.ilgiornale.it/news/malpensa-996453.html>

- Link SS33 – SS11
- Link “Zara – Expo”, previously not included in the list;
- Others:
 - Viability “Via Cristina Belgioioso”, Project n° 4 of the “Essential Work” list in 2010;
 - Parkings P1 (Project n° 9a), P2 (Project n° 9b), P3 (Project n° 9c), P4 (Project n° 9d). All of them were previously considered essential work;
 - Interchange in “Fiera Milano”: rail-way project, previously not included;
 - Reilway:
 - Strenghtening “Rho - Gallarate”;
 - Y and X Joints in Busto Arsizio (two separate projects);
 - Strengthening line Saronno – Novara – Malpensa;

6.2.1 *The state of the projects: Conclusion*

From our prospective the issues that has emerged from the analysis performed are clearly coming or generated by an inefficiency in managing the “Essential” and “Connected” projects, that over the years have been cancelled, have been subjected to delays and criticisms by the legal or public institutions (environmental causes, regulation bodies, etc.) and that have been characterised by over costs. Therefore, we consider reasonable to dig in this direction in order to understand better the nature of the project changes.

The following table summarizes what explained above:

Initial Projects	Project will not be implemented for Expo 2015	Projects with changed priority	Projects significantly changed or reduced for Expo
<i>(the full list presented by government in 2008)</i>	<ul style="list-style-type: none"> • “Land Way” • Metro Line M6 • Metro Line M1 • Rho – Gallarate Railway • Link Terminal 1-Terminal 2 Malpensa 	<ul style="list-style-type: none"> • Via Cristina Belgioioso • Parking P1, P2, P3, P4 • Variant of SP233 	<ul style="list-style-type: none"> • Metro Lines M4 and M5 • Variant of SP233 project is reduced to the realization of a limited section • Residential Village project will be realized with a limited number of accommodations • For Pedemontana project is considered only the first segment • Zara-Expo (Lot 2 will not be completed)
Total: 36	5	3	6
100%	13.9%	8.3%	16.7%

Table 30: Summary of the evolution of the list of Essential and Related Projects

Basically, from these numbers it is possible to conclude that only 60% of the projects planned survived from their initial plan. Being in 2014 we can add that, even though they have not been changed so far, it does not protect them from delays and problems during the remain phases of implementation and of course from future changes, especially if urgent decision-making will be required (OTI, in 2014, claims that Metrlo line M1, Rho Monza and Zara Expo have high risk to not be completed given the strict deadlines. Looking at the other projects, we can add that all

the projects supposed to be finished in April 2015 have no contingencies and so carry high risks).

The weak point of these changes is that the projects (which have been cancelled or changed priority) were initiated and it means that they took a big portion of money from the Essential Projects budget (reducing it by 63%), by this cutting money from healthy projects.

The issues that determined this situation were multiple:

- Normal problems of Project Management (e.g. bad weather in the site);
- Legal issues (controls, lawsuit, as it happened in the exposition site);
- Long authorization process (as in the case of Rho-Monza road);
- Opposition by citizens (in the Darsena project, part of “Via D’acqua” project);
- Need to re-design projects (for citizens pressure, like Darsena, Rho-Monza);
- Lack of public funds or necessity to integrate public funds, in the case of projects financing (in the highways construction, in the Metro line projects);
- Inability to quickly react, establishing priorities and developing alternative plans.

However, the issues in the projects analyzed are the normal condition: 40% of the projects are late, delayed or different from plans and of the remaining 60% many have very strict deadlines to respect in order to be completed, as previous mentioned. Moreover, the few cases of projects that will be completed for sure or which have been able to avoid (at least for now) to be cancelled are characterized by “emergency” saving or peculiar conditions:

- For example BreBeMi, which will be completed on time, is a project that started more than 10 years ago. It will be completed before Expo and the event helped in push it to the final phases, but considering the overall lifecycle, even Brebemi project is late;
- Many projects who were lacking funds had been saved by three special laws signed in 2013: “Decreto Del Fare”, “Fondo Unico” and “Destinazione Italia”. These three laws allocated new funds re-allocated funds of cancelled projects to other Expo projects and gave guarantee to companies and privates involved in the event.
- Finally, the president of Regione Lombardia and the *Commissario Unico* had been able to use their power to speed up authorization process, avoid too long lawsuit and to overcome certain procedures (this happened in the site, for the procedures of Rho-Monza and in other cases).

Basically, we can see a highly risky and instable situation that can significantly harm the results of Expo 2015.

However, it is important to notice that the problems in projects development are not a prerogative of Expo projects. According to Assolombarda, of 24 infrastructural projects in Lombardy monitored in eleven years old, 5 were completed (for a total of 8 billion euros), 10 are under construction (cost \$ 16 billion, with current availability of 6 billion), while the cost of those to start is about 4 billion, but with a coverage of just over one billion. If we compare the actual situation with the one of 2011, only one project was completed (the railroad Saronno-Seregno) while 11 works have been advances but without being completed and 8 remained

almost stationary ¹²⁹.

6.3 ***Governance: Evolution and Analysis***

After analysing the main facts and after having assessed the progress of Expo, we would like now to analyze the Governance settings of the Exposition.

As has been shown in the previous parts of our analysis, Expo 2015 has significant amount of imperfections from the organizational point of view. This fact makes essential to analyze one of the possible root of these problems, which is the managerial mechanism of the event – the governance.

First of all, the aim of this section will be to show the dynamicity that characterizes governance of Expo 2015.

The main objective of this part of analysis is not only to give the comprehensive view on the composition of the managerial mechanism of EXPO, but also to see it through various models for the classification and analysis of governance mechanisms, offered by the literature and best practise documents, in order to better demonstrate advantages and disadvantages of its structure and actor composition.

Governance Settings

According to the timeline, it is basically possible to identify three important phases, which define three configurations of the Governance of Expo: in the following paragraphs we will summarize the laws presented in the timeline regarding those configurations.

1. Bidding Committee

The Bidding Committee had been active from the 16th of September 2006 to the 1st of April 2008, when it became Organising Committee. The Organising Committee had then been released after the 1st December 2008, when Expo 2015 S.p.a. was constituted (Chapter 6, Candidature Document).

In its two forms, it has pursued different goals:

- As “Bidding Committee”, its role was to support the candidature of Milan. It had also the role of writing the candidature document, supported by other committees.
- As “Organising Committee”, its role was, once the bidding would have had a positive outcome, to “process all the organizational, operational and financial resources necessary to realize Expo 2015”.

The Bidding Committee was composed by MoM, PoM, RL, CCIAA, “Ente Autonomo Fiera Internazionale Milano”, President of the Council of Minister, Ministry of Foreign Affairs and Ministry of Foreign Trade. A Managing Board, formed by representative from the different partners, administered it. Moreover, there were also a President, an Executive Secretary and a Treasurer that completed the body.

¹²⁹ <http://www.assolombarda.it/news/infrastrutture-a-rilento>

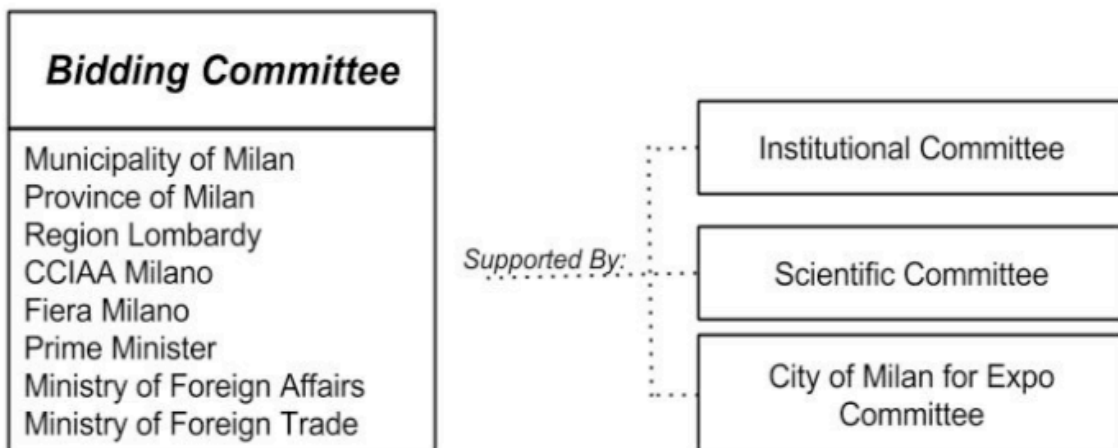


Figure 8: Bidding Committee composition

The Bidding Committee was supported in its activities by three committees (chapter 6, Candidature Document):

- Institutional Committee, “composed by business and financial organizations, social forces and civil society”. The purpose of this committee was to develop ideas, exchange views, promote initiatives and develop programs for organising and staging the event;
- “City of Milan for Expo 2015 Committee”, a task force with the purpose to develop themes and sub-themes of the event. This committee was formed by representative of Milan cultural institutions;
- Scientific Committee: made of prestigious authorities from the Italian and International scientific world. The committee had the purpose to support the Bidding Committee on the technical aspects.

Once Milan would have won the Bid, the Bidding committee was supposed to become the Organising Committee. Organising Committee, according to Ch6 of the candidature document, had to be a “single public company, governed by private law” with the objective to oversee design and construction of infrastructures related to Expo and to organise the event.

In the following picture, we can see as the Organising Committee structure was represented in official documents (Candidature Document).

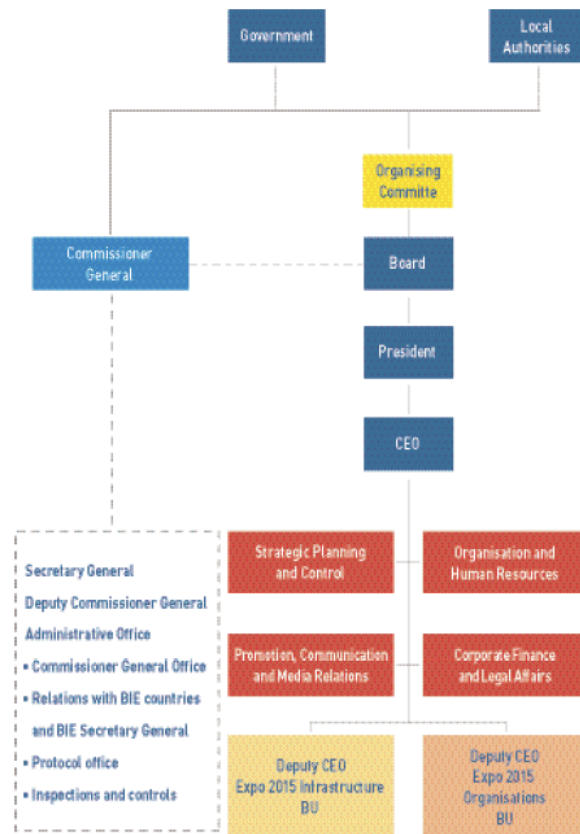


Figure 9: Governance Structure according to Candidature Document

The committee should have been supported by a “Commissioner General”, who had as its roles to interact with the Board of the Organising Committee, with the Government and the Local Authorities of Lombardy. Moreover, commissioner general was supposed to have control role over the activities of the Organising Committees and a diplomacy/communicating role with participant countries and BIE.

The board of the organising Committee was instead in charge of Expo realization (infrastructure and organization) and it should have been composed by Italian Government, MoM, PoM, LR, CCIAA, Fondazione Fiera and eventually other institutions.

Basically, Organising Committee was conceived as an *ad-hoc* management company for the event: as we will see in the following governance configurations (the second and the third one), this indication had been taken in account in structuring Expo 2015 S.p.a., the management company of the event, even if other roles were added to the governance structure and the role of “General Commissioner” was slightly change in its real-world form.

Another important role defined during this phase of the Expo is the COSDE. COSDE was not part of the roles defined in the candidature documents: the decision of including it was taken by the government in June 2008, and the mayor of Milan was appointed as COSDE. The COSDE was attributed with special power to support the committee and to speed up preparatory works. These powers include the possibility to waive a series of laws regarding urban planning and authorization procedures for infrastructural projects, if necessary.

While Bidding Committee can be considered the first real governance structure for Expo, Organising Committee can be seen as a transaction setting. As the Expo entered in a more

active phase of planning and development, the governance setting had indeed been changed, enriching existing roles and adding new authorities, but we will see how the Organising Committee structure has affected the definition of the model.

2. Establishment of Expo 2015 S.p.a. & Double-Commissioner

With the DPCM of the 22nd of October 2008 it was defined the governance structure that characterized Expo in the first years, from 1st December 2008 till the 24th of May 2012.

The DPCM of the 22nd October 2008 basically took and expanded the governance based on the “Organising Committee” and the General Commissioner suggested in the Chapter 6 of the candidature document. In particular, three different commissioners will be appointed and two coordinating commissions will be added to the Governance:

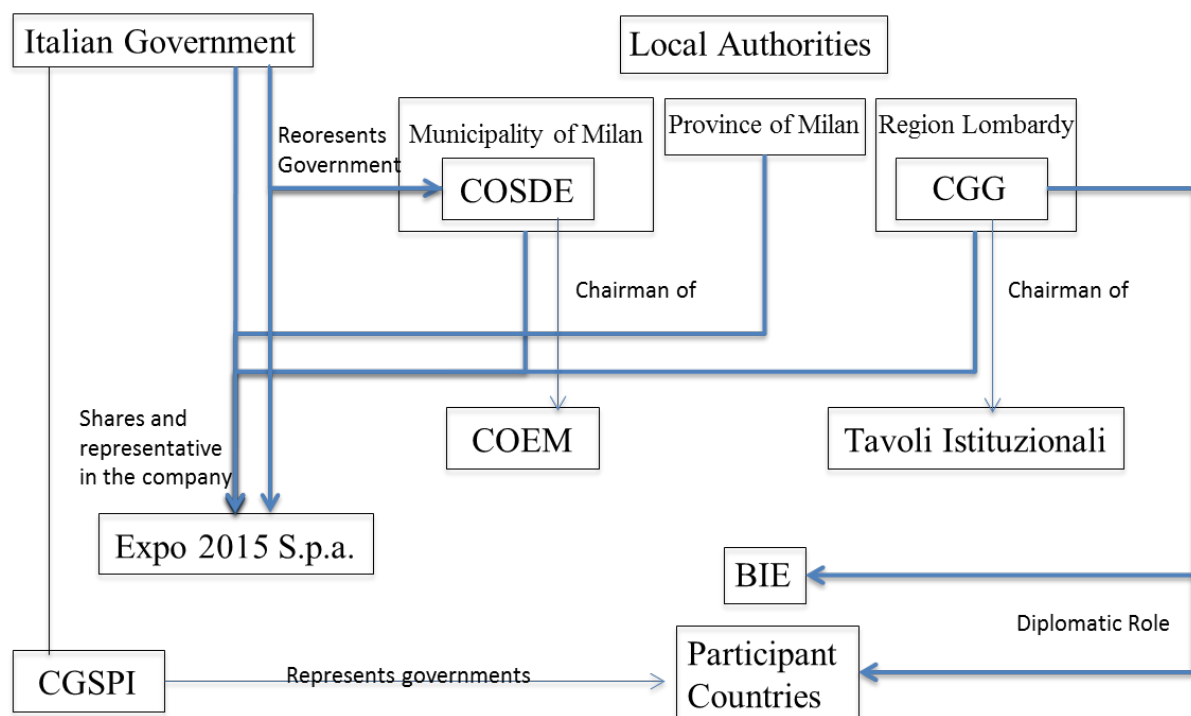


Figure 10: First Version of the Governance Structure

- Expo 2015 S.p.a.: it is the organising company of Expo constituted in 2008 and participated by Ministry of Economy, CCIAA, PoM, MoM, LR. It is a private company in charge of “Essential Projects” of Expo and in charge of the organization of the six months of the Event. For this reason, it is recipient of public funds, it has to draft yearly budget. Moreover, it can use the technical offices and of personnel of public institutions involved in the projects.
- This company basically took the place of the “Organising Committee” described in the Chapter 6 of the candidature document. The 1st of December 2008 President and representative of the different participated were appointed. The 9th of April 2009 also CEO and Board of Directors Members were appointed.
- COSDE: it represents the Italian government, it has supervisory activities and refers to the President of Council of ministers and it chairs COEM. Mayor of Milan is appointed to take this role. Moreover, the COSPE participates to CIPE meetings to periodically refer about

the progress of the works.

- CGG: it has a diplomacy role, communicating with participant countries and with BIE. It appoints the CGSPI. President of RL is appointed to assume this role.
- CGSPI, which represents Italian Government as participant to the Event and it is responsible for the management of the Italian Exposition spaces. Moreover, it has the responsibility to control that the participants countries will respect agreements and rules in their exhibition spaces.
- COEM: it has a politic - coordination role. COSDE chairs it and decides for the participant. It should be composed by representatives of cultural, social and business institution. Its goals are to guarantee coordination and consistency among initiatives developed by different actors. Moreover, it has the objective of guaranteeing the consistency among plans (Masterplan) and actions taken. Its functioning is not clear and well-established: COSDE has the responsibility to decide for COEM organization and processes.
- *“Tavolo istituzionale per il governo degli interventi regionali e sovraregionali”*: chaired by president pro-tempore of the RL chairs the table. It is attended by the Special Commissioner, the MoM, the Ministry of Economy and Finance, the PoM, the municipalities of Rho and Pero, the CCIAA. Moreover, other ministries and local authorities can participate. It takes care of the planning and implementation of regional and supra-regional activities related to the event Expo Milano 2015, as well as initiatives and activities relating to the works connected on areas other than those relating to the Expo site 2015.

As COSDE the pro-tempore mayor of Milan was appointed, while the CGG was the pro-tempore president of RL.

The security of the execution phase and the control over potentially dangerous criminal organization infiltrations will instead be managed by:

- CCASGO, established in January 2010 and formed by representatives of public organs and by representatives of the ministries;
- GICEX, which will collaborate with CCASGO and police forces and expert in managing Mafia and criminal organizations compose it.

Those two authorities have monitoring role over companies participating to the bidding, procedures and relevant data exchange. They were established with a joint decision of the Italian Ministries of Interior, Justice and Transport, the 23rd of December 2009. Their work has been based from 2010 till now on security guidelines that were, however, published only in April 2011.

3. *Unique Commissioner*

During the first years of Expo 2015 development, however, several issues have emerged as the Exposition projects were running late.

The 24th May 2013 the Italian Government took the decision to attribute all the powers, the special powers (possibility to waive laws and procedures to speed up processes) and the responsibilities of the COSDE and the CGG to a unique commissioner, “Commissario Unico”. The DPCM of the 6th May 2013 will appoint the CEO of Expo 2015 S.p.a. as Commissario Unico and will make the other organs (CGSPI, COEM, Tavolo Istituzionale) consistent with

this new role (e.g. COSDE is declared chairman of COEM in substitution of COSDE).

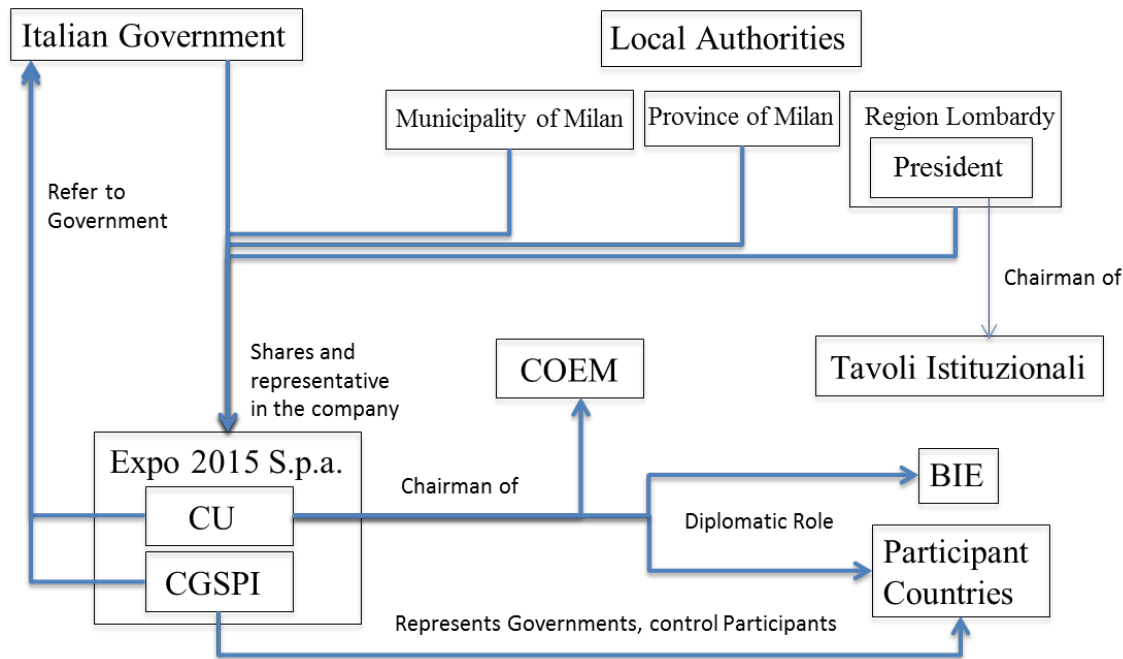


Figure 11: Final Governance Structure

“*Commissario Unico*” became in this way the only delegate for the Italian Government: he monitors the development of Expo, he is in charge of the communication with the President of the Council of Ministry, BIE and the commissioners from the participant countries.

“*Commissario Unico*” has three collaborators (the first two appointed by the Government, the third by the President of RL):

- “Secretary of the Government Appointed for Expo”, previously a role separated from the one of Unique Commissioner, after the 6th of May it becomes its collaborators with the purpose of dialoguing with Government and Local Authorities;
- “Expo Ambassador”, which partially assumed the former responsibilities of the CGG;
- “Regional Secretary Appointed to Expo”, with the role of managing the relationships between Expo authorities and Region Lombardy.

The decision of a unique commissioner follows a similar one of 2012: Diana Bracco, already President of Expo 2015 S.p.a., was appointed CGSPI with the DPCM of the 3rd of August 2012. In this way, the powers and the responsibilities of the two roles have been concentrated in a unique actor.

This third phase of Expo Governance is not very different from the second one in terms of roles and authorities, but it is very different because of the higher (Burke 2006) of powers. The *Commissario Unico* assumed in fact the power of two commissioners (COSDE and CGG). Fabrizio Sala, being appointed as *Commissario Unico* and already being CEO of Expo 2015 S.p.a., merges in this way the powers of the CEO and the powers of the two commissioners: three roles of the previous setting were concentrated in a unique person. Moreover, Diana Bracco merges the roles and the powers of President of Expo 2015 S.p.a and of CGSPI. In this way, the three commissioners roles of the initial setting were concentrated in the two people in

charge of the higher positions of the organising company.

6.3.1 Governance Analysis

The three configurations are fundamental in order to understand the performance and the issues of Expo 2015, so they deserve a more in-details analysis. In order to do that in a structured and efficient way, we will use some of the models and the classification tools identified during the literature analysis.

One of the observations that is easy to make about these governance comes from the research of O'Connor (2013). O'Connor made a distinction *between Expertise-based and Representation-based* boards in organizations. In the first case, which represents a best practice, the members of the board are selected basing on their quality, skills and experience. In the case of Expo, it is easy to see that this element is secondary in fact, while we can assume that the people appointed for each specific role can be selected also according their skills and experience, it is instead pretty clear how the board composition of the different authorities is always based, in first place, on the need to have the most important actors represented.

Expo 2015 S.p.a., COEM, *Tavolo istituzionale per il governo degli interventi regionali e sovraregionali*, CCASGO are in fact always composed, according to the laws and the decrees that define them, by representatives of different institutions and associations. Same consideration can be made for the COSDE and the CGG, which were appointed not on the base of their skills, but respectively as Mayor of Milan and President of Lombardy. Even the Bidding Committee was composed as a group of representative of important institutions.

There are multiple consequences for this first characteristic. First of all, as O'Connor observed, in this kind of setting stakeholder's interests and political decisions, not optimal solutions, dominate the discussions. Political game and conflicts of interests are then common and harmful for the decision-making process. Another consequence is that there is the need to involve expertise from outside: in this way, the Bidding Committee needed the support to three different committees to fulfil its objectives while Expo 2015 S.p.a. needs to have access to technical and specialist resources of the institutions is working with to complete its activities.

We can see the passage from the second to the third setting of the governance also as a way to limit this representative-based structure limits. With the third governance structure, indeed, three representative-selected roles (COSDE, CGG, CGSPI) were basically eliminated. However, in the board of the organising companies, in the COEM and in *Tavolo istituzionale per il governo degli interventi regionali e sovraregionali*, a representatives-based composition continued to dominate.

Continuing with the analysis of the skills of the major actors involved, we can also apply the model of analysis made by Renn (2005). According to this model, actors have mainly three characteristics: Assets, Skills and Capabilities: a network of actors, or a governance structure, should be evaluated according to how those three elements are present and balanced.

In the case of Expo 2015 the *Assets* and *Capabilities* are dominant over the skills, showing an unbalance in the governance settings:

Characteristic	Assets	Skills	Capabilities
Details of the	• Rules, norms	• Flexibility	• Relations

Characteristic	<ul style="list-style-type: none"> Resources Competencies and Knowledge Organizational Integration 	<ul style="list-style-type: none"> Vision Directivity (ability to drive and not only limit change) 	<ul style="list-style-type: none"> Networks Regimes (possibility to establish rules of the game)
What happens in Expo 2015	Most of the actors involved are public institutions. Public funds and public infrastructure are the available resources. Moreover, rules and norms are often shape by central Government and by local institution to ease the development of Expo. It is less easy instead to generalize about Knowledge and Competences of each actor: while most of the CVs of the actors chosen to represent the different institutions and groups are on-line, to evaluate their skills and ad-hoc research should be performed.	Directivity is the characteristic that shows the most the lack of “Skills” of actor. In the first two settings, it was difficult to find an actor able to lead change: those settings put all actors on the same level on the discussion and, while they were able to defend and make explicit their objectives and needs, it was difficult for them to impose a choice or drive the other actors on that path. Probably also in order to avoid this issue, the choice of Commissario Unico and the decision of increase also the powers of the CSGPI –President of Expo 2015 S.p.a. was made in response of this lack of ability of drive actions and decisions of previous roles.	“Capabilities” are the characteristic that is presented the most. While probably only the government has the possibility to establish rules and norms, in fact, every member has instead an high network of relations behind him. Moreover, if discussions and negotiations are lead by representatives, it is possible to expect an enlargement of the networks and relations resources. This is a typical characteristic of governance based on representatives instead of experts and technicians.

Table 31: Assets, Skills and Capabilities in Expo 2015 according to Renn (2005)

Again we can assume, as mentioned in the scheme, that the choice of moving from the second governance setting to the third one was made mainly in order to overcome the lack of directions and the limits of a governance (and so a decision-making process) based not on knowledge and technical skills, but on personal interests and goals, that typically lead to long decisional process and late, suboptimal decisions. The fact of merging CGG, COSDE and CEO of Expo 2015 S.p.a. in a unique person and the fact of merging CGSPI and President of Expo 2015 S.p.a. in another actor basically create two roles which have all the three characteristics (Assets, Skills and Capabilities) and that can lead the Expo development.

We can use the research of Renn (2005) to classify also culture of the boards, besides its composition and its characteristics. Renn identified four approaches: *Adversarial* (decision-making is an open forum of discussions), *Fiduciary* (public can suggest and propose, but not join the decisional process), *Consensual* (closed negotiation, selected actors) and *Corporatist* (a more transparent version of the Consensual).

While the Candidature Document, with the Bidding Committee supported by three committees

of experts, public and representative of numerous heterogeneous institutions, seemed to let space for a *Adversarial* or *Fiduciary* approach, the two later settings were instead much closer, hovering between *Corporatist* and *Consensual*.

In the case of the Bidding Committee, according to its structure as described in the chapter 6 of the Candidature Document, seemed that there was the willingness to define procedural rules and to make informed decisions supported by multiple actors (*Adversarial*), or at least to evaluate public inputs (*Fiduciary*). Mutual agreements, stakeholders and experts involvement seemed to be the path chosen (those three are characteristics present to different extent in both the approaches).

The second governance setting and even more the third, instead, showed a completely different paths. The main entities (COSDE, CGG – later Commissario Unico- , COEM, *Tavolo Istituzionale* etc.) are in fact formed by a closed group of actors (Government, Lombardy Local institutions, CCIAA are always present with a dominant role, other actors can support them with minor roles in certain cases).

Corporatist Approach seems good to describe culture of Expo Governance: the decision is closed, but there is little space for interest groups. The public control over the process is limited, but public can have good visibility. However, in many cases it is more corrected to use the more closed *Consensual Approach*: negotiation often is beyond closed doors and the process seems more oriented to create solidarity and collaboration between the closed group and then to communicate with the public focusing on the key actors interests. The process in this second approach relies mainly of key actors, which are not selected for they effective skills or capabilities, but for their reputation.

The analysis through this approach peripherally touches a topic that is very important, according to Mega Events scholars: public participation. Expo seems to be very poor on this side, with a decision-making process characterized and dominated by few, powerful public actors.

A final remark regards the public-private balance: Expo Governance is state-centered, the state produces policies, sets structures, defines roles and decides for the involvement of non-governmental institutions. The main engines of Expo are the laws and the decrees of the Italian state, regarding actors and their roles, funds and policy-settings, while other decisions are only consequences (see the appointment of Commissario Unico, or the big debates about “Stability Pact” and Italian work-market place laws, which were able to stop and slow down local decision-making process).

6.4 Interviews

For the projects presented, a strong documental and news research have been coupled with interviews, in order to extract a deep understanding of the initiatives and of their position in the network of Expo 2015 projects.

Essential projects have been very difficult to be found as stand-alone initiatives, as we initially thought they would be. They tend instead to group around “*Pivotal*” initiatives, which have a consultancy-networking role and that ease “*External*” projects development and coordination.

With “*Pivotal*” initiatives we mean initiatives that tend to propose themselves as a reference for actors that want to be involved in Expo 2015, supporting them in developing autonomous projects. Examples in this chapter will be Tavoli Per Expo, Sistema Como 2015, Piattaforma MiTi and, to some extent, Explora.

We decided, instead of evaluating several, autonomous projects, to give bigger room to these “*Pivotal*”, coordinating initiatives. As a consequence, “*External*” projects have been analyzed from a “*Pivotal*” point of view, while giving much more attention to characteristics and role of the “*Pivotal*” initiatives.

Another observation that had been unexpected for us is that, also because of the presence of these “*Pivotal*” initiatives, the variety of projects and their autonomy resulted to be less accentuated. This does not mean that the projects are equal to each other: origins, topic, scope, actors and dimensions of subprojects have effectively resulted to be very different from each other. However, despite these sometimes-strong differences, it has been possible to find common patterns in how the projects are organized, developed, managed and put in an interconnected network.

This considerations, developed both during the research of the sub-projects to be analyzed, both during the interviews, had obviously affected the number of interviews made and, as mentioned above, also the kind of initiatives and projects selected for the analysis.

A last remark to be made regards the fact that, as already claimed in the framework, the interviews are very often not only made by a strict, rigid list of questions. In different cases, in fact, the meeting with the actors at the end resulted to be a discussion over the current state and the evolution of Expo. In the final reports, we thought significant to include also this kind of information.

The list of the projects analyzed, with the content and the results of the interviews will follow.

6.4.1 Tavoli Per Expo

Interview with:

- Giacomo Biraghi (Consultant for CCIAA)
- Alvise de Sanctis (Consultant for CCIAA)
- Massimiliano Zigo (Involved in the development of different areas of discussion of Tavoli per Expo)

Key Topics:

General overview of Expo 2015; Organizational structure of Expo 2015; CCIAA of Milan; Network of projects involved in Expo 2015; Interrelationships Among Expo Initiatives; Community involvement in organization; External Projects

	Examples.
Key Project:	“Tavoli per EXPO”
Role of the key Project:	Responsible for Economic Impact of the Expo 2015

Table 32: Overview of Tavoli Per Expo Interview

We acknowledged the existence of this initiative during a conference organized by Politecnico di Milano about the opportunities and the impact of Expo, during which Giacomo Biraghi gave a contributions about the opportunities of Expo and the role that Italian companies should have in exploit and enhance them. After this first meeting, we had the possibility to discuss during two different meetings with Giacomo Biraghi, Massimiliano Zigo and Alvise de Sanctis about “Tavoli per Expo” and the role of these initiatives in the development of Expo

Beyond explaining us the initiative “Tavoli Per Expo”, the two meetings were also very interesting in deepening some organizational aspects regarding Expo projects

We can introduce “Tavoli Per Expo” as an initiative with the aim of stimulate and coordinate the participations of people and businesses in Expo, supporting and helping in the development of business ideas ¹³⁰. Given the actors managing this initiative and its importance for the economic impact of the event, we can consider it as a “Supporting” project.

Inside Walls - Outside Walls Organization

The first part of the interview, made in order to describe the overall situation of Expo organization, has explained us some important organizational issues.

According to Biraghi, governance of Expo was very complex from the beginning and right now it is possible to identify till 38 different actors; Expo 2015 S.p.a. is only the main one. It has been decided then to circumscribe its action to organization and management of the event (“Inside the Walls”, using Biraghi’s expression), construction of main infrastructures and management of relations with participant countries and companies, as we already mentioned in the previous chapters.

All the other themes would have been managed “Outside the Walls”: other actors would have taken ownership of and responsibility for them. The idea from the beginning has then been to split the activities and tasks necessary for the Expo development, identifying themes and connecting adequate actors to each of them. One of the main “Outside the Walls” themes is the management of the economic impact, in term of creation of companies and job places and in term of increasing business activity.

CCIAA of Milan has decided to oversee this theme; given the fact that, for its characteristics, it was probably the more adapt association in managing it. The reasons why CCIAA can be the best organizations in managing this theme are mainly two:

- CCIAA was involved in Expo since the beginning, was part of the Bidding Committee, has a participation in the organizing company. CCIAA has then a great knowledge of Expo and its objectives, of the actors involved and has a bigger vision on the overall event development;

¹³⁰ <http://www.tavoliexpo.it/>

- CCIAA Milan, in its normal functioning¹³¹, has a monitoring, controlling, administrative and regulatory role over business activities in Milan area, so this is an association which has a great awareness and knowledge of the business environment in which Expo is generated.

Biraghi claimed that the main risk of this theme was that companies would have started to work autonomously but in a disorganized and messy way and not timely, damaging each other and the total impact of Expo: the number of companies and people potentially involved, the high number of different sectors possibly interested from the initiatives generated, the lack of reciprocal acknowledgement of the initiatives and lack of knowledge about Expo would have potentially brought to inadequate initiatives, to inefficient use of resources and to missed cooperation opportunities.

The decision of CCIAA of controlling the economic impact of Expo was taken in the early stages of the event but still this was not enough to avoid periods of stalemate. According to Biraghi and De Sanctis, this is a rough timeline of “Tavoli per Expo” evolution:

- 2009: Dott. Bruno Ermolli (member of the council of CCIAA), after the successful candidature of Milan for the Expo, decided to take control over the economic impact theme, claiming that the success of the Exposition was more related to the economic impact rather than to the number of tickets sold;
- 2010: The initiative “Tavoli per Expo” started;
- 2010/2011: Those years are described as a period in which there were poor clarity and little direction about Expo, so “Tavoli per Expo” carried only institutional work, setting objectives and starting to set the base for development of initiatives;
- 2012/2013: Those were instead the years of major activities, where tables of discussion were set and participations grew:
 - The growth of Expo 2015 enabled “Tavoli per Expo” to assume full control over the theme of the economic impact. Ideas were gathered, participation of other actors increased, the initiative started to be developed in a more analytic and structured way;
 - CCIAA, in collaboration with Expo 2015 S.p.a. and universities started to develop reliable and accurate report about Expo economic impact;
 - In the second semester of 2012, four important topics started to be discussed: Tourism, Internationalization, Creation of Businesses and “*Fuori Expo*”¹³²
 - Meetings started to be more frequent, involving companies and start-up (e.g., the 19th November 2013, in a table for encouraging and improving discussions among young entrepreneurs and businesses, 50 start-ups were presented);
 - Moreover, the quality and the number of initiatives developed made think about the possibility to dedicate space in the Expo site to the best initiatives.

Tavoli Per Expo

“Tavoli per Expo” is managed by CCIAA through consultants (Giacomo Biraghi and Alvisè de Sanctis are two consultants managing the initiative). The Budget for the project is declared each year: the costs are mainly management and administrative. The cost of the initiatives is roughly

¹³¹ <http://www.mi.camcom.it/web/guest/chi-siamo>

¹³² <http://www.sistematico2015.it/it/>

€200-300 thousands per year, while the cost of CCIAA from 2008 to 2013 had been less than €2 millions.

“Tavoli per Expo” organized the discussions about economic impact of Expo 2015 around seven main areas:

- *Accommodation Capacity and Welcoming*,
- *Energy and Environment*
- *Credit*
- *Health*
- *Art and Culture*
- *Agro-food*
- *Charity and non-profit*
- *Young People and Work*

For each area, meetings are organized, where people and companies can expose their ideas and discuss them. There are no ranking or funds: the main objective of “Tavoli per Expo” is to have consultancy and networking role, enabling better communication and coordination among projects, easing communication between projects and banks and between projects and media.

Examples of Projects

It is easy, from the web site of “Tavoli per Expo”, to observe the high variety of projects developed.

Looking for example at “*Accommodation Capacity and Welcoming*” area, it is interesting to notice projects like *Gambero Rosso Travel*¹³³, developed by well-established international companies (Gambero Rosso and Viaggi Dell’Elefante S.p.a.) and oriented to touristic packages high-end customers, close to projects like “*Ostello Bello*”¹³⁴, in which a young company proposed an initiative with a total expected cost of maximum €600 thousands, oriented instead to the development of low-cost accommodations. Other projects, like *Eat*², aimed at the development of an innovative system, based on the use of smartphone apps, to increase number of customers for restaurants, add an innovative dimension.

In these first three examples we can already see technological project close to typical tourism projects (packages), infrastructures and services, high-end and low-end customers orientation, till apps oriented not to final customers, but to restaurants (B2B projects)

Analysing instead “*Energy and Environment*”, we can see projects like “Car Sharing Milano”^[7] and projects like “Milano Emissioni Zero”¹³⁵. These projects show how the technological contents of the initiatives can be extremely high, but also how projects developed vary from transportation projects, oriented to final customers and developed by established companies like A2A (Car sharing), to innovative, experimental projects, based on recently patented technologies

¹³³ http://www.tavoliexpo.it/Accoglienza_E_Ricettivita/Progetti/Gambero_Rosso_Travel.kl

¹³⁴ http://www.tavoliexpo.it/Accoglienza_E_Ricettivita/Progetti/Eat2.kl

¹³⁵ http://www.tavoliexpo.it/Energia_E_Ambiente/Progetti/Milano_Emissioni_Zero.kl

and oriented to the construction of new infrastructure for energy production (Milano Emissioni Zero).

Looking at, one of the themes most related with the one of exposition “*Agro-food*”, we can see again great heterogeneity. For example, one of the project is based on the idea of creating a pool of companies and associations experts in the food logistics, in order to develop a service for participants countries based on existing knowledge and infrastructures, instead of creating new companies and building new infrastructures (warehouses and deposits) ¹³⁶. Agrisolar projects instead wants to call Italian companies, expert in food sector, in order to contribute to the creation of a new greenhouse park in China with the ambition of change world food industry ¹³⁷. Finally, with *Wineamore* we have an app-project with the ambition of substitute the wine-menu un restaurants with an app that gives more visibility to the wine production-chain and that can generate grater marketing opportunities for wine producers as well as for wine sellers and restaurant ¹³⁸.

Finally, another interesting topic can be “*Charity and non-profit*” ¹³⁹, where we can see projects like “Adopt a Country”, to increase connections among Italian businesses, developing countries and ONG, but also projects like “*Terza Primavera*” ¹⁴⁰, oriented to the development of Apps which can be more easily used by elderly people, in order to use new technologies to support also the people who are less ready to adopt them.

In general, while “Tavoli Per Expo” is an initiative focus on networking an consultancy and geographically located in Lombardy and Milan, the initiatives developed are national and international, for Milan or that can be extended worldwide, oriented to the creation of services for the Expo or with the objective to create long term infrastructures, collaboration and knowledge.

Insights and future research opportunities

Projects as “Tavoli per Expo”, given their central role in managing multiple actors and heterogeneous projects, can be an optimal point of view in order to develop a better knowledge and comprehension about impact of Mega Events. It would be valuable research to make an analysis of the total investments and the total impact generated by the projects developed, in order to be able to better measure the value added by Expo.

Moreover, in order to enhance the organizational knowledge regarding events, also the number of actor involved and how their interactions contribute to the development and the implementation of the ideas are topic that should be better discussed.

Focusing on our research, it would instead be fundamental to understand the causes of the two years of “poor clarity and little direction about Expo” and how they affected the effectiveness of the initiative and the impact generated. The relation of the initiative with Expo 2015 s.p.a. and the Inside the Walls-Outside the Walls setting is another important topic to be developed.

¹³⁶ <http://www.tavoliexpo.it/Agroalimentare/Progetti/Progetto1.kl>

¹³⁷ <http://www.tavoliexpo.it/Agroalimentare/Progetti/YEMIN-AGRISOLAR-PARK.kl>

¹³⁸ <http://www.tavoliexpo.it/Agroalimentare/Progetti/Wineamore.kl>

¹³⁹ http://www.tavoliexpo.it/Solidarieta_E_No_Profit/Progetti/PMI_Adozione_Paesi_In_Via_Di_Sviluppo.kl

¹⁴⁰ http://www.tavoliexpo.it/Solidarieta_E_No_Profit/Progetti/TerzaPrimavera.kl

6.4.2 Sistema Como 2015

Interview with:	Erika Bignami (CCIAA consultant in charge of “Tavoli per Expo”) Marco Ballabio (CCIAA consultant in charge of “Tavoli per Expo”)
Key Topics:	Benefits for Como (and for areas surrounding Expo 2015); Tourism impact; Transportation; Legacy of EXPO for Como.
Key Project:	Sistema Como 2015
Role of the key Project:	Platform to connect local businesses with countries-participants in Expo 2015 for construction, maintenance, staffing services during the event. Moreover, platform to support the development of projects that can improve offer of Como during Expo.

Table 33: Overview of Sistema Como 2015 Interview

The interview took place in Camera di Commercio di Como with Erika Bignami and Marco Ballabio, who are managing the initiatives for the CCIAA of Como. The acknowledgment of the initiative came from a previous collaboration with CCIAA Como and with “Sistema Como 2015”.

The contribution of Erika Bignami and Marco Ballabio had been very useful, beyond the fact of explaining us “Sistema Como 2015”, in understanding how an event like Expo could impact and stimulate activities in a territory which is not bordering, but not the main location, of the event.

The Origins

The first International Participants Meeting of Expo took place in Como, in 2011. Bignami identifies this as the moment in which the territory of Como started to analyze and to evaluate the possibility to participate in the event.

In a first moment “*Thematic Tables*”, work-groups and other tables for discussion had been set up in order to coordinate activities. These first initiatives were employed in order to understand how Como could participate in Expo and exploit the benefits generated by the event: different actors, coming from companies and public institutions, participated in order to gain deeper comprehension of the event and propose ideas. In 2011 there had been the opportunity to unify these groups and to make their effort more concrete. Sistema Como 2015 is the result of this unification.

Right now, CCIAA Como, Province of Como, Lariofiere¹⁴¹ and several municipalities from the area of the Como Lake participate to Sistema Como 2015, together with about one hundred local companies and business activities.

Sistema Como 2015

The main purpose of Sistema Como 2015 is to connect local companies and business activities with participant countries to the event, in order to propose the entrepreneurial system of Como as

¹⁴¹ <http://www.sistemacomo2015.it/it/>

a service-provider for the countries that will need construction services, maintenance, staffing services and others for the six months of the event.

The idea is to increase the quality of the offer of the territory making the companies work together, in order not to sell singular services to the participating countries, but to sell packages of services that can go from the design to the dismantling of the pavilions, from the accommodations and transportation of personnel to catering services.

According to Erika Bignami, Sistema Como has two different streams of work that are necessary to implement the main goal of the initiative:

- Internal: from the half of 2012, Sistema Como 2015 started to gather companies and associations, to inform them, to encourage them to participate to Expo and to collaborate with each other in offering and creating high quality services-packages.
- External, which is made of:
- Relationships with Expo 2015 S.p.a. Sistema Como 2015 communicates mainly with one contact person internally to Expo 2015 S.p.a., even if for specific needs they often have to address to other actors. The evolving governance, from the point of view of communication, has been indicated as a weakness of Expo 2015 organization.
- Relationships with Participants Countries: initially a greater effort had been necessary, since there were not one contact person for each country. For this, the first contact and exchange of information with different participants used to take place in different ways (in Expo-related meetings and conferences, through different diplomatic channels). In the last month, however, participants are getting more organized and structured and so communication became easier: now participants typically have a team or a role specifically dedicated to manage relationships with actors like Sistema Como 2015.

Sistema Como 2015 claims that in last months participants countries has started to ask for proposals for projects development. Initially these requests were not defined, but recently they started to be very precise: they ask for designers, architects, engineers for managing and supervising works, warehouses, accommodation, maintenance services and a great variety of other services.

Sistema Como 2015, in this context, has developed a Data Base of local companies. When a country develops a request, they simply ease the meeting between companies in Como and participants to the Event.

Also the cultural and entertainment events are areas of interest for Sistema Come 2015, which wants to make Como more attractive for Expo visitors in order to attract them and increasing the tourism. To manage this topic, groups of work have been set up to discuss about events, accommodations and touristic packages. Other discussions had been set up on the topics of Transportation, Environment, "*Expo-generation*" (related to the topics of work and young people).

Talking about the table of tourism, during the interviews it was highlighted the lack of direct public transportation between Como and Rho, the site of Expo. In order to overcome this issue, it is under evaluation even the possibility to develop a helicopter transportation system. Another

possibility that has been evaluated is the bus transportation: in this regard, it is possible to make an example of a project that Sistema Como supported.

In 2012, ASF ¹⁴², started the project “Destinazione Expo 2015” in collaboration with Politecnico di Milano in order to:

- Develop a transportation system to connect Como with Rho;
- Develop a smartphone application to enhance the quality of the service for Como tourists and ASF customers.

During this project, which was oriented to solve two issues that are considered critic for the capacity of Como to exploit Expo, Sistema Como 2015 had been very active in dialoguing with ASF and in giving opportunity to “Destinazione Expo 2015” to meet with other important actors, like political authorities and companies operating in the areas affected by the project (tourism, apps development) to ease the development of the project.

Expogeneration is another good example: from this table, discussing about work and role of young people in Expo, emerged the idea of occupying students and young people as volunteer guides for foreign tourism in Como.

As for Tavoli Per Expo, it is easy to see how projects developed range from collaboration with existing companies to volunteer initiative, from the creation of new resources (an app) to the creation of services relying on existing resources and capabilities (linguistic ability of students in Como).

In developing these projects, Sistema Como 2015 has to maintain constant and frequent relationships with Expo 2015 S.p.a., CCIAA Milano and, more recently, also Explora (that will be introduced later in the chapter, for developing a more adequate and coordinated touristic offer) and E015 (a digital platform, that will be introduced during Cefriel interview; E015 was for example part of ASF’s project design). According to the interview, the communication with initiative like Tavoli per Expo and Platform MiTi (that will appear later in the reports) are less frequent, despite the similarity of activities and goals and the potential synergies.

The last topic managed by Sistema Como 2015 regards the possibility and the modality of Como (as a touristic destination and as an economic system) to participate to the exposition, in order to gain international visibility during the six months of exposition.

One last interesting point addressed during interviews regards the legacy of Expo and how it is perceived by the area of Como. Here Expo is seen as an opportunity mainly for the possibility that it gives to re-think and re-plan the territory and its activities. In this optic, the effect of Sistema Como 2015 is not only short-term (to give to local companies the possibility to participate in the event) but it is also a long-term effect: the idea is to exploit the situation to force businesses and companies to work together, think as a system, to create a solid and reliable network of companies able to exploit opportunities and to survive to down-turn in the economy. Moreover, Sistema Como wants to give international visibility to this system, rather than to the single company or business, at an international level.

¹⁴² <http://www.cefrirel.com/projects/il-coordinamento-di-e015-piattaforma-ict-smart-city-expo-2015/>

Insights and future research opportunities

It would be very useful to better understand how an initiative like that can affect the participation of businesses in an event like Expo, both in term of number and quality of the initiatives: as for Tavoli per Expo, Sistema Como 2015 has indeed a central role in managing and coordinating multiple activities and actors that can be exploited for Knowledge Management purpose regarding Mega Events.

From an organizational point of view, it would be instead interesting to understand how a stronger and more continue connection with Expo 2015 S.p.a. as well as with other similar initiatives (“Tavoli per Expo”, “Piattaforma MiTi”) would have affect the impact of “Sistema Como 2015”.

6.4.3 Explora

Interview with:	Giuliano Noci (President of Explora)
Key Topics:	Tourism; Network of Touristic Organizations.
Key Project:	Explora
Role of the key Project:	A company to enhance the quality of the touristic offer of the Region Lombardy.

Table 34: Overview of Explora Interview

We acknowledged the existence of Explora while we were conducting researches on the facts and the main decisions characterizing Expo 2015. However, we gained the first proper comprehension of this company and its activities during a conference held in Politecnico di Milano during which Sergio Rossi (at the time already member of the Board of Directors of Explora as representative of CCIAA Milano) introduced Explora while talking of objectives and impact of Expo on Italian economy.

For the interview, instead, we had the possibility to discuss with Giuliano Noci, President of Explora, who, despite the fact that Explora was at the time of the interview in the early phases of its development and so many aspects of Explora management were under discussion, had been very helpful in making us better understand plans and goals of the company.

Our knowledge of the company comes then from Sergio Rossi, Giuliano Noci and it has been integrated with news regarding this recent Expo-related initiative.

Origins and Role of Explora

“Explora” was constituted the 2nd of August 2013 by Region Lombardy, CCIAA Milan and Expo 2015 S.p.a.. The company has the purpose to enhance the quality of the touristic offer of the Region Lombardy, in coordination with institutional companies involved in Expo 2015 Development.

According to Chiara Mammarella (see later in the chapter) Explora was born from an agreement between Expo 2015 S.p.a. and CCIAA, and later Lombardy joined the project. Moreover, according to Giacomo Biraghi, Tavoli per Expo had a central role in pushing for the creation of and *ad-hoc* company managing the tourism-theme, since the need for this company arose from discussions born during *tables* of discussions of Tavoli per Expo.

Consistently to what just said, CCIAA Milan has the 60% of the shares of Explora, while Region Lombardy (through the public owned company Finmeccanica) and Expo 2015 S.p.a. have both the 20%. In the future, Region Lombardy will have the possibility to acquire the share of Expo 2015 S.p.a. in order to reach the 80% of the participation and to have major control of Explora.

The objectives of Explora can be then summarized in two points:

- To enhance the value of the touristic offer during the period of Expo, increasing the number of visitors of the Event and the number of tourists attracted by Expo;
- To create a network of actors, an operating model and a touristic proposal that can be used also in the future.

The interview with Giuliano Noci has been useful in expanding and deploying the two objectives.

Explora will work in two phases:

1. The short-term phase, referred to the first point above, is based on the idea of developing tourist packages to attract visitors in the Expo and tourists in Lombardy. These touristic packages will be developed in an innovative way, since they will not be focused on visiting “places”, but they will be built around certain themes, like food, sports, art. They will be oriented mainly to international tourists, the main target of Explora, and the themes will generally be Expo-connected.

Explora will use the infrastructures and the resources of the local CCIAA branches spread around Lombardy to find partners, to develop packages but also to acknowledge and eventually involve already existing touristic projects (according to Noci, only relevant projects – namely, projects internationally oriented and consistent with Explora offer – will be involved).

Summarizing, the first phase of Explora will be Expo oriented, focus on international customer, will mainly affect Lombardy, geographically speaking, and it will try to generate a different kind of touristic offer.

2. The second phase of Explora will take place after Expo: the idea is to expand and to apply the model to Italy, not only to Lombardy. Explora wants to generate a long-lasting legacy with a new touristic system, which is more internationally oriented and offers more to the customers, a system that is based on spread collaboration among different tourist operators. Moreover, Explora itself wants to be a legacy of the events, being the company that can carry on this model (and this objective explains the contractual option owned by Lombardy Region to acquire the shares of Expo 2015 S.p.a.).

Insights and future research opportunities

Given the early phases in which the interview took place; we have few information about costs, organizations and projects developed by Explora. Being those elements essential in analysing a company, there are at the moment several limits in analysing the initiative.

The most interesting thing that can potentially be extracted from currently studying this company is how it is possible to develop and organize an innovative touristic offer that should be based on the involvement of many actors. Moreover, it would be interesting to understand how the creation of this company affects the touristic offer in different places.

For example Sistema Como 2015 is working of the creation of a touristic offer for the lake of Como in view of Expo 2015 and, as claimed by Erika Bignami, in the last months of 2013 they started to interact frequently also with Explora: it would be the interesting to understand how one initiative is affected by the other, and which results can be delivered.

6.4.4 Cefriel – E015

Interview with:	Maurizio Brioschi (Head of Digital Enterprise Division of Cefriel) Emiliano Verga (Researcher)
Key Topics:	IT Projects, Technology in Expo 2015; Ciefriel Role in IT development of Milan; Other Projects of Ciefriel
Key Project:	E015
Role of the key Project:	Digital Ecosystem, enabling the development of integrated software applications in order to enhance the quality of services to Expo visitors and tourist

Table 35: Overview of E015 Interview

As for “Sistema Como 2015”, previous experiences enabled us to acknowledge the existence of the initiatives E015 and the role that Cefriel has in it. However, we needed a deeper comprehension of this project. Two meetings with Maurizio Brioschi and Emiliano Verga had been fundamental in acquiring a full comprehension of E015 goals, principles and functioning.

These two meetings had been really fruitful also thanks to the availability and the courtesy of Maurizio Brioschi and Emiliano Verga in answering our questions and discussing with us had about topics that were not part of the initial set of questions submitted to them.

E015

E015 Digital Ecosystem is, as defined in its website, a “digital environment, open to cooperation, non-competitive, non-discriminatory and concurrent cooperation digital environment, enabling the development of integrated software applications”^{143, 144, 145}.

The goals of E015 are both long-term and short-term:

- E015 wants to ease the creation of applications and of ICT systems in order to enhance the quality of services to Expo visitors and tourist;
- E015 wants to be a legacy of Expo, leaving to Italy a digital environment and an operating way that can be replicated and re-used in the future.

¹⁴³ <http://www.cefriel.com/projects/il-coordinamento-di-e015-piattaforma-ict-smart-city-expo-2015/>

¹⁴⁴ <http://www.expo2015.org/e015>

¹⁴⁵ <http://www.e015.expo2015.org/>

The project was born in July 2010, when a protocol of agreements (“Strategic ICT projects for Expo”) was signed by Confindustria, Assolombarda Confcommercio, Confcommercio (Association of Commerce, Milan), CCIAA Milan and Expo 2015 S.p.a.. Expo 2015 S.p.a., as Management Company of Expo 2015, is now in charge of the project. The role of Cefriel is to provide the management company with the technical expertise and knowledge necessary to manage an initiative characterized by a high technological content.

The idea that generated the protocol of agreement and then E015 comes from other two Expo-related projects: “Tavoli per Expo” and “Gruppi di Lavoro per Expo” (Work-Groups for Expo, an initiative managed by Confindustria and similar to “Tavoli per Expo”: the idea is to merge contributions of different actors in order to identify, discuss and develop relevant topics regarding Expo). It is very interesting to notice how this kind of initiatives had so much effect in aggregating and generating ideas, contributing to the creation of E015 and Explora.

E015 is based on an innovative approach: the idea is not to create technological infrastructure, but to set rules according to which company can join the ecosystem. When in the ecosystem, companies can mainly do two activities:

- To publish *Services*, namely to share content and information (for example, timetables of trains, touristic information about certain area etc.)
- To publish *Applications*, so to use content and the information shared by other actors in order to develop new applications and new ICT system.

The importance of rules is related to the necessity to set a common language in managing the contents and the applications. Information shared, as well as application to be developed, must be described from companies sharing or developing it according to a format defined centrally, in order to ease the use of these elements.

The rules are defined by a Technical Management Board (TMB). Cefriel main activities regards the support the TMB, to manage evolution of the guide lines, to receive and process adhesion, to manage request for publishing contents, to control behaviour of companies which are part of the ecosystem and finally to spread the knowledge about this system. Expo 2015 S.p.a. has instead the ownership of the platform: the contract signed in order to join E015 is an agreement with Expo 2015 S.p.a.

Moreover, Cefriel was supposed, at least according to the initial model, to evaluate the quality and the effectiveness of the final output (which applications are developed, which contents are shared, users satisfaction, diffusion of the applications etc.). However Brioschi claimed that these are secondary activities with respect to the direct management of the platform.

For now, the project is mainly known in Lombardy and so the companies participating are typically coming from the area of Milan. However, the promotional activities for E015 are growing, supported also by other institutions (regions, Italian Pavilion Management).

The cost of joining E015 is null: as observed by Brioschi, the platform is innovative not only because of the way it enable sharing and cooperation, but also because it is free, differently from

similar solutions existing in the market. However, Brioschi claimed also that to set E015 model in this way was necessary for the success of the system in the context of Expo 2015.

The costs of sharing or using content from E015 are null also because costs of the platform are relatively low (€144 thousands for the first year, while in the following years the costs had been lower, mainly administrative and management costs) but the value created is potentially very high.

The examples of the projects will help in understanding this last claim.

Examples of Projects generated by Cefriel

On the site of E015 it is easy to see the high number of participants to E015 ¹⁴⁶.

We want to take as a first example a project managed by SEA (company managing airports of Milan), which Brioschi introduced to us as a good example of opportunities generated by E015. SEA, which “published its Services” (shared) in E015 platform the timetables of planes arriving and leaving its airports, has developed smartphone and tablets applications and has placed screens in its airport ^{147,148} showing:

- Road traffic in the area of Milan;
- Trains and Metro, reaching the airports, timetables and real-time situations;
- Buses timetables.

If a solution like this would have been developed outside E015, SEA would have had the necessity to develop economic and technological agreement (data format, frequency of update, maintenance of the data and of the system) with companies managing roads, buses, metro, train line. Through platform E015, instead, SEA had to sustain minimum investments, while exploiting information made available by Trenord S.r.l. ATM S.p.a. and other members of E015 with modalities (in term of format, frequency of update and other technical issues) which are already defined in E015 adhesion contract.

Looking at ATM S.p.a., we can see another project: the information totem spread around Milan in order to inform tourists on transportation, services and attractions ^[22]. Even in this case, we can see that with limited infrastructural investments a company can exploit information published by other actors (in this case Trenord S.r.l., SEA, Milano Serravalle and Autostrade Italia) in a previously defined format and on agreed sharing rules, to implement innovative services.

In both cases, we can see how E015 eases the collaboration among different companies for the creation of services that, with relatively low investments, can be valuable for several different customers (for example, the screens placed by SEA in the airports of Linate and Malpensa are expected to be able to serve 7.5 million of travellers per year).

¹⁴⁶ <http://www.e015.expo2015.org/esplora-i-contenuti/gli-aderenti>

¹⁴⁷ <http://www.e015.expo2015.org/esplora-i-contenuti/le-applicazioni/mami-schermi-aeroporto>

¹⁴⁸ <http://www.e015.expo2015.org/esplora-i-contenuti/le-applicazioni/mami-app-android>

Insights and future research opportunities

Given its level of innovativeness and its impact in short and long term E015 is a very interesting initiative, and it would be important to understand how it impacts on:

- Costs of Apps/ICT system development;
- Time for the development of Apps/ICT system development;
- Effectiveness of the final application.

Also during the interviews, indeed, the interest of Cefriel in understanding the economic value of savings and the value generated by E015 was highlighted.

Looking instead at our research, it is interesting to notice how this initiative is owned by institutions and companies already involved in Expo and how it was originally generated from other Expo-related projects. Moreover, even the companies participating in the platform are generally in common with other initiatives analyzed. This information let us understand how projects and actors are strongly interconnected in Expo 2015 settings. Obviously, it would be important to understand limits and advantages of this configuration.

6.4.5 Padiglione 0 & Events on the site of Expo

Interview with:	Davide Rampello (Artistic Director of Padiglione 0, Artistic Director for Show-Schedule of events in Expo 2015) Chiara Mammarella, Anna Castellanza (Planning & Controlling Division, Expo 2015 S.p.a.)
Key Topics:	Value behind of EXPO; Event during EXPO; Best Practice Comparison.
Key Project:	Padiglione 0
Role of the key Project:	The main entrance of the Expo site for visitors, one of the spaces in the Exposition site designed and constructed by Italy.

Table 36: Overview of Padiglione 0 Per Expo Interview

Given the necessity to deepen the knowledge of the management of the “Essential Projects” of Expo, we decided to analyze in a more precise way at least one of the project making part of the site of Expo. In doing that, we had two different interviews.

In the first one, Davide Rampello, as artistic director of Padiglione 0, explained to us the organization of the project, its objectives, how it can be fundamental in communicating some of the messages of Expo and in enhancing the attractiveness of the Exposition. Moreover, Davide Rampello, as artistic director of Expo 2015, introduced to us his role in organizing and shaping the schedule of the shows and events that will take place in the exposition site from May to October 2015.

In the first of the two interviews, Chiara Mammarella and Anna Castellanza gave us a more precise view about the organization of the projects on the site.

Padiglione 0

Padiglione 0 is the entrance of the Expo site for those visitors that will reach Expo 2015 by Metro and train, since it is the closest entrance to the metro and train stations in Rho. For this

reason, Davide Rampello claims that this project can be fundamental in making more valuable the experience of the visitors, stimulating their curiosity and introducing them to the theme of the exposition.

The project is very articulated, since it has to summarize and deploy the topic of the Exposition. It will be developed renouncing to the use of interactive attractions, in order to facilitate the quick flow of visitors. The pavilion will be structured on 12 rooms, each one inspired to Italian territory and each one with proper internal spaces (Rampello called them “Caves”) to explain and express the topic of the room.

For example, the first room will be focus on the concepts of history and memory. Foods and nutrition will then be analyzed from the historical point of view, starting from prehistoric age.

At the moment of the interviews, the designs of the project had just been done and organizers were starting to develop the planning phase. The process to get to the final design took about 3 months.

It is very interesting to notice how Rampello, during the interviews, emphasized the possibility of Expo 2015 to enhance international collaboration and to communicate new culture and new meanings related to food (the objectives of Expo theme-related). In this sense, the beauty and the capacity of Padiglione 0 to stimulate visitors can have a central role.

From the organizational point of view, the main observation made by Rampello regards the lack of knowledge about the pavilion projects of other countries. From a certain point of view, this is an advantage, giving fewer constraints to single participant. On the other side, this is a disadvantage, making impossible for Expo 2015 management to have a clear idea of the overall impression of the exposition till the opening date. In particular, Rampello highlighted the fact that Expo 2010 in Shanghai (where Rampello contribute to the Italian Pavilion) where organized in a totally different way, with strict controls and more detailed guidelines given to countries.

Events during Expo 2015

Davide Rampello quickly exposed to us also the way in which events during the six months of the exposition will be organized.

Again, the central organizers of Expo will only collect and organize initiatives in a show-schedule considering national holidays of the participant countries and the kind of shows proposed. The only coordination system to reduce heterogeneity among events will be a book of guidelines, which will be developed and provided to participants during 2014.

Moreover, the internal events will not be coordinated with initiatives external to the site, focusing on the organization of what will happen in Rho. However, as claimed by Chiara Mammarella, the director of the events during the event will be different from the artistic director before event (Davide Rampello) so it is possible that a different approach will be used.

The contrast with Shanghai 2010 appeared again in this discussion. While Davide Rampello in this case (as in the previous one) claimed to prefer the Italian model, which gives major space to individual country creativity and ability; in this case he added also that the dimension and the

volume of investments in Expo 2015, much higher than in Expo 2010, leave also less room for strict planning and controlling.

The last observation about the organization of events during the Expo 2015 was about the necessity and the complexity to coordinate events organization with logistics and operations in the site, topic that was only introduced. Here, again, the contribution of Chiara Mammarella was important in remarking how the event Expo 2015 is a mixture of Logistics, operations, shows-management and many other components and that the “Artistic Director” is only one of the important role in its management.

Insights and future research opportunities

With respect to other interviews, the discussion with Davide Rampello highlights to us one very interesting issue about the way in which events are organized: in Expo the decision was to set guidelines and then let the participants organize their own space (controlled by CSGPI, according to the analysis of Expo governance) and their own event (coordinated by Davide Rampello). As it was observed in the interview, however, a previous Expo like Shanghai 2010 was managed in a much strict and controlled way. It can be really valuable to compare decision-making process, costs and results of the two approaches. This would probably give space to:

- Cultural study on approaches to manage events;
- How contingent factors (dimensions of events, number of participants, culture etc.) can affect an event.

Moreover, this is the first of our interviews that faces the topic of the organization and coordination of the activities in the site during the event.

6.4.6 Business Planning & Control Business Unit - Expo 2015 S.p.a.

Interview with:	Chiara Mammarella, Anna Castellanza (Planning & Controlling Division, Expo 2015 S.p.a.)
Key Topics:	Management in EXPO; Organizational Structure of EXPO and its evolution; Roles of the main actors in EXPO

Table 37: Overview of Expo 2015 S.p.a. Interview

The interview with Chiara Mammarella and Anna Castellanza had been also really useful in better understating some managerial aspects connected with Expo 2015 S.p.a.

In particular, during the interview with them it has been possible to better understand the organizational structure of Expo 2015 S.p.a. and its evolution. Moreover, it has been possible to have a wider and more comprehensive view of the activities of the management company of Expo, with respect to the incomplete and rough view given by public documents about it.

Organization Structure of Expo

While in the previous chapter we have discussed the overall governance of Expo 2015, this conversation helped us in understanding better Expo 2015 S.p.a.

Expo 2015 S.p.a. is in fact a company evolving in its structure, following needs of the different phases of Expo 2015 lifecycle: Strategic Planning, Operating Planning and Execution.

In particular, Expo 2015 S.p.a. was conceived to evolve in the following way:

- From 2010 till 2012, more or less ten people worked in an informal way, without monitoring,
- After a first informal phase, a functional model would have been adopted, to define areas of development and budget.
- The planning started in 2012 and the organizational structure developed as a matrix, every function develops operative instruments (operative plans, budget) and transversal groups of work are developed
- From 2013 to 2015, we have the execution phase of the event. The model is now a matrix focused on the executions of plans.
- In 2015 there will be the operative management of Expo. The organizational structure will be based on the management of different groups of work, decisions will be decentralized.
- From 2015 to 2015, a minimum group of work will manage residual assets and will guarantee an efficient transition of the legacy to the actors that were identified in the planning.

In working for the event this structure must be highly interconnected with other groups of authorities and other associations, at different levels. The interview had been very valuable in better understanding:

The role of BIE, which manages periodical controls, participates to the meetings and has a monitoring role over norms discussions. The role of BIE that emerged from this interviews is much more determinant and the Bureau of Expositions is much more participating than what understood from documents.

The role of Italian Ministry of Foreign Affairs is fundamental in managing the first approach with potential-participant countries (they send the first invitation). It is also important during negotiation discussion phases (the country that receives an invitation developed a Team Statement, it is evaluated by a committee, there is a Contract and then the pavilion design: till the contract definition, Italian Ministry of foreign Affairs has a determinant role).

The interviews had been very helpful in giving to us other information about activities and relationships of Expo 2015 S.p.a. with external actors:

A CRM system has been developed to share with participants a list of companies that are available to do work. This instrument is necessary to manage communication with companies and countries. In order to be inserted in the “catalogue” of companies provided by the system, is necessary to respond to some requirements. It has been very interesting to notice, discussing with Expo 2015 S.p.a., with Sistema Como 2015 and with platform MiTi that there were not shared information about the existence and the way of working of this catalogue.

Even partners were indicated as a very important actor in terms of volume of communications: the 14 actual partners of Expo are expected to provide to the exposition €300 million.

Insights and future research opportunities

In general this interview had not addressed any specific projects, even if it contributed to the understanding of Padiglione 0, Show-Schedule of the events organization and Explora. However, it has been significant in showing further levels of analysis and more detailed elements about organizations and process of Expo that worth to be taken in account, even if a proper evaluation will imply a dedicated research.

6.4.7 *Piattaforma Miti*

Interview with:	Mattia Ferretti
Key Topics:	Benefits for Switzerland from the Event; Long and Short term goals of the Initiative;
Key Project:	<i>Piattaforma MiTi</i>
Role of the key Project:	To support Switzerland as participant and to support Swiss construction companies in EXPO site

Table 38: Overview of *Piattaforma Miti* Interview

“*Piattaforma MiTi*” is an initiative that, for goals and way of operating, it is very similar to “Sistema Como 2015”: in fact, we acknowledged the existence of his initiative during the interviews with Sistema Como 2015. The really interesting point in addressing this initiative is the analysis of how border countries, Switzerland, perceives and exploit the benefits of an Event like Expo 2015.

Our contact with “*Piattaforma MiTi*” had occurred through Mattia Ferretti, who had been very helpful in answering our questions while deepening certain topics and enlarging the discussion.

“*Piattaforma MiTi*”

The institutional platform Milano-Ticino (MiTi) was created in 2011 from a decision of executive Board of Cantone Ticino, with the purpose of coordinating and managing projects related to Expo 2015.

The idea of Platform MiTi was born on the initiative of the State Council of Cantone Ticino. This council is composed by municipalities of Cantone Ticino, touristic associations and economic associations. In March 2011, a delegate was nominated by Cantone Ticino Council to coordinate and manage the platform. Platform MiTi is headed by Cantone Ticino State Chancellery.

The Delgate of Cantone Ticino is the director of the platform, supported by a State Chancellor and by an operating unit composed by two assistants fully employed in platform Miti.

In 2012, MiTi organized a competition with the purpose of evaluating and selecting ideas to be developed for Expo. A scientific jury then selected ten projects and all of them have started (or will start) between half of 2013 and first months of 2014.

In the beginning of 2014 the vote of the parliament on the total budget for MiTi will take place. The budget will be for: contribution to the construction of Switzerland pavilion, funds to projects

developed by platform, organization of events for the six months of exposition and of “Giro del Gusto 2014” (a series of events that want to be a prologue for Switzerland participation ¹⁴⁹).

The activities of Platform MiTi will in fact be very different:

- To organize the presence of Switzerland in Milan and at the Expo 2015, in terms of pavilions and events;
- To coordinate projects and initiatives that can support Switzerland participation;
- To ease the participation of companies from Cantone Ticino in the construction site of Expo.

While the last two activities make Platform MiTi very close to Sistema Como 2015, the first activity of the list shows instead a central role of the platform in setting the Switzerland participation in Expo.

The goals of the platform are both short and long term goals. In the short term, the platform works for evaluate and coordinate the project of Cantone Ticino in Expo, to evaluate and coordinate projects and initiatives and to help companies in Cantone Ticino to be part of the construction site of the event.

In the long term, instead, the platform wants to create legacies in four areas:

- Tourism: to promote touristic offer of Cantone Ticino, in particular looking at increasing touristic flows from Italy;
- Businesses: to promote Cantone Ticino businesses in Italy;
- Culture: increase reciprocal knowledge between Italy and Cantone Ticino, trying to promote typicalness of Cantone Ticino culture;
- Institutions: increase and enhance relationships with northern Italy, so to improve collaboration between Cantone Ticino and Northern Italy;

It is interesting to notice how, while Italy (for example with Explora and Sistema Como 2015) is very oriented to work with the objective to attract foreign tourist and to improve business relationships with other countries, by reflex a foreign participant country like Switzerland is completely focused on developing collaboration and attracting tourist from Italy, and in particular from northern Italy, in the area of Exposition.

From a governance point of view, Platform Miti works in collaborations with municipalities, businesses, universities and privates. Several internal and external partners can be identified. Internal are those municipalities and associations from Cantone Ticino. External are other three cantons (Uri, Vallese, Grigioni), cities of Zurich, Basilea and Ginevra and “Presenza Svizzera” (DFAE, entity responsible for the promotion of Switzerland abroad ¹⁵⁰).

The coordination with the other cantons and the three Helvetic cities regards mainly the spaces in the pavilion and the “Giro di Gusto”. In both cases, however, the spaces will be managed autonomously. In this sense, a coordination role will be taken by DFAE.

¹⁴⁹ http://www4.ti.ch/fileadmin/CAN/TEMI/EXPO_2015/documenti/Interventi.pdf

¹⁵⁰ <http://www.eda.admin.ch/eda/it/home/dfa/orgcha/gensec/prs.html>

Moreover, the platform has continuous relationships with Expo 2015 S.p.a., mainly through Switzerland consulate. The contacts with Expo 2015 S.p.a. also generated a partnership for the training of guides and hostess for the Helvetic pavilion.

Insights and future research opportunities

The initiative helps us to understand how Expo is perceived from abroad and how the presence of foreign countries is organised. From this point of view, it would be very interesting to estimate the level of activities generated by Expo in different countries and how those activities can be managed.

6.4.8 Project “X”

Interview with:	Marika Arena Irene Bengo
Key Topics:	Labels, Nutrition and Food regulations, Environment, Food Production.
Key Project:	Project - X
Role of the key Project:	Reserch on topics connected to Expo 2015, looking at the process for the development of a new product for an external client.

Table 39: Overview of Project X Interview

During the thesis development, we had the possibility to collaborate, working under the supervision of Marika, to a consulting-research project managed by Politecnico di Milano for an external client.

For privacy reason it is not possible to go too much in detail with the content of the work, but there is still the possibility to extract some relevant insights about windows of opportunities and wideness of initiatives generated by Expo 2015.

The content of the project

The project was commissioned to Politecnico by an Italian public institution, not directly involved in Expo development. The idea of the project was to create a certification for food industry in order to help future customer to distinguish products on the base of the sustainability of the raw materials and of product lifecycle (CO emission, Water used, Labour used and others).

The project was developed probably trying to exploit the opportunity given by a Mega Event, which has food and food industries among the main themes of discussions. During the collaboration we have discovered that even such a small intangible initiatives can be beneficial and can benefit from the major event.

During its development, the projects had been changed several times in terms of objectives and schedule.

The project was not known by other Expo 2015 actors, therefore this is the first project that we analyzed that was absolutely free in terms of the relationships and decisions to be taken.

The organization and project planning did not show high performance, because of the already mentioned lack of clear direction, that is why project was not satisfying deadlines and expected results: when we left the project (the project team working on the project was concluding the Feasibility Study at the time) there was not certainties about the possibility to carry out the project before Expo, since there were few positive indications about the value of the initial ideas of the project and about its introduction in the market.

Insights and future research opportunities

It is important to highlight that this project was from the so-called “External” category, meaning that it would not play crucial role the event, but it had the possibility to add certain value for the Event, since it was responding to the main theme.

In order to properly involve and develop this kind of projects, estimate and deadlines should be attributed to external projects. This approach can be beneficial for the projects as well as for Expo 2015, which can in this way support and realize valuable initiatives.

This project, differentially from what seen in the case of E015 and Tavoli per Expo, was not under the control of a “Pivotal” project: it would be important to understand how the performance of “External” projects (managerial performances and quality of outputs) change in the two settings.

6.4.9 Results of the Interviews

In this section have been presented results from direct meetings with actors involved Expo 2015 at different levels. Together, with investigation, not only of key projects but also of overall Expo 2015, we tried to collect insights and share some thought about possible areas of investigation and challenges for future researches.

As has been mentioned in the introduction, the goal of this chapter is not only to perform a strong analysis but to build a good data source in order to apply this information in the following phase of the research, for building the proposed classification and map of projects. Moreover, direct interviews (as an inside source) are essential to have a clear picture about Expo 2015 organization, in order to prove the points that were mentioned in literature and to disclose those that were not possible to be found.

The first relevant point that emerges from this set of interviews is the common pattern in developing External projects: local authorities (CCIAA Como, CCIAA Milano, DFAE in Switzerland) had organized initiative in order to:

- Enable dialogue about actors;
- Enable ideas sharing and development;
- Provide consulting service to valuable projects.

To some extent, also Explora, with the project of involve *relevant* projects, and E015, with a platform that eases technological projects development, have the purpose to enhance the possibility to develop external, valuable initiatives.

On the contrary, project X, developed in autonomy by one entity, resulted to be less effective: while this can't be considered an example that show the superiority of an approach to the other,

given that in order to do that we would need a bigger sample and a more detailed analysis, however we can extract some information from that:

- Pivotal activities not only support projects development, but also contributed to an early stage, the one of ideas development. Discussion among different actors enables a selection of relevant topics, that can then be oversaw by the most prepared and skillful actors joining resources. In this way, the most adequate actors develop valuable ideas;
- In the case of E015, valuable projects have been developed because the system provides low-cost information and resources, which obviously decrease projects costs making them more easily feasible.

In this way, Sistema Como 2015, Tavoli per Expo and E015 are contributing and have already developed successful projects.

Another important element to be considered is the dominance of certain actors that resulted in the timeline, in the analysis of governance and in the interviews. The network of actor, from what seen till now, resulted to be very extended but, at the end, only few actors have really power inside it (certain public institutions, CCIAA, obviously Expo 2015 S.p.a.) also if it not enough to define a hierarchy: for example, CCIAA has a dominant position in certain projects (Sistema Como 2015, Tavoli per Expo), while it only participates with a limited roles in others (E015, the Essential and Related projects of Expo).

In general, this analysis gives us a more profound view of Expo organizations and development, especially if combined with the documentary analysis. In the following chapter, this information will be the base for the construction of a model for Expo projects analysis.

6.5 *The Expo 2015 Summary of Characteristics & Issues*

As we claimed in the framework and the methodology chapters, the timeline was very helpful in understanding dynamics and components of Expo. In particular, it was very useful in identifying the dominance of public actors, the importance of political dynamics, the lack of involvement of certain groups of stakeholders and the closed decision-making process with all its consequences.

Moreover, the timeline helped us in observing the low performances of Expo and the impact of them on the expectations about the event.

We then analyzed in depth supporting and essential projects of Expo, where it has been easier to see which are the main projects and objectives controlled by Expo 2015 S.p.a. and where it has been possible to highlights different elements concurring to the low performances.

At this point, we analyzed governance of Expo using theoretical model and easily noticing how it is characterized by several weaknesses.

Finally, we tackled the main focus point of our research, the multi-projects composition of Expo, noticing how there are several projects that are not under the direct control Expo 2015 S.p.a. but that are fundamental in pursuing important goals of the Exposition.

As a result of the empirical analysis conducted till now, it is possible to identify the main issues characterizing Expo 2015:

Lack of Goals Definition and Alignment	Goals of Expo are not well established, defined and inserted in a comprehensive plan. Expo 2015 had basically managed directly only event organization and infrastructure constructions.
Lack of wide and comprehensive Strategic Plan	Lack of a wide and comprehensive plan, able to consider all the goals, issues and actors of a Mega Event. Central governance of Expo manages event organization and infrastructures constructions, which can help only in reaching short term goals of Mega Events, while other actors have managed other goals in a not-coordinated way.
Wrong forecasts and optimism bias	Project composition and description changes: as we have shown final project list was strongly reduced. Moreover, it has been demonstrated that there are serious doubt about the possibility the forecasted number of visitors and economic impact. A great contribution to the reduction of the expectations is due to: <ul style="list-style-type: none"> ▪ Late and uncoordinated development of initiatives to manage several topic of Expo 2015 (see points above); ▪ Low performance in site and other infrastructural projects construction.
Inadequate control over project development	There is not proper control over the projects development. Frequent need of re-planning and rescheduling works is not quickly satisfied because there is no definition of project priority and there is not full awareness of the overall Expo development state.
Delays, over costs, frequent changes in projects scope	Due to normal project problems (late authorization, opposition of citizens, weather conditions, lack of funds), but also due to lack of control. There is frequent need to change projects, re-set priorities, re-allocate funds, establish alternative solutions, but there is no capability of do that quickly and effectively.
Low Involvement of Stakeholders	Mainly because goals of the event were established only by political and economic elites. Governance is indeed dominated by few actors, and the decision-making process does not result to be fully transparent.

Opposition of Stakeholders	As a consequence of the low involvement, the stakeholders like citizens and other associations started to contrast projects considered harmful
Low Security	Weak controls during bidding and during implementation: 2 bids have been stopped by investigations. This is a further cause of delays in projects development and complexity in the management of the event.
Political Instability	During the period 2006 -2015: 5 governments parties took the 2 mayor of Milan 2 governors/presidents of Lombardy Representatives of national and local institutions in Expo governance had been frequently changed
Political Dynamics	Appointment of actors inside governance based on representatives: cause of significant delays and project cancellations.
Instable Governance of Expo 2015	Changed over time; Need to merge roles (because of political choices of members, which force to appoint new members, or because of ineffectiveness of settings, which force to establish new governance structure) need for waiving and derogation powers Significantly affected by political decisions.

Table 40: Issues in projects development

Expo 2015 has several of the issues characterizing Mega Events as they are described in the literature analyzed.

At the same time, as we already showed introducing Expo 2015, the event has all the characteristics that distinguish Mega Events from Mega Projects. In particular, in the analyzes just performed emerged:

- The complexity of setting a proper governance structure;
- The wide and heterogeneous set of projects arising around Expo 2015;
- The presence of a short-term event realized and managed by the central organization of Expo 2015, in contraposition with a large set of heterogeneous long-term goals pursued by other stakeholders through initiatives in which Expo 2015 S.p.a. has often a marginal role.

These elements have clearly not been planned in the initial phases of Expo, otherwise it would be difficult to explain:

- The late and/or autonomous (with respect to the central organization) arise of initiatives to pursue goals of Exposition;
- The lack of control over these goals and initiatives;
- The necessity to change governance, its roles and the powers of these roles several times;
- The inability to face all these issues quickly, having full control over the overall event development (which means, over all its goals) and being able to set priorities and to develop alternative plans without constantly recurring to extraordinary powers and reduction of the scope of the exposition.

Moreover, organizers are not able to quickly see overall event development, considering projects, objectives and priorities, and this inability makes the damage on the event produced by the poor initial planning even more dangerous for the event development.

We will now directly tackle all these issues.

6.6 *The Model Development*

Data collected during the empirical analysis are used in order to confirm the findings from the literature and to develop a model, which can help in addressing the issues identified.

6.6.1 *Classification System*

First of all, we need to classify projects. According to the literature, this will be important in order to understand sub-projects characteristics and, as a consequence, to identify optimal management models.

Moreover, it will be useful in order to define in structured way how different projects are composed, how they contribute to Expo development and so their importance.

As introduced in the framework, projects should be classified along the relevant dimensions. On the base of the data collected, the classification was structured in the following way, determining each element in a qualitative way on the base of the interviews and documents available:

- Activities done in the project, to define what the project does and the areas of expertise involved:
 - Topic of the project;
 - Objectives;
 - Scope of Activities;
- Network Composition, to understand organization of the project and in particular to determine how it was related to other projects or to Expo:
 - Type of Actors;
 - Stakeholders;
 - Ownership;
- Impact of the project, to understand on which objectives to the Expo the project impacts:
 - Type of legacy and description;
 - Dimension of impact;
 - Impact on the event;
- Type of project: on the base of previous dimensions, we will determine the belonging of the project to the Essential, Supporting or External categories.

For this analysis, we will use the projects for which we collected interviews. Moreover, we will use also the infrastructural projects of Expo 2015, being a fundamental part of the exposition: the data used in order to classify the supporting projects come from official documents released by Local Institutions and Italian authorities in charge of their development.

The projects will then be:

1. Tavoli Tematici per Expo;
2. Tavoli Tematici External Project ex. 1: Gambero Rosso Travel;
3. Tavoli Tematici External Project ex. 2: Car Sharing, Electric Vehicle;
4. Tavoli Tematici External Project ex. 3: WineAmore;
5. EXPLORA;
6. E015;
7. E015 External Project ex. 1: SEA Applications & Airport screens;

8. Padiglione 0;
9. Sistema Como 2015;
10. Sistema Como 2015 External Project ex.1: Destinazione Expo 2015;
11. Piattaforma MiTi;
12. Project X;
13. Metro line 4;
14. BreBeMi Highway;
15. Rho-Monza Link;
16. Connection Terminal 1 – Terminal 2.

Padiglione 0 wants to be a project that represents, in terms of objectives and kind of activities, site construction projects. Metro line 4, BreBeMi Highway, Rho-Monza Link, Connection Terminal 1 – Terminal 2 are instead significant example of the infrastructural projects being part of the “Essential” and “Supporting” projects list of the candidature document.

The classification is articulate along three dimensions, already presented in the framework: Activities, Network Composition and Impact of the projects.

Activities dimension, which will be described by Topic, Objectives and Scope of the Project, will be important in determine the kind of project we are analysing: as observed in the literature (Locatelli et Al. 2012, Dvir et Al. 1998, 2003, Shenhar et Al. 1996, 2001, Pellegrinelli 1997, Pellegrinelli et Al. 2007) to identify the projects characteristics is the first step for an effective management.

In particular, Locatelli et Al. 2012 suggest, in order to improve Mega Event control, to specific project control techniques for each project, according to its typology. This first classification, once a set of projects has been defined, can be important in this sense.

	Activities		
	<i>Topic</i>	<i>Objectives</i>	<i>Scope Of Activities</i>
Tavoli Tematici	Business Development	Facilitate the creation of the new business ideas; analysis of the expo impact	Networking
Tavoli Tematici ex. 1: Gambero Rosso Travel	Tourism	Development of New touristic offer	Organization and marketing of touristic packages
Tavoli Tematici ex. 2: Car Sharing, Electric Vehicle	Transportation	Increase use of car sharing and electric vehicles in Lombardy	Re-think transportation system
Tavoli Tematici ex. 2: WineAmore	Logistics	Develop a new Business Model for whine marketing and distribution based on smartphone app and network of restaurants and producers	App development, networking
EXPLORA	Tourism	Increase tourism for Expo and for Italia	Coordinate and support development of tourist offer related to Expo.

E015	ICT	Support ICT sector, facilitate development of ICT tools to support Expo 2015	To create a " <i>Development Environment</i> " to facilitate the creation of new application and in general the improvement of ICT in Italy through a cooperative development.
Cefriel E015 ex. 1: SEA Applications & Airport screens	Tourism & Transportation	Create new services for tourists and travellers	Design of application, sharing of information
Padiglione 0	Site Construction	Develop the Pavilion that will be the main entrance of Expo	Design and Construction.
Sistema Como 2015	Business Development	Businesses involvement and development	Networking.
Sistema Como 2015: Destinazione Expo 2015	Transportation and Tourism	Create new services for tourists and users of public transportation	Market analysis, design, and implementation of services.
Piattaforma MiTi	Business Development	Involvement and development of Swiss businesses	Networking.
Project X	Food	Create new certification system for food.	Product development.
Metro Line 4	Infrastructural	New Metro Line Construction	Design and construction
BreBeMi Highway	Infrastructural	Road Construction	Design and construction
Rho-Monza Road	Infrastructural	Road Construction	Design and construction
Connection Terminal 1 - Terminal 2 Malpensa	Infrastructural	Railway construction	Design and construction

Table 41: Classification of the base of Projects content

The second dimension regard instead the ownership and the stakeholders involved in the project: once the set of project has been defined, this classification can help in defining relevant stakeholders and in understanding relationships among projects.

This last point, in particular, can be developed in order to improve governance:

- It can be used to identify significant actors to be part of the governance, combining representative and actors who have ownership of the project, or simply stakeholders which are highly affected by an initiative;
- It can be used to defining roles in the governance, eliminating ambiguity and overlapping of goals.

Network composition			
	<i>Type of Actors</i>	<i>Relevant stakeholders</i>	<i>Ownership</i>
Tavoli Tematici	Public	Camera di Commercio, Expo 2015 S.p.a., Companies and Businesses, Local Italian authorities	Camera di Commercio 100%
Tavoli Tematici ex. 1: Gambero Rosso Travel	Private	Gambero Rosso, Viaggi Dell'Elefante, Camera di Commercio	Gambero Rosso, Viaggi Dell'Elefante
Tavoli Tematici ex. 2: Car Sharing, Electric Vehicle	Private	A2A, Camera di Commercio, ATM	A2A
Tavoli Tematici ex. 2: WineAmore	Private	Wineamore, Restaurants, Camera di Commercio	Wineamore
EXPLORA	Private company, public participation s.	Regione Lombardia, Expo 2015 Spa, Camera di Com Camera di Comercia	60% Camera di Commercio Milano, 20%, Expo 2015 s.p.a. 20%. Presidente Giuliano Noci
E015	Public and Private	Confindustria, Assolombarda, Confcommercio (Lombardy and National), Camera Commercio Milano, Expo 2015 s.p.a., Cefriel	Confindustria, Assolombarda, Confcommercio (Lombardy and National), Camera Commercio Milano, Expo 2015 s.p.a., almost Equally
Cefriel E015 ex. 1: SEA Applications & Airport screens	Private	SEA, ATM, Trenord, Cefriel	SEA
Padiglione 0	Public	Expo 2015 s.p.a.	Expo 2015 s.p.a.
Sistema Como 2015	Public and Private	Camera di Commercio di Como, Municipalities in the Como Area, Province of Como, numerous (around 100) local businesses and private companies.	Camera di Commercio di Como
Sistema Como 2015: Destinazione Expo 2015	Private	ASF, Camera di Commercio di Como	ASF
Piattaforma MiTi	Public	Switzerland municipalities, businesses, universities.	Cantone Ticino Authorities
Project X	Public	Italian public institution, Politecnico di Milano	Italian Public Institution

Metro Line 4	Public and Private	Municipality of Milan, ATM, Camera di Commercio,	Municipality of Milan, ATM
BreBeMi Highway	Public and Private	Camera di Commercio, Municipalities and Provinces which are passed by the Highway, Private companies	Region Lombardy
Rho-Monza Road	Public and Private	Camera di Commercio, Municipalities and Provinces which are passed by the Highway, Private companies	Region Lombardy
Connection Terminal 1 - Terminal 2 Malpensa	Public and Private	SEA, Region Lombardy, Municipality of Milan, European Union	SEA, Region Lombardy

Table 42: Classification of the base of Projects stakeholders

The last classification regards the impact of the projects. The importance of a project should be defined in accordance to its impact, which should be evaluated on the base of:

- Extension of the impact (here we used the geographical extension, but having more detailed information on the projects it could be possible to improve the indicators and to give it a numerical rating);
- Time span of the impact (short term or long term impact: again, the impact measure can be improved using numerical measures);
- Impact on the event (is the project fundamental for the viability of the event or it can generate only marginal advantages?).

Combining these information with the one of the previous two classifications, we can define if a project is Essential, Supporting or External to the event. This can help in understanding priority of the project and adequate management method (planning, control, coordination with other initiatives, etc.).

	Impact				Type of the project
	Type of Legacy	Description	Dimension of Impact	Impact on the event realization	
Tavoli Tematici	Mainly Long-term	To support economic development, to develop new business activities, to support economic growth (short and long term), 50 start-ups, creation of EXPLORA, E015	Local impact (area of Milan mainly)	Possibility to enhance touristic offer and to increase service to visitors and to citizens during the event.	Supporting
Tavoli Tematici ex. 1: Gambero Rosso Travel	Short-term and Long-term	New touristic packages	National and International	Possibility to develop touristic packages developed on the topics of the event.	External

Tavoli Tematici ex. 2: Car Sharing, Electric Vehicle	Short-term and Long-term	Increase Car sharing potential	Local (Milan)	Enhance transportation in Milan	External
Tavoli Tematici ex. 3: WineAmore	Mainly Long-term	Support Wine and restaurants	Potentially wide	Possibility to give a new service	External
EXPLORA	Long-term and Short-term	Improve touristic offer in the enhance quality of touristic sector in Italy.	National	Development of touristic offer to increase number of visitors.	Supporting
E015	Long-term and Short-term	To enhance the ICT capital of Italy, the expertise of the companies about ICT, to develop a set of service for people through ICT, to develop a new model for cooperative development of ICT	Mainly local	Development of initiatives that can create new services for tourists and Expo visitors.	Supporting
Cefriel E015 ex. 1: SEA Applications & Airport screens	Short-term and Long-term	Better quality of service for travellers	Lombardy (travellers and Tourists in Lombardy)	Better quality of services for tourists and visitors.	External
Padiglione 0	Short-term	Part of the Exposition site, its main impact is on the overall quality of Exposition.	Limited to the Exposition site.	Entrance of Expo, important role in Enhancing experience of visitors.	Essential
Sistema Como 2015	Long-term and Short-term	Increase business activities and visibility in the Area of Como. Increase number of tourists.	Local (area of Como)	Enhance Como and surrounding areas participation, provide companies for site construction and maintenance.	Supporting
Sistema Como 2015: Destinazione Expo 2015	Short-term	New services.	Local (area of Como)	Connect Como and Rho, increasing accommodation capacity and providing new attraction and services to tourists and visitors.	External
Piattaforma MiTi	Long-term and Short-term	Increase business activities and visibility in the Canton Ticino.	Local (Canton Ticino,	Enhance Switzerland participation to the event; provide companies for site	External

			Switzerland)	construction and maintenance.	
Project X	Mainly Long-term	Exploit Expo theme to develop a certification that can be a new service for customers in the food sector.	National	Limited impact, also if the main topic is very strictly related to the theme of the exposition.	External
Metro Line 4	Mainly Long-term	Enhance capacity and quality of service of Milan Metro.	Local (Milan)	Important to guarantee adequate transportation service in Milan	Supporting
BreBeMi Highway	Mainly Long-term	Increase quickness of transportation in Lombardy.	Lombardy	Important to guarantee accessibility to Milan and to Exposition site	Supporting
Rho-Monza Road	Mainly Long-term	Give better access to Rho	Lombardy	Important to guarantee accessibility to Milan and to Exposition site	Supporting
Connection Terminal 1 - Terminal 2 Malpensa	Long-term and Short-term	Higher service for tourists and users of Malpensa Airport. Possibility for Malpensa of reorganising airport service.	Very focused (Airport, Milan)	Possibility to attract higher quantity of tourist for Expo.	Supporting

Table 43: Classification on the base of Projects Impact

The model just presented can be useful in:

- Planning and control cycle: here the model can help in identifying typology of projects involved. As observed in the literature, to determine typologies and categories of projects in fundamental in determining:
 - Relevant success factors for each project typology;
 - Optimal management model for each projects (for example need of coordination of the project with the central organization) and optimal project progress measures (deadlines, budget, percentage of work completion), as observed in the literature;

In the case of Expo 2015, this practice could have brought to a better management:

- There would have been a better analysis of all the panorama of projects and initiatives;
- The central organization (Expo 2015 S.p.a.) would have been able to improve overall control on all existing projects, establishing high-level measures for project progress.
- Stakeholders Analysis and Governance settings:
 - This analysis force to reflect on stakeholders of initiatives, identifying decision-makers, stakeholders like citizens, but also better acknowledging areas of expertise;
 - Coupled with the analysis of the governance previously presented, this structured identification of stakeholders can potentially lead to a better overall governance structure for the event, for example involving a major number of important stakeholders.

- In general, the model can help in conducting structured analyzes of actors, goals and network of projects, identifying relevant elements and enabling classifications and comparisons of them.

6.6.2 *Project Map*

The just developed classification provides the user with several relevant information about projects network, but in a way that makes them difficult to be quickly assessed in order to come to a conclusion about relevant issues of the event, like goals alignment and projects priority.

We decided then to couple, as written in the framework, the classification system with a map that can help in overcome this limit of the classification system.

The sub-project map has been developed using the classification of the projects previously made. Its purpose is to represent and help in comprehending the different types of projects that compose a Mega Event.

Model

In our model, two main axes compose the matrix on which the map is based:

- Importance for the event implementation: basically, the importance of a certain project in order to enable the carrying out of the event;
- Legacy Impact: the short and long term impact of the projects, so impact on tourism, impact on business development, tangible (infrastructures) and intangible (know-how, services) long-term legacy.

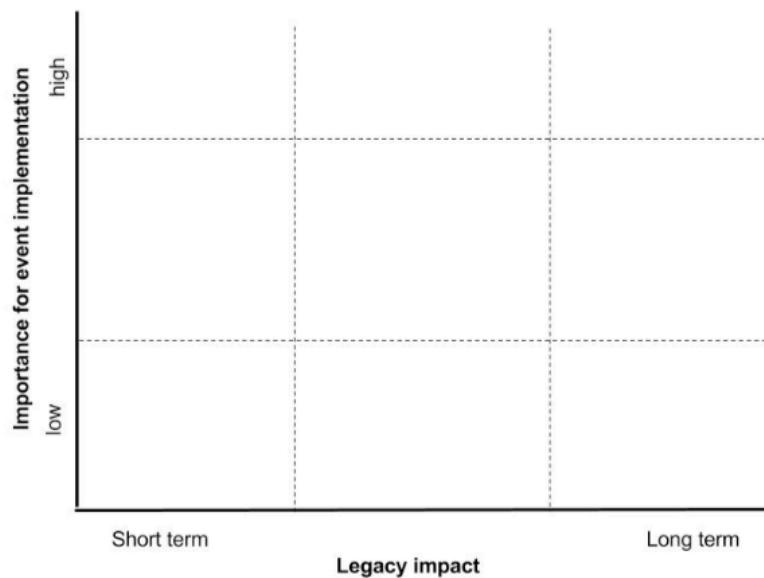


Figure 12: Sub-Project Matrix

We decided in fact to focus on how projects interact with the goals of the event:

- Goals are reached through projects and initiatives, so their alignment and the ability to effectively cover the spectrum of goals of a Mega Events should be visible observing the projects and the goals they pursue;
- Priority of a project should be determined on the goals it is pursuing.

As the following step we would like to demonstrate test of the model filling it with our projects, previously classified:

1. Tavoli Tematici per Expo;
2. Tavoli Tematici External Project ex. 1: Gambero Rosso Travel;
3. Tavoli Tematici External Project ex. 2: Car Sharing, Electric Vehicle;
4. Tavoli Tematici External Project ex. 3: WineAmore;
5. EXPLORA;
6. E015;
7. E015 External Project ex. 1: SEA Applications & Airport screens;
8. Padiglione 0;
9. Sistema Como 2015;
10. Sistema Como 2015 External Project ex.1: Destinazione Expo 2015;
11. Piattaforma MiTi;
12. Project X;
13. Metro line 4;
14. BreBeMi Highway;
15. Rho-Monza Link;
16. Connection Terminal 1 – Terminal 2.

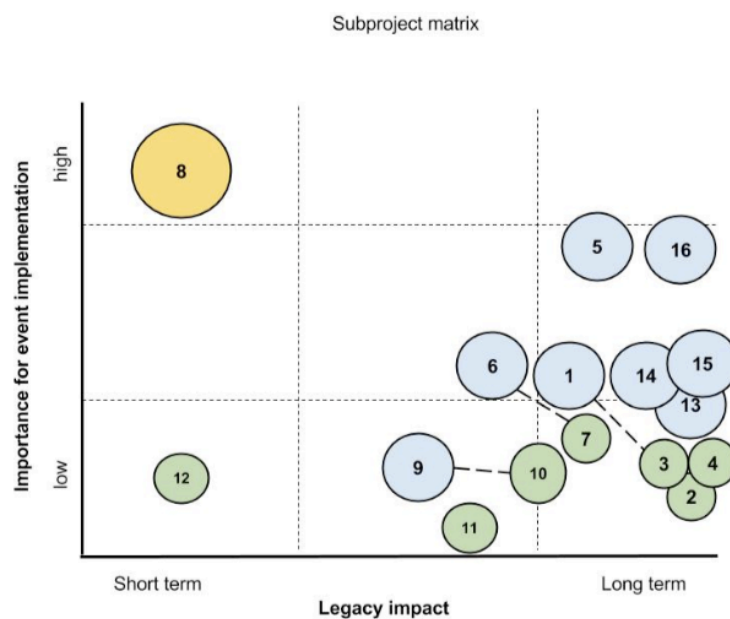


Figure 13: Positions of projects analyzed in the map

Links between supporting and external projects (e.g.9-10) represent the roles that projects like E015 (technological platform that defines rules for the exchange of information among partners) and Tavoli Tematici per Expo (networking and consulting role) have in supporting the development of external projects. Moreover, another dimension of analysis is provided by above-mentioned distinction between sub-projects types: Essential, Supporting and External Projects.

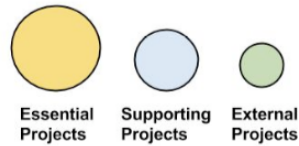


Figure 14: Categories of projects

This model then enables:

1. To identify how categories of projects previously identified contribute to event development;
2. To better assess existence and importance of External projects in the Mega Event development;
3. To demonstrate misalignment of the goals of the essential projects according to the main aim of the Mega Event, which is long lasting legacy;
4. To identify possible improvements in event management.

Observing the map, it is possible to notice how the projects belonging to a certain category tends to be concentrated in certain positions of the map, as the following matrix shows:

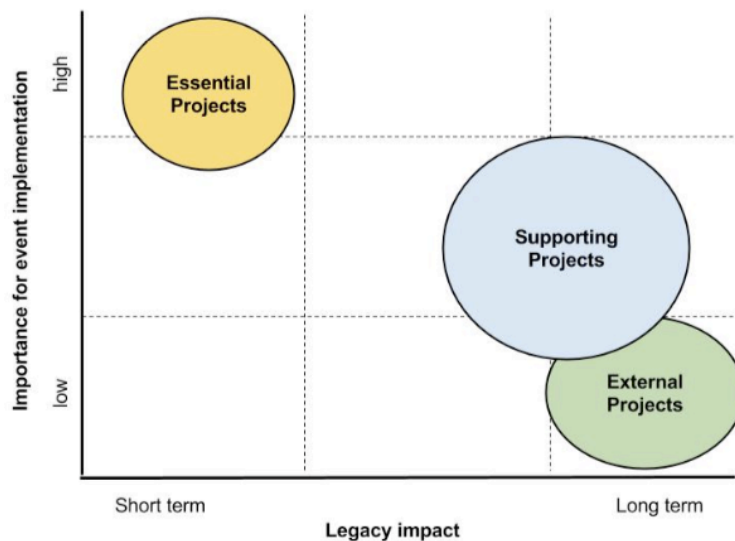


Figure 15: Position of Categories of Projects in the Map

Even though we had just one project as an essential one, we claim that it has the general characteristic of the “Essential” projects of Expo: high importance for the event, no long-term impact and not direct impact on other event goals.

Most of the essential projects of Expo 2015 were exactly at the place we have situated them. In the world best practices there were some spectacular examples when the construction site brought long lasting legacy. For example Eiffel Tower has generated huge increase of the real estate around the expo site. In this case the essential project had become a source of long-term legacy. Generally speaking this is the main goal of the project planning for the event, to build the projects which have high importance for the event and at the same time that are able to generate long lasting legacy, however we do not have many examples like this one in the

history. Fact proves the main issue of the Mega Event is post-event using of the facilities (or converting in to long term legacy).

Another interesting situation that it is possible to observe is with supporting projects, which have certain importance for the event, but they are not fundamental for the viability of the event, and which demonstrate the most significant effect on the legacy.

Moreover, most of the external project are quite important for the impact of the Mega Event: while singularly their scale is limited, the significance of their impact is due to the huge quantity of projects which can generate local and national-wide long-term effect.

Basing on this we would like to doubt the classification provided by Candidature document, because not Tavoli Tematici, not Explora, not even Cefriel were considered in the classification of the EXPO S.p.a. as a supporting project, even though they have played the role in the creation of a lot of external projects. And there were not considered all of these small projects which in scope plays crucial role for the long term success of Mega Event.

As a following we propose to talk about nature of the areas in the following matrix:

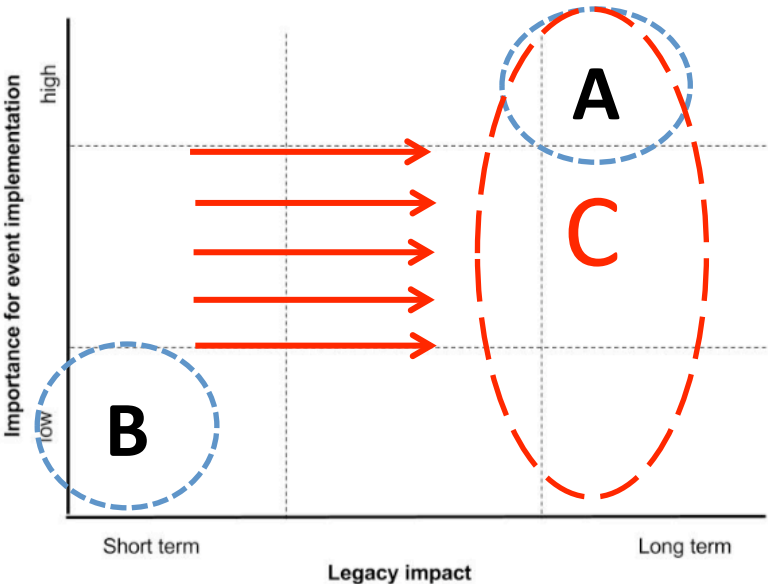


Figure 16: Guidelines From Project Map

According to results from, documentary analysis and interviews we can conclude the following observations:

1. Area A is the ideal alignment of the project goals and therefore to develop solutions that can fit this area should be the main target for project managers at the stage of the project selection and following implementation;
2. Area B is the area to which project managers have to pay attention. There is a need to exclude this kind of projects from list of the projects involved and also to eliminate the possibility of involvement of these projects in the following stages after planning, because there is no value added to the final goals of Mega Event;
3. Since the real-case is far from the best practices, there is need to select project and implement them in the way that they would be distributed in the area C in order to have a

successful event implementation and achieving the main long-term goals of Mega Event. Especially projects that have high expenses.

This instrument can support a better alignment of objectives of Expo and the projects part of the network, also increasing the ability to perceive priorities of different projects.

As we observed from many literature contributions, the main goal of any Mega Event is not to carry on the event by itself, but to carry on the event as a mean to generate long-lasting impact for economy, society, politics and environment. Basing on this, we would like to highlight that one of the main goals of this visualization is to demonstrate that in Expo 2015 case most of the supporting and external project were not considered in the planning and classification, even though they are essential for long term impact. Therefore, by this we would like to underline the necessity to align the goals of the included sub-projects according to the main long-term goal of the Mega Event. In conclusion, we believe that this model can be used as a tool to align sub-projects according to the goals of the event and prioritize selection of them accordingly.

Concluding, this last instrument can be used from the early phases of Mega Events development in order to:

- Develop comprehensive plans, considering all the relevant projects of the event;
- Align goals and align activities with goals;
- Give an high level view of the event that does not lose control of specific initiatives;
- Managing in a simple way the trade-off among different goals, and in particular between long and short-term goals.

7 Conclusions

Our research started with the aim of analysing the nature of the Mega Event as a network of sub-projects in order to collect insights and information that can improve overall decision-making for event. The main objective has been deployed in four sub-objectives:

1. To provide profound theoretical base about Mega Events;
2. To assess and analyze the main case study (Expo Milan 2015) according to general characteristics, governance and network composition;
3. To assess and analyze case studies in terms of sub-projects in Mega Event, according to their relationships, priority, complexity, benefits and importance for local area (territories, businesses, communities etc.) and for Expo;
4. To develop guidelines that can enable a better and more structured analysis of a Mega Event in general and that can, in particular, support the planning phase, according to the main characteristics and issues of Mega Event (given the results of the literature).

7.1 Literature Analysis

The literature analysis, the first step of our research, aims at reaching the first of the sub-objectives. Its role was important in providing elements on which we could base the empirical research and the final output.

First of all, the literature analysis showed us the differences between Mega Events and Mega Projects, enabling us to say that a Mega Events can be seen as a more complex version of a Mega Projects: while both are characterized by huge scale, high investments, multi-years development and huge number of actors involved, the Mega Events resulted to have indeed:

- Short-term nature, due to the stage of implementation of the event, in contraposition with a long-term legacy (which is also the main output of the Mega Event);
- An higher number of heterogeneous objectives, which generate a network of different projects for scale and scope and which imply the participation of an higher number of actors;
- A more complex governance, due to the much wider impact of the event and the much more heterogeneous nature.

From the literature, we had also been able to extract which are the issues in Mega Events management (this has been done combining contributions of Mega Projects and Mega Events research):

- Mega Events are characterized by low performance: actual results are often lower than forecasted one, there are frequent over costs;
- There are often difficulties to define clear objectives and plans;
- Planning and Controlling are very difficult to be managed in complex and wide situations, like the one of Mega Event but, between the two phases, Planning is the one that can deliver more value in event management, reducing issues in following phases;
- High number of stakeholders, long development time, politic dynamics, high number of heterogeneous objectives involved make very difficult to define optimal governance structures, in terms of stakeholders involvement, role definition, transparency of decision-making process etc.

- There is a lack of proper instruments to manage Mega Events in all their complexity.

Project Management literature had then pushed forward our research, showing us:

- Project Management is a discipline with multiple weaknesses, especially if applied in complex settings;
- Project Management lacks of adequate tools and methodology to face complex and uncertain situation;
- The approach of project managers is often based on too strict planning and controlling: the idea is to define a plan and to implement it, measuring the success of a project on the ability to respect the plan. Modern research on Project Management suggests instead the need for more flexible approaches, more oriented to goals of the projects and actors involved, and there is the need to define a more complete list of success factors, beyond the respect of deadlines and costs;
- In complex situations, Project Management should provide instruments that helps in understanding the environment;
- There is the need for more tailored instruments: the “One size fits all” paradigm does not work and there is the need for instruments tailored on the characteristic of the single project;
- Different areas of study of Modern Project Management can generate improvements in the management of complex projects. One of the most interesting, especially thinking about Mega Events, is Programme management, oriented to the management of multiple projects which are realized in order to reach a certain set of objectives.

According to these elements, our decision had been to realize a model that was able to overcome limits of Project Management, but which was specifically oriented to Mega Events. In this optic, we decided to focus of the planning phase, as the phase that has the major impact on Mega Event development. Moreover, we decided to focus on the peculiar characteristics of Mega Events: the multi-project nature, the contraposition between short-term goals and long-term legacy and the governance of the event.

This lead to the development of two models:

- A classification system for projects part of the network of Expo 2015, which will be necessary to understand the composition of this network and its relevant characteristics;
- A map of the projects, that will help us in understanding relationships among projects, priorities and that can possibly lead to a better overall management of the event.

According to our literature analysis, we claimed that through these instruments we could have effectively addressed some major issues in Mega Event management:

- *Goals Definition and Alignment*
- *Project Planning*
- *Stakeholders*
- *Governance*
- *Legacy Management and Planning*
- *Project Control*

In order to demonstrate this claim, implementing and testing the models, we continued our research with an empirical analysis of the Expo 2015 case.

7.2 Empirical Analysis – Expo 2015 & The Sub-Projects

The empirical part of the research has been developed in order to reach the second and the third sub-objectives of the thesis: to understand the case study and the network of projects composing it.

Its results, combined with the literature analysis, enabled us to develop and apply guidelines and models.

Expo Milan 2015 is a perfect example of Mega Event: the definition of Mega Event can be applied to this exposition given its huge scale: the investments for the event and the related projects is higher than €10 billion, the value that it expected to generate is around €20 billion for a ten years horizon, the number of visitors expected for the six months of the event is 20 million.

Summarizing the results of the Expo 2015 documentary analysis and of the interviews, we can say:

- The goals of the event and a strategic plan to reach them have not been clearly defined, moreover, they are often not aligned with each other;
- The initial forecasts (revenues, costs, number of visitors, global impact of the exposition) has resulted to be very optimistic and, from the first data in 2008 till the last estimation in 2013, they had been severely reduced;
- Governance settings are not stable and they are highly affected by political choices. Moreover, limited number of actors have power in the decision making process, which had effected the initial selection of projects and initiatives and that had lead to opposition to Expo and its projects. A last issue coming from the changing governance is advised actors who managed projects related to Expo, like Sistema Como 2015, who claimed that communication and interaction with Expo 2015 S.p.a. and other actors is sub-optimal because of the lack of fixed references;
- The projects in order to realize the events are often late, and the list of main projects of Expo (the one presented in the Candidature Documents) needed several changes in terms of scope of the projects, deadlines and budget. Some of the projects of the initial list had even to be cancelled;
- The Expo has had a frequent need for re-planning and reorganizing of activities, which have never been quick or lead by Expo 2015 objectives: when a issue arose, there have always been the need for analysis of the progress of the Exposition, then for a re-definition of priority and finally the definition of the new plane;
- The list of the project related to Expo, managed by the central authority Expo 2015 S.p.a. or by other local authorities (Region Lombardy, Municipality of Milan) is limited to infrastructural projects, which are important but not fundamental for Expo, while it neglects important projects and initiatives in other areas (Tourism, Business Development etc.) which are an equally fundamental part of the outcome of a Mega Event as Expo. As a result, those topics have been managed by separate actors, often in connection with Expo 2015 S.p.a., but showing however the lack of a complete and comprehensive plan: this

actors (see the example of Tavoli Tematici 2015) observed that there had been years of confusions, characterized by lack of directions during Expo 2015 development; other projects, like Explora, fundamental for the development of a touristic offer for Expo, were developed really late.

7.3 Guidelines & Models

The outputs of our research are three. The main outputs are the classification model and the project map, to which our thesis was oriented since the initial phases. Moreover, given the high quantity of information collected on the topic of the governance of Expo 2015 and the consequent analysis carried out, we had also been able to generate guidelines regarding the optimal composition of a Mega Event governance: these guidelines, combined to the models, can be important in addressing the issues of Mega Events management tackled by this research:

- *Goals Definition and Alignment*
- *Project Planning*
- *Stakeholders*
- *Governance*
- *Legacy Management and Planning*
- *Project Control*

Through the guidelines and the models we are then able to provide, as we claimed in the chapter dedicated to the framework, tools that can be helpful in planning an event, but also as assessing tools for the quality of the overall management and the state of the Mega Event along its lifecycle.

Governance assessment guideline

Governance structure and characteristics should be planned and continuously assessed relatively to significant dimensions. In particular, three simple models can give a very strong support in shaping and then understanding evolutions of Governance in a Mega Event.

Area of assessment	Characteristics	Description	Comments
Board composition	Experience based or Representative based	<ol style="list-style-type: none"> 1. Members that have been chosen according their experience and professional skills compose the governance board team. 2. Members who represent other actors (private companies, public authorities) compose the board: the main criterion used to build the board is to be able to represent all the actors considered relevant. 	These are two main pillars of the governance composition. It is possible to assume that following characteristics depend on this essential setting. In order to make a government structure more efficient we can say confidently that it should be composed by both or by proper percentage of the two kinds of members, up to the requirement of the certain decision making environment.
Resources of the	<ol style="list-style-type: none"> 1. Assets 2. Skills 	<ol style="list-style-type: none"> 1. Competencies and skills, expertise, possibility to 	Assets are necessary for every governance setting, even if the scale

Actors belonging to the Board	3. Capabilities	<p>access to limited resources, possibility to affect laws.</p> <p>2. Flexibility in managing dynamic situations and in handling complex decision, overall vision of event development, directivity in sense of ability to drive changes in order to develop alternative scenarios.</p> <p>3. Network of already established relationships, Regimes (or Power asset) as a possibility to establish rules of the game.</p>	<p>of the event can affect the optimal balance of assets with respect to skills and capabilities.</p> <p>Skills are the main attribute of the Experience based governance, and (as showed Expo 2015 case analysis) the main gap for Representative based type. This makes governance not competent enough in order to handle various situations in management and as a solution they hire professional companies doing these activities. As a result there can be losses in control, decentralisation and increase of expenses.</p> <p>Capabilities are the main advantage of the Representative based governance, since the relationships and the connections among actors are important in carrying out the event.</p> <p>Concluding we would like to highlight the importance of the proper mix of the representatives and experienced professional to be presented on the board team.</p>
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Culture of the Board	<ol style="list-style-type: none"> 1. Adversarial 2. Fiduciary 3. Consensual 4. Corporatist 	<ol style="list-style-type: none"> 1. Open room for decision making and actors involvement 2. Public can play low advisory role but decision are made by small circle of people 3. Opened to the representatives, closed negotiation, procedure of decision making and implementation can be flexible 4. Open to the experts but not to representatives, low public involvement but high visibility, strict management of implementation and decision making 	<ol style="list-style-type: none"> 1. High involvement of actors can be the cause of the high complexity of decision-making process. Moreover, the competence of the actors involved could be doubtful. 2. Low involvement decreases the transparency and can be cause of the trust undermining. 3. This is the best example of the Representative based setting, as has been mentioned before it has high power to shape the environment but low visibly and competences. Therefore decision-making can be affected by opportunistic behaviours and be a cause of delays and budget overrun. 4. Corporatists are experience-based professionals, it can be a best-case management system for the Mega Event implementation, except of the
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<p>lack of the flexibility and power to shape decisional environment.</p> <p>5. In the case of Mega Events, the high number of complexity makes almost impossible to apply the Adversial Model. However, a model that guarantees transparency and at least a partial participation of stakeholders should be used: for this reason, we suggest the use of the Fiduciary or the Corporatist approach.</p>
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Table 44: Governance Assessment Models

The need for instrument and for this assessment is due to the fact that, as we saw from the literature, governance in Mega Events (and in general, in complex situations) is a fundamental element for an effective management but it is often:

- Unstable;
- Lack of clear roles definition;
- It considers limited number of actors and, as a consequence, limited number of goals and issues;
- It is often highly affected by politics dynamics, rather than by goals of the event (or of the project).

Applying the model to Expo 2015, we found a confirmation of these issues:

Area of assessment	Expo 2015 Case	Consequences
Board composition	Board is representative-based.	Politics lead decisions; solutions are not optimal but guided by few interests and so there is the loss on the view of objectives of the overall exposition, need to involve expertise from outside.
Resources of the Actors belonging to the Board	<ul style="list-style-type: none"> • The main Assets of Expo 2015 governance is the possibility to affect rules and norms • A representative based structure has forced the different actors of the governance to have low directivity, which means little ability to drive change. • Capabilities are the stronger characteristics of Expo governance, since representative based structure are characterized 	This setting is another consequence of a representative-based board. The lack of knowledge and capabilities need to be covered by external expertise, while the lack of directivity needed for a change of governance, in order to overcome the stalemate in which Expo was in 2011-2012.

by large networks and strong relationships.

Culture of the Board	Corporatist and Consensual Approaches are the ones that better describe Expo governance	The decision making process is closed. In this way, few objectives of the Exposition are pursued (the objectives of a limited number of stakeholders), while other stakeholders can oppose to the decisions (as it is happening in different Expo projects and on the overall event)
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Table 45: Governance Assessment Models applied to Expo 2015

The consequences of these settings can significantly harm Mega Event management. In the case of Expo 2015, we can see the following elements:

- Low involvement and consequent opposition of stakeholders;
- Political Instability and influence of political dynamics of Expo 2015;
- Lack of a wide and comprehensive strategic plan and of a clear strategic direction, due to a decision making process too much affected by limited stakeholders.

For this reason, we suggest to apply Governance assessment models at different phases of projects development, in order:

- To set optimal governance settings in the initial phases of Event development;
- To limit and control the weaknesses of a certain governance setting during the event development.

Sub-project classification

The main goal of our research was, however, to develop “model that can enable a better and more structured analysis of a Mega Event in general and that can, in particular, support the planning phase, according to the main characteristics and issues of Mega Event”.

In the literature and then analysing the case study, we observed how the multi-project composition of Mega Events is a important but not adequately investigated theme. Continuing the literature research in the fields of Project Management and Multi-Project Management, we identified that scholars claim to be important the characteristic of a project in order to develop optimal management tools.

Looking more in details at the two streams of research:

- Multi-Project Management, where the heterogeneity of project and the inability to identify and specifically address to each category of project is seen as one of the biggest limits of Programme management.
- Project Management research, where often scholars ask for tailored management model for specific projects category and at the same time claim that different project categories have different management model and different measures of success.

In order to use these insights, we decided to develop a classification model for Expo projects, based on the following characteristics:

1. Activities: this is part plays role of description of the projects in terms of:
 - a. Topic;
 - b. Objectives;
 - c. Scope of activities;
2. Network composition:
 - a. Type of actors involved into decision making process;
 - b. Relevant stakeholders;
 - c. Ownership;
3. Impact of the projects:
 - a. Type of impact;
 - b. Description of impact;
 - c. Dimension of impact;
 - d. Impact of the event realization by itself.

According to these dimensions, we can insert projects in three categories:

- *Essential*: projects that are essential for the development of the event itself;
- *Supporting*: projects that can support the event and that can significantly affect its success, but which are not determinant for its viability;
- *External*: projects developed and managed externally from the main event, which arise mainly in order to satisfy local and specific needs. From their point of view, the event is an opportunity.

Activities, network and impact of the projects are the elements that determine to which category every project belongs.

While Essential and Supporting projects categories existed in Expo documentation, “External project” is a definition developed by us, seeing both in the literature research both in the empirical research the high numbers of projects developed during an events: while Essential and Supporting projects are the ones typically managed (directly or indirectly) by the most important actors of an events and they have significant direct or indirect impact on the event itself, Essential projects are projects which arise trying to exploiting the opportunities generated by the event, they are not managed by the central organization of the event and they don’t have significant impact on the event development.

In the classification we can easily observe these elements:

- Expo 2015 S.p.a. has a direct management and control only on Essential (site construction) and supporting projects;
- Other actors, part of Expo 2015 S.p.a. management (like Camera di Commercio) have a participation on Supporting projects which are oriented to the development of External projects, but, as we can see from the documentary analysis, for these projects there is not consideration in masterplan or work schedule of the event: as observed during the interview with Tavoli Tematici, project like Tavoli Tematici, Explora, E015 were not born as a part of a plan, but they arose spontaneously and in a not coordinated way during Expo development.

However, these projects are fundamental in covering short and long-term objectives of Expo, like tourism, business development, etc. (see later in the Sub-project Map).

The classification developed confirmed our expectations:

- High number of projects;
- High Heterogeneity of scopes, dimensions, objectives;
- High number of stakeholders involved at different levels in Expo.

From a “practice” point of view, this classification can be used in a different way:

- As suggested by Locatelli et Al. (2012) a classification system for the projects developed in Expo can help in establishing optimal measure for the progress of the event: as claimed by the author and by Project Management research in general, for each category of project optimal project progress measures and optimal success factors can be defined, enabling an optimization of the planning and control cycle.
- In general, this instrument can be used to assess the network of a Mega Events projects, helping in conducting a structured analysis and in identifying:
 - Relevant areas of projects development;
 - Goals coverage;
 - Stakeholders network;
 - Network of projects extension and impact.

The Sub-Project Map

However, the classification system was not able to deliver a quick and clear view of the Expo development, so the previously described model is also important as a input source for the Sub-Project Map. The definition of a project map, and the insertion of projects in it, can help managers from the planning phase during all the management of the event.

Project will be classified according to their impact of the event and according to their overall short or long-term impact:

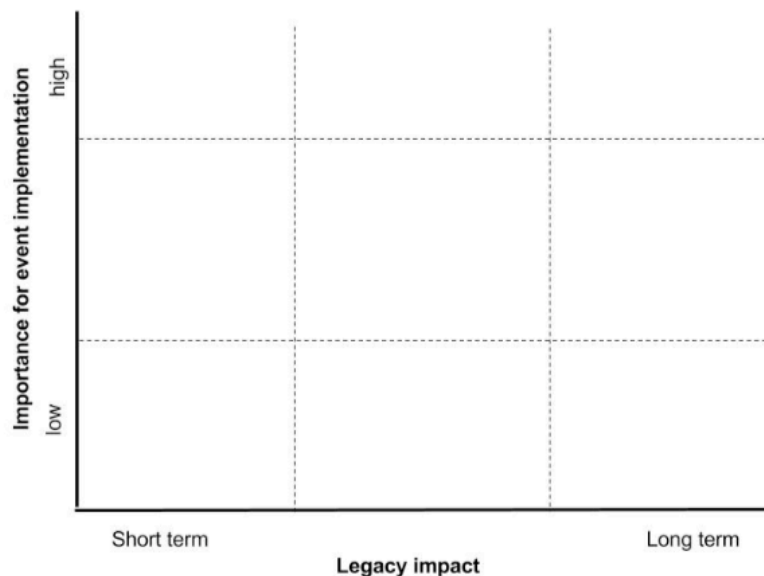


Figure 17: Project Matrix

They will be represented on the base of their belonging to one of the three categories of projects that we defined:

- Essential
- Supporting
- External

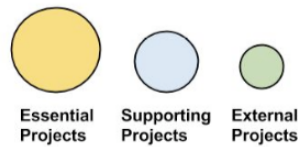


Figure 18: Project Categories

The first relevant results of the Map can be seen applying it to 16 representative Expo projects from the three different categories:

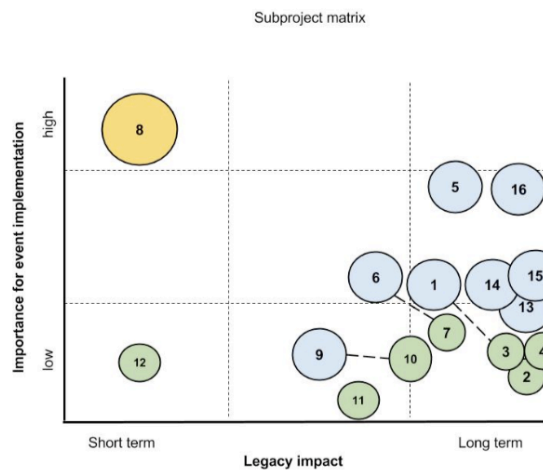


Figure 19: Projects Analysed inserted in the Project Map

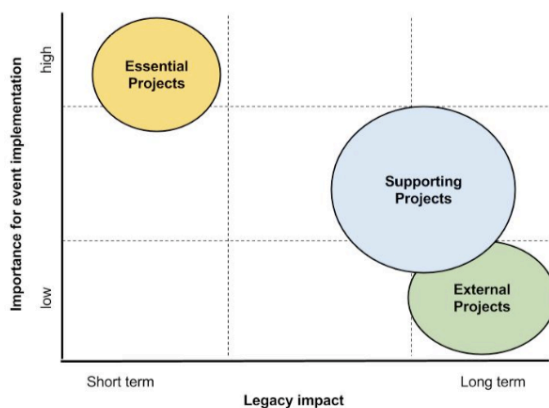


Figure 20: Categories of Projects inserted in the Project Map

In the graph on the left, the following projects are placed in the maps:

1. Tavoli Tematici per Expo;
2. Tavoli Tematici External Project ex. 1: Gambero Rosso Travel;
3. Tavoli Tematici External Project ex. 2: Car Sharing, Electric Vehicle;

4. Tavoli Tematici External Project ex. 3: WineAmore;
5. EXPLORA;
6. E015;
7. E015 External Project ex. 1: SEA Applications & Airport screens;
8. Padiglione 0;
9. Sistema Como 2015;
10. Sistema Como 2015 External Project ex.1: Destinazione Expo 2015;
11. Piattaforma MiTi;
12. Project X;
13. Metro line 4;
14. BreBeMi Highway;
15. Rho-Monza Link;
16. Connection Terminal 1 – Terminal 2.

In the graph on below, instead, we can see how projects typologies are distributed on the map.

The map highlights one of the main issues of Mega Events (but this issue can easily be generalized to Mega Projects and to complex projects in general): we can immediately see how there is typically a trade of between short and long-term goals and in particular between the short-term goal of Expo realization and the long-term legacy of an event.

Only certain kind of supporting projects are able to put themselves close to a central position in the map, which means that they are able to partially mitigate the goals trade-off.

Considering that, as observed during documentary analysis, Expo 2015 S.p.a. and the central governance of Expo manage only Essential and part of the Supporting projects (the infrastructural projects) we can easily visualize also a lack of coverage of important long-term objectives of Expo 2015 from the central organization of the Exposition.

The coverage should be higher in terms of:

- Plans: strategic plans for Mega Event development should be able to include all important objectives, and this confirms many findings in the Mega Event literature;
- Control: Central organization should be able to have an effective control of all the objectives of the Event, which means to have control on all relevant initiative and projects aimed at reaching them.

Classification System and Sub-Project Map: Final Guidelines

The two instruments can effectively be inserted in Mega Event development and they can help in solving different issues of Mega Event management:

- Once Goals of a Mega Events are defined and initiatives for reaching them are proposed, they should be inserted in the classification system and in the project map in order to:
 - Verify that all relevant goals are covered;
 - Verify that projects and goals are aligned and balanced in short and long-short terms;
 - Assess areas of expertise and impact (geographical impact, scope of the impact) of the projects, so to define from the beginning relevant stakeholders and to use this information for defining optimal governance settings.

- Once projects are chosen, the classification system will help in defining:
 - Budget, deadlines, success factors;
 - Establish priorities and relationships among projects;
 - Optimal governance and stakeholders involvement for each project. At this point, we have however to distinguish:
 - Projects like Metro Lines and Highways, which exist before Expo candidature and which have their own governance and stakeholders already defined, will provide a constraints for Expo 2015 organizers in terms of stakeholders;
 - Other projects, generated for the event, could be instead developed optimizing stakeholders composition;
- At this point, having a clear view of the network of projects and having a comprehensive plan, which considers in a balanced way relevant goals of the event, central organization of the event will be able to:
 - Have a full control of the event development, being able to maintain a high level perspective but without loosing control on the single initiative;
 - Verify project progress in relation to different goals;
 - Establish priorities and relationships among projects and to re-plan and adapt plan if necessary.

7.4 Value of the Research & Future Developments

With our research we have been able to create valuable tools for Mega Events management, grounded in the essential characteristics of Mega Events and potentially able to be effective during different phases of Mega Events development.

The tools are effective in particular during the planning phase, where they can help in shaping the organization of the Mega Event, while during other phases they can be helpful in understanding and assessing the event development: as we saw in Project Management and Mega Event literature, there is a lack for both of these two kinds of instruments.

With these tools we are proposing an innovative element in particular in Mega Events research since, how it has been abundantly highlighted by many scholars, there is a lack of tools that are thought specifically for the Mega Events management.

Moreover, our research is innovative also in the sense that develops these instruments focusing on the goals and most of all on the multi-project composition of Mega Events. The last one is an aspect very poorly investigated by literature but which can be very valuable in improving management and final results of Mega Events, given the similarities among Mega Events and Programmes and given the capability of Programme Management of acting on different aspects of projects complexity.

Regarding the limits of the thesis, our research is based on a strong documentary analysis but a direct analysis of a limited number of projects. The first improvement that can be done is to develop a wider and more complete map of projects, classifying and higher number of Expo related initiatives in order to enrich the classification and collecting better insights on the network of Expo related projects.

Obviously, once an event like Expo is mapped in a more complete way, the application of the model to other Mega Events (other universal expositions, or sports events) can help in

developing more relevant and general insights about Mega Event development, like for example identifying best practices.

A second possible evolution of our model could be done developing a more stakeholders oriented analysis. In this analysis, a classification of the stakeholders can be coupled with a map of them. Using these tools and adding our contribution, it would be possible to develop an instrument that can be very helpful in better understanding dynamics among actors and projects, and in particular political dynamics, which we have only marginally mentioned addressed in this research, even if they are determinant in Mega Events development as observed by the literature and by our documentary analysis.

This last improvement could further enrich the literature especially if coupled with a more deep analysis of the governance aspects.

Finally, a better-defined classification system can be implemented in a mathematical way, and not only in a qualitative way as we done, enabling the development of an instrument that can be more easily implemented and communicated. Obviously, in order to do that the dimensions that we used should be better articulated and adequate indicators should be developed to evaluate each of them, so there is first the need to develop a wider research, testing our models on multiple Mega Events and better establishing relevant dimensions for the classification.

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