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A DYNAMIC PERFORMANCE MANAGEMENT APPROACH TO ANALYSE THE PERFORMANCE OF MUSEUMS: THE GALLERY OF MODERN ART IN PALERMO

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LIST OF ABBREVIATIONS

GAM Gallery of Modern Art

ICOM International Council of Museums

MIBACT Ministero dei Beni e delle Attività Culturali e del Turismo

UNESCO United Nations Educational, Scientific and Cultural
Organisation

CLD Causal Loop Diagram

DPM Dynamic Performance Management

NPM New Public Management

SD System Dynamics

P&C Planning and control (systems)

SF map Stock and flow map

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ABSTRACT

The present research shows how useful the application of the dynamic performance management approach is in the analysis of museum performance.

The combination of the performance management with the system dynamics approach, may allow both managers and public decision makers in the identification of those performance drivers on which to intervene to affect museum performance.

The Gallery of Modern Art in Palermo has been chosen as a representative case study of the current analysis.

The strong interrelationship between back-office and front-office units in the implementation of the institutional activities of the analyzed museum as well as their impact on the image of the Gallery will be explained.

CHAPTER ONE

INTRODUCTION

1.1. Background research

Over the last few years the cultural sector has been affected by many institutional and organisational reforms which can be connected to two main factors:

- 1) the introduction of managerial principles in Italian public management, which has reformed cultural resources, including museums, from an institutional and organisational point of view;
- 2) the economic crisis which has involved many European countries generating a drastic decrease in public financial support in the cultural sector where the dependence on public funding is relevant.

Therefore, the European economic crisis, the reduction of funds deriving from the public sector, grants and contributions and the increasing competition among cultural institutions have pressured non-profit organizations such as museums to find strategies to improve their performance in the competitive cultural market.

The interesting results of this process of transformation in managing the public sector, is the introduction of a new approach of governance, more orientated towards customers, to efficiency as well as to service quality.

Based on these constraints, most economic literature focuses its attention on how demand of cultural services can be increased in order to boost revenues¹.

¹ Amenta C., (2010), *Exploring museum marketing performance: a case study from Italy*, in *International Journal of Marketing Studies*, vol. 2, No. 1, pp. 24 – 35.

Literature suggests that in the long run, the survival of museums depends on the results they are able to achieve in terms of capability to attract more visitors, more financial resources as well as to improve their image.

More precisely, management literature suggests that in order to improve their performance, museums must shift their attention from an internal perspective based on preservation, documentation and study to an external perspective based on their visitors and audience, on customer satisfaction, on cultural education and on the relationship between museums and their stakeholders².

According to this perspective, non-profit art organisations such as museums should “respond more to market forces in order to compete with an ever- expanding array of alternative entertainment choices and to cope with declining revenues from granting agencies [...]”³.

Gilmore and Rentschler identify two ways of managing a museum, through ⁴:

1. a custodial approach
2. a marketing approach

According to the first perspective, there are still many museums which have an approach based on research activities and preservation of their collections, while the marketing approach is based on marketing orientation, on visitors audience, on their satisfaction through the organisation of temporary exhibitions and events.

² Bernardi C., (2005), *The strategic Development of Museums: a System Dynamics Approach*, International Conference on Arts and Cultural Management, July 3 – 6 2005, Montréal, pp. 1- 22; Gilmore A., Rentschler R. (2002), *Change in Museum Management: A Custodial or Marketing Emphasis?*, Vol. 21, n. 10, pp. 745 – 760; Jalla D., (2003), *Il Museo Contemporaneo, Introduzione al Nuovo Sistema Museale Italiano*, Utet, Torino.

³ Izquierdo C.C., Samaniego M.J. G., (2007), *How alternative marketing strategies impact the performance of Spanish museums*, in *Journal of Management Development*, Vol. 26, No. 9, pp. 809 – 831.

⁴ Gilmore A., Rentschler R., (2002), *Changes in museums management: a custodial or marketing emphasis*, in *Journal of Management Development*, Vol. 21, No. 10, pp. 745 – 760.

This approach, guiding the way to manage modern museums and based on business orientations, “can be traced back to the traditional contribution of marketing in the field of management: the shifting paradigm for product/production to market⁵”.

However, the concept of marketing applied to the arts is different from the traditional concept of marketing. As a matter of fact, while profit organisations try to know customer needs before launching a new product, cultural institutions create the product according to certain scientific criteria and after that search for an appropriate audience for that product⁶. In the cultural field, for instance, customers are not able to evaluate the cultural service before going to see a “cultural product” like exhibitions, due to the simultaneity between production and fruition.⁷

By offering a wider cultural calendar and increasing the quality of additional services (temporary exhibitions as well as events), a museum can increase not only its visitors but also its image and should be able to attract more financial resources even from private grants or donations.

Based on the challenges that museums have been facing in the past few years, the present research aims to show the benefits of introducing a Dynamic Performance Management system, to foster new learning processes in increasing performance management of museums.

Museums are considered complex organizations for many reasons: “the variety of activities carried out, the intangible nature of the outcomes and the role museums can have in society.⁸”

⁵ Bernardi C., (2005), *The Strategic Development of Museums: A System Dynamics Approach*, International Conference on Arts and Cultural Management, July 3 – 6 2005, Montréal, p. 2.

⁶ Mejon J. C., Fransi E. C., Johansson A. T., (2004), *Marketing management in cultural organizations: A case study of Catalan museums*” in *International Journal of Arts Management*, Vol. 6, No. 2, pp. 11 – 22.

⁷ Bagdadli S., *Il museo come azienda, Management e organizzazione al servizio della cultura*, Etas, Milano, p. 86.

⁸ Bernardi C., (2005), *The Strategic Development of Museums: A System Dynamics Approach*, International Conference on Arts and Cultural Management, July 3 – 6 2005, Montréal.

Therefore, the choice of the Dynamic Performance Management methodology is closely connected to the complexity of the organisation of the museums.

The strategy to attract more visitors and to improve the image of museums by bettering their performance management, is a challenge for museums, considering the characteristic of the cultural service.

Improving performance management of museums means understanding the cause and effect relationships among the main variables affecting its performance.

In order to do that, the combination of System Dynamics with performance management perspective, has been chosen as a methodology for the present research.

Furthermore, the use of System Dynamics is justified by the fact that the reality of the museum is characterized by a certain complexity and only the adoption of new approaches and tools, that may adopt a *common shared view* among differently involved stakeholders regarding the underlying causes of certain phenomena.⁹

The Gallery of Modern Art of Palermo is an empirical example of cultural institutions and it has been chosen as a representative case study in the present research.

This research does not concentrate on a specific problem related to the GAM of Palermo, rather it aims at analyzing the benefits of introducing a Dynamic Performance Management system to support the decision makers of the Gallery of Modern Art in Palermo in improving the performance of the Gallery.

The use of System Dynamics methodology applied to the reality of the Gallery of Modern Art of Palermo, makes the present research innovative.

The introduction of a Dynamic Performance Management system for improving performance management of the Gallery of Modern Art, in fact, could represent an

⁹ Bianchi C. (2010), *Improving Performance and Fostering Accountability in the Public Sector through System Dynamics Modelling: From an 'External to an 'Internal perspective*, in *System Research and Behavioural Science*, 27, pp.361-384.

original perspective, considering that, at present, most of the work concerning the Gallery are more related to the collections of the Gallery and to the historical and artistic aspects rather than on managerial aspects.

The hope of the author is that this work can be useful both for policy makers and for managers of the GAM since that museum represents a piece of Palermo's historical past.

1.2 Purpose and motivation of the research

The purpose of the present research is to provide an analysis of the relevant aspects characterizing museums, with particular attention to the Gallery of Modern Art in Palermo chosen as empirical case study.

Therefore, the Gallery of Modern Art wants to assume an active role in the cultural and socio –economical development of the territory of the city of Palermo.

In fact, in small and medium sized museums, the relationship between a museum and its surrounding area is even greater.¹⁰

The Gallery of Modern Art in Palermo is considered as:

- a cultural asset;
- an important place of education and part of the territorial heritage;
- a place of cultural production;
- a place which contributes to the personal growth and artistic development of the territory;
- a place of cultural entertainment actively involving the local community.

¹⁰ Comune di Palermo, Settore Cultura, Servizio Musei e Spazi espositivi, Capitolato d'Oneri sulla "Concessione dei servizi museali integrati – Biglietteria, Servizi informativi, Prenotazione e Prevendita – Progettazione e Organizzazione di mostre ed eventi culturali – Bookshop – Bar . Caffetteria- Ristorazione – Didattica nonché supporto funzionale/ scientifico – Servizi educativi e diffusione culturale presso la Galleria Arte Moderna per il quadriennio 2014/2018".

Modern ways of running museums are oriented not only towards the traditional ways of protection and preservation of their collections, but they also have a central role in the social environment in which they compete, contributing to the cultural and socio – economical development of the local community.

Since the Gallery has an active role in the cultural and social debate of the territory where it is located, the present research is focused on the performance management of museums, since they represent important centres for the cultural life of cities. In fact, they allow citizens to take part in the cultural life of their territory and they are the expression of their traditions and cultural identity.

The objective is to identify a model for museums in order to underline those elements affecting their performance.

Starting from a conceptual framework of the way museums are managed, the main purpose of the research is to analyze how the use of Systems Dynamics methodology can enhance the performance of museums and help public decision makers to understand the functioning of a complex system such as museums.

Furthermore, the chosen methodology can support policy makers in finding strategies and policy levels on which to act in order to improve museums performance.

Evaluating museum performance is a challenge for the author, since a coherent system of performance management valid for all museums, does not exist.

Each museum, in fact, has its own peculiarities based on the typology of its collections, on the dimensions, on the location as well as on the quality of its services¹¹.

¹¹ Chirieleison C., *La valutazione delle performance nelle gestioni museali: problematiche operative e tecniche*, Dipartimento di Economia Aziendale, Università degli Studi di Pisa, Studi e note di economia 1/99, available at the following link: www.mps.it/NR/rdonlyres/EFB0B4B0-79CF.../j6_chirieleison.pdf.

Hence, the present research concentrates on those factors which have an impact on the performance of the Gallery of Modern Art in Palermo, according to a dynamic performance management perspective.

Another **critical aspect** in analyzing the performance of museums is also related to the dependence museums have on public institutions. In Italy, in fact, museums are mainly “offices or public authorities in which organizational boundaries are not clear”¹².

For instance, political decisions in the Sicilian cultural heritage sector, are taken at a central level by the Regional Government, while their implementation is carried out by nine local authorities called “ Soprintendenze” which are responsible for any decision making regarding heritage conservation¹³.

Museums, especially Municipal ones, don’t have their own financial identity and autonomy, rather they belong to a central administration. More in particular, in the case of the Gallery of Modern Art of Palermo, it belongs to the cultural sector of the Municipality of Palermo.

The research is motivated by the need to understand which strategy a museum can put into practise in order to improve its performance, considering its complexity and characteristics.

A great motivation derives from the reality observed: a medium sized museum in the historical centre of Palermo.

Another incentive for studying museum performance, has a theoretical foundation.

The use of System Dynamics methodology in studying museums appears interesting and useful. In fact, traditional performance management systems “often lack to

¹² Bernardi C., (2005), *The Strategic Development of Museums: A System Dynamics Approach*, International Conference on Arts and Cultural Management, July 3 – 6 2005, Montréal, p.3

¹³ Castro M. F., Rizzo I., (2009), *Performance Measurement of Heritage Conservation Activity in Sicily*, in *International Journal of Arts Management*, vol. 11, n. 2, pp. 29 – 41.

capture the dynamic complexity of managerial decision making. They may omit to consider a number of relevant factors influencing organizational performance, such as delays, non-linearity, intangible factors and to the unintended consequences of human perception and behaviour caused by a superficial or mechanistic approach in setting performance targets (...)"¹⁴

Considering the limitations of the traditional performance management systems, the application of a dynamic performance management system to the study of museums appears helpful.

Based on the above mentioned motivations, the research tries to answer the following questions :

- 1) Which are the benefits of applying a dynamic performance management system to museums?
- 2) How can the System Dynamics methodology support managers of museums to improve museum performance?
- 3) Which results are connected to the adoption of the Dynamic Performance Management system within a medium sized museum such as the Gallery of Modern Art in Palermo?

Hence, in order to answer to the above mentioned research questions, the present research, firstly, summarizes the main institutional and organisational aspects of museums, specifying their distinctive characteristics, describing their goals as well as their back-office and front-office activities.

Following that, the present research analyses the benefits of the application of the System Dynamics methodology in the study of the performance management of museums.

¹⁴ Bianchi C. et al., (2013), *A Dynamic Performance Management Approach to Evaluate and Support SMEs Competitiveness: Evidences from a case study*, Paper presented at the 31st International Conference of the System Dynamics Society, July 21 – 25 2013, USA, p.2.

In the second part of the thesis, an empirical application of the dynamic performance management perspective is applied to the Gallery of Modern Art in Palermo, chosen as empirical case study in the present research.

The result is a model showing the feedback relationship among the main variables characterizing the system of the Gallery.

More in depth, the organisational unit concerning the scientific activities of the analyzed museum will be scrutinized in its complexity in order to depict a framework of the investigated museum and identify the main performance levels on which to act to improve the performance of the Gallery, according to a dynamic perspective.

1.3 Research methodology

The present research is based on the dynamic performance management approach as a tool to analyse museum performance.

Since the dynamic performance management is the application of system dynamics to the performance management of a given organisation, firstly a description of the performance management will be carried out. Following this, an introduction of the system dynamics methodology will be illustrated, in order to build a dynamic performance management approach applied to the analysis of the Gallery of Modern Art in Palermo.

The analysis of the functioning of the Gallery of Modern Art, is the result of some interviews with the scientific board of the same museum.

More in depth, firstly a meeting was organized with the head of the cultural sector of the Municipality of Palermo, where the necessity of a more efficient running of museums was discussed.

Secondly, the study involved the discussion of the two most representative strategic units of the museum:

- 1) museum activities and added services;
- 2) scientific museum activities

The former mainly deals with all the administrative and accounting aspects related to the organizations of events and cultural activities of the Gallery as well as digitalization of invoices and data processing.

The latter deals with the safeguard of the cultural assets, scientific research concerning collections, cataloguing and inventory of works of art, loans of artworks, management of the library and the archive, as well as scientific research.

Semi-structured interviews have been conducted in order to explore the main critical issues of the cultural sector in the territory of Palermo, how the system of the Gallery of Modern Art in Palermo works, who are its main stakeholders and to design its model structure.

The case study is based on a conceptual framework aiming at underlying external and internal factors affecting museum performance.

The Dynamic Performance Management system appears to be a useful tool since it allows both managers and public decision makers to understand which are the main causes and effects underlying the analyzed system and to design some policies to enhance museum performance.

However, a museum is a complex system to investigate because of the interactions of many factors affecting its performance, both external such as visitors flow as well as the permanent collection displayed in the museum and internal such as the effect of the policy of loans, of the planning of an exhibition.

For instance, visitor satisfaction is associated with various factors both tangible and intangible (perceived quality of museums, level of instruction of visitors, as well as time available to visit museums).

In the same way, the back office policy of loans depends on many factors such as the conditions of security and insurance of the works of art as well as the quality of the institutions borrowing the works of art.

The interaction between the front office and back office units is necessary in order to have a clear picture of the system as well as its strategic resources, and drivers on which to act to get the desired results in line with sustainable growth.

1.4 Thesis structure

The present work is divided into five chapters.

More in detail, the current research is structured in the following way.

Firstly, the introduction of the research has been carried out, with a description of the background research, its purpose, the motivations of the choices of the cultural field, the research questions and the research methodology for the analysis of museum performance. The first chapter allows the reader to have a general idea of what the thesis is about and to understand the reasons why the System Dynamics methodology has been applied and why it is considered a useful method.

Following that, the second chapter includes a detailed description of the Italian context in the field of “cultural heritage” with particular attention paid to the organization of museums as cultural institutions. It describes how the structure of a museum works, defining their main internal and external stakeholders.

More in detail, the cultural institutions and their characteristics are explored, explaining their main organisational features and characteristics of functioning.

A description of the new role of museums in society is explained showing the passage from the traditional role of museums based on research and preservation towards a new role based on visitors, on improving the museum's image and the relative services offered to the visitors.

In the second chapter, the evolution of the most legislative reforms characterizing the cultural system is also described, explaining the main relevant aspects of the International and European legislation as well as the main characteristics of the National and Regional legislations.

A framework of the Italian and Sicilian museums is also illustrated in the second chapter in order to give a clear picture of the Italian cultural and artistic heritage and patrimony.

Based on the above analysis, the third chapter discusses the limitations of the traditional systems of performance measurement and introduce the Dynamic Performance Management approach applied to the organization of museums.

The use of Systems Dynamics methodology, in fact, can support public decision makers in their process of learning about the accumulation of strategic resources and their depletion processes, as well as their influence on performance drivers which in turn influence end-results. End results have an effect on strategic resources creating a dynamic spiral to be investigated.

In order to understand how to implement the Dynamic Performance Management framework to museums, the second part of the thesis focuses on an empirical study conducted inside a medium sized museum of Palermo.

More in detail, the fourth chapter introduces the dynamic performance management analysis applied to a specific museum: the Gallery of Modern Art in Palermo. It describes all the main aspects as well as the key challenges faced in managing the

museum. Hence, it tries to give some suggestions to the policy makers in order to improve the performance of the Gallery according to a dynamic performance management perspective.

The scientific museum activity has been chosen as an organisational unit, since it represents the main “business area” of the Gallery, regarding its institutional and core activities.

The latter activities are extremely related to those concerning loans of works of art, to the works of art which the Gallery borrows from other museums or foundations, to the number of contacts in terms of partnership the Gallery is able to create and establish with other museums, to the quality of the museum collection as well as to its image.

Finally, the fifth chapter provides the conclusion of the present research. It underlines the main results achieved as well as some limitations of the research and some ideas and suggestions for further research.

CHAPTER TWO

THE MUSEUM AS AN ORGANISATION: MAIN FEATURES AND JURIDICAL ASPECTS

2.1 Introduction

The main mission of museums is acquiring, preserving and promoting their collections as a contribution to safeguarding the tangible and intangible natural, cultural and scientific heritage.

The collection of a museum, which represents its core activities, is protected by international, national and regional law¹⁵.

Indeed, the Gallery of Modern Art in Palermo follows some “aesthetic codes” which belong to the museum policies and which express the “conservative business” of its management.

The current chapter provides an explanation of the terms culture as well as a description of the main organisational aspects of cultural institutions.

An analysis of museums as examples of cultural institutions is carried out with a consequent description of their goals, their main activities, as well as their characteristics and way of functioning.

Back-office and front-office activities are analyzed in depth, since they are extremely connected to each other.

¹⁵ ICOM, Code of Ethics for Museums; for further information check the following link: http://icom.museum/fileadmin/user_upload/pdf/Codes/code_ethics2013_eng.pdf. ICOM Code of Ethics for Museums was adopted in 1986 and revised in 2004. It establishes the values and principles shared by ICOM and the International Museum Community.

Since both of the above mentioned activities aim at increasing the performance of museums, the interconnection between back – office and front – office units will be analyzed in the present chapter.

The evolution of the most recent legislative reforms characterizing the actual International, European, National and Regional cultural system will be analyzed. Furthermore, an overview of Italian and Sicilian museums will be shown in order to give a clear picture of what the reality of museums in our country is today.

2.2 Culture and cultural institutions

Cultural and artistic institutions of today, represent an important resource both economically and socially.

From an **economic point of view**, institutions involved in the cultural sector, contribute to the production of national GDP and create an innovative framework in society. As a matter of fact, the World Bank, in 2003, estimated that 7% of the world GDP derives from the artistic sectors.

From a **social point of view**, cultural institutions have an active role in the involvement of public opinion, considering the positive effect they have on the wellbeing of individuals and the contribution they give to the community.¹⁶

More specifically, cultural institutions such as museums, libraries and archives have a social impact on society.

The above mentioned social impact can be either intrinsic or instrumental.

According to Newman, “intrinsic” impact has been defined as the subjective experience of culture intellectually, emotionally and spiritually, whereas an “instrumental” impact has been defined as those found outside cultural areas where

¹⁶ Carù A., Salvemini S. (2011), *Management delle Istituzioni Artistiche e Culturali*, Egea, Milano, p.17.

culture achieves a social or economic value. According to the same author, “intrinsic impact has become associated with the idea that the importance of art resides in the aesthetic sphere associated with the art for art’s sake argument”¹⁷.

In order to understand the main features of cultural institutions, in particular museums, first of all the concept of “**culture**” and expressions of art should be explained.

The original meaning of the term “culture” referred to the tillage of the soil, while in the sixteenth century, this literary meaning was attributed, metaphorically speaking, to the cultivation of the mind and the intellect¹⁸.

Hence, defining the term “culture” is not an easy task, since this word is employed in a variety of senses but without a tangible or general meaning.

In 1962, Morin defined culture as the union of values, symbols, myths, rituals and images upon which a group establishes its own identity and its interpretation of the world¹⁹.

In 1973, the anthropologist Geertz, in “*The interpretation of culture*”, defined culture as “a system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate and develop their knowledge about, and attitudes towards life”²⁰.

In 2001, in his works “*Economics and Culture*”, Throsby gives a double definition of the term culture.

The first one, refers to culture as a “set of attitudes, beliefs, customs, values and practices which are common to or shared by any group”.

¹⁷ Newman A., (2013), *Imagining the social impact of museums and galleries: interrogating cultural policy through an empirical study*, in *International Journal of Cultural Policy*, Vol. 19, No. 1, pp.120-137.

¹⁸ Throsby D., (2001), *Economics and culture*, Cambridge University Press, p. 3.

¹⁹ Morin E. (1962), *Lo spirito del tempo*, Meltemi, Roma.

²⁰ Geertz C., (1973), *The interpretation of culture*, Basic Books, New York.

The group can be defined in terms of politics, geography, religion, ethnicity or other characteristics which contribute to building the distinctive characteristics of the groups and to differentiate a group from members of other groups.

The second one is related to certain activities which are carried out by people and to the “products” of those activities.

In this second meaning, culture occurs as an adjective and it refers to “cultural goods”, “cultural institutions” and “cultural industries”²¹.

The places that create, preserve, spread and develop forms of art such as values, symbols, myths and images are called “**cultural institutions**”²².

For Throsby, the activities which originate from culture, follow certain criteria.

They are:

- the involvement of some form of creativity in the production of such artistic activities;
- the symbolic dimension related to these activities and
- the existence of intellectual property rights.

Hence, creativity, symbolic meaning and intellectual property, are the three main characteristics which define an activity as cultural.

The difficulty with such a definition, is that it is so broad that it may include, for example, sporting events, film making, festival, television, radio as well as archives, libraries and museums.

Therefore, a **museum** can be defined **as a cultural institution** since it communicates through symbols. The collections, in fact, not only are the expression of some

²¹ Throsby D. (2001), *Economics and Culture*, Cambridge University Press, pp. 3-4

²² Carù A., Salvemini S., (2011), *Management delle Istituzioni Artistiche e Culturali*, Egea, Milano, p.19.

symbolic meaning but also of the creativity of the scientific board of museums who decide how their artworks will be exhibited.

Finally, the existence of intellectual property rights defines a museum as a cultural institution (for example the payment of an entry ticket is the example of the intellectual property rights inside a museum)²³ .

The **classification of cultural institutions** in “*Management delle istituzioni artistiche e culturali*” by Carù and Cirrincione, gives a clear picture of what cultural institutions are.

It is also useful to explain, more in detail, the reasons why a museum can be considered as a culture institution.

According to the above mentioned authors, the below criteria define cultural institutions:

- 1) main activities carried out by the institution;
- 2) characteristics of the cultural product;
- 3) organisational set – up of cultural institutions and
- 4) prevalent goals.

According to the above mentioned criteria, it is possible to distinguish **profit** from **non profit institutions**.

A few examples of profit institutions are publishing houses and acting companies; while theatrical foundations, festivals, cultural associations, literary parks, artistic and environmental safeguard institutions, libraries, archives and museums as well as archaeological areas, are defined as non profit organizations.

Inside these organizations, the following sectors can be distinguished: **heritage**, **performing arts** and **cultural industries**.

²³ Ibidem, pp. 20 – 22.

According to the Council of European Union, “cultural heritage consists of the resources inherited from the past in all forms and aspects, tangible, intangible and digital, including monuments, sites, landscapes, skills, practices, knowledge and expressions of human creativity, as well as collections conserved and managed by public and private bodies such as museums, libraries and archives. It originated from the interaction between people and places through time and it is constantly evolving. These resources are of great value to society from a cultural, environmental, social and economic point of view and thus their sustainable management constitutes a strategic choice for the 21st century²⁴”.

The Convention for the Safeguarding of the Intangible Cultural Heritage defines the **intangible cultural heritage** as “the practices, representations, expressions, as well as the knowledge and skills (including instruments, objects, artefacts, cultural spaces), that communities, groups and, in some cases, individuals recognise as part of their cultural heritage”²⁵.

Artistic and environmental safeguard institutions, libraries, archives and museums as well as archaeological areas belong to the cultural heritage.

The **performing arts** include many cultural expressions which reflect human creativity and which also exist in many other intangible cultural heritage domains²⁶.

Festival, theatre and drama belong to performing arts.

Heritage and performing arts imply a direct consumption of the cultural product (for example an exhibition, or a ballet), while publishing houses or radio or television

²⁴ Council of the European Union, (2014), *Conclusions on cultural heritage as a strategic resource for a sustainable Europe*, in EDUCATION, YOUTH, CULTURE and SPORT Council meeting, Brussels, 20 May 2014.

²⁵ For more details check UNESCO website at the following link:
http://www.unesco.org/services/documentation/archives/multimedia/?id_page=13&PHPSESSID=743f303f0b2452205c4a672fde9310bc

²⁶ For further information check <http://www.unesco.org/culture/ich/?pg=00054>

networks belong to the category of **cultural industry** where the cultural product is broadcasted or reproduced.

Despite the above mentioned differences, heritage, performing arts and cultural industries have in common the fact that art, whatever its form, is a public good²⁷.

According to this definition, art has a positive effect not only for those who consume and pay for it, but even for those who do not contribute directly to its production or preservation.

For example, museums, opera houses, orchestras and art festivals generate a positive effect on the surrounding environment. In this way arts have a spill over effect both for paying and non paying persons²⁸.

Museums are an extremely important attraction to a city, region or country since they are highly influential on the economic activities²⁹.

At the end of the 1950s, Musgrave (1959), formulated the theory of art as a “merit good”³⁰. According to Musgrave culture is a good and it must be preserved and handed down through the financial support of all its citizens³¹.

²⁷ “ A public good is an item whose consumption is not decided by the individual consumer but by the society as a whole, and which is financed by taxation. A public good (or service) may be consumed without reducing the amount available for others, and cannot be withheld from those who do not pay for it. Public goods (and services) include economic statistics and other things for the use and benefit of all (law enforcement, national defence, parks...). No market exists for such goods and they are provided to everyone by governments” (Business Dictionary).

²⁸ Bianchi C., Bivona E., Cognata A., Ferrara P., Landi T, Ricci P., (2010), *Applying System Dynamics to foster organizational change, accountability and performance in the public sector: A case-based Italian Perspective*, in *System Research and Behavioural Science*, 27, pp. 410- 411.

²⁹ Fonseca S., Rebelo J., (2010), *Economic Evaluation of Cultural Heritage: Application to a museum located in the Alto Douro Wine Region-World Heritage Site*, Pasos, *Revista de Turismo y Patrimonio Cultural*, vol. 8, n. 2, pp. 339 – 350.

³⁰ Merit are goods or services (such as education and vaccination) provided free for the benefit of the entire society by a government, because they would be under-provided if left to the market forces or private enterprise (from business dictionary).

³¹ Carù A., Salvemini S., (2011), *Management delle Istituzioni Artistiche e Culturali*, Egea, Milano, p. 172.

2.2.1 Main organizational features of museums

According to the last version of the museum, as defined in the ICOM Statutes, adopted by the 22nd General Assembly in Austria in 2007, “a **museum** is a **non-profit, permanent institution** in the service of society and its development, open to the public, which **acquires, conserves, researches, communicates** and **exhibits** the tangible and intangible heritage of humanity and its environment for the **purposes of education, study and enjoyment**”.

It is possible to find similar characteristics of an organisation within a museum³².

The model developed by Michael Porter, described in figure n.1 concerning the characteristics of management inside organisations, may be relevant in order to analyze the characteristics of a museum as an organisation.

The model distinguishes **five primary activities of an organisation**:

- 1) the logistical aspect;
- 2) the transformation of the product;
- 3) the supply and the communication of the product;
- 4) services

These primary activities are strictly related to the **following areas**:

- 1) technology;
- 2) purchase;
- 3) administration;
- 4) management

As it can be observed in the following figure, the margin is the consequence of the value generated by any firm.

³² For further analysis check: Sorci C., (2002), *Lezioni di economia aziendale*, Giuffrè, Milano; Airoldi G., Brunetti G., Coda V., (1989), *Lezioni di economia aziendale*, Il Mulino, Bologna.

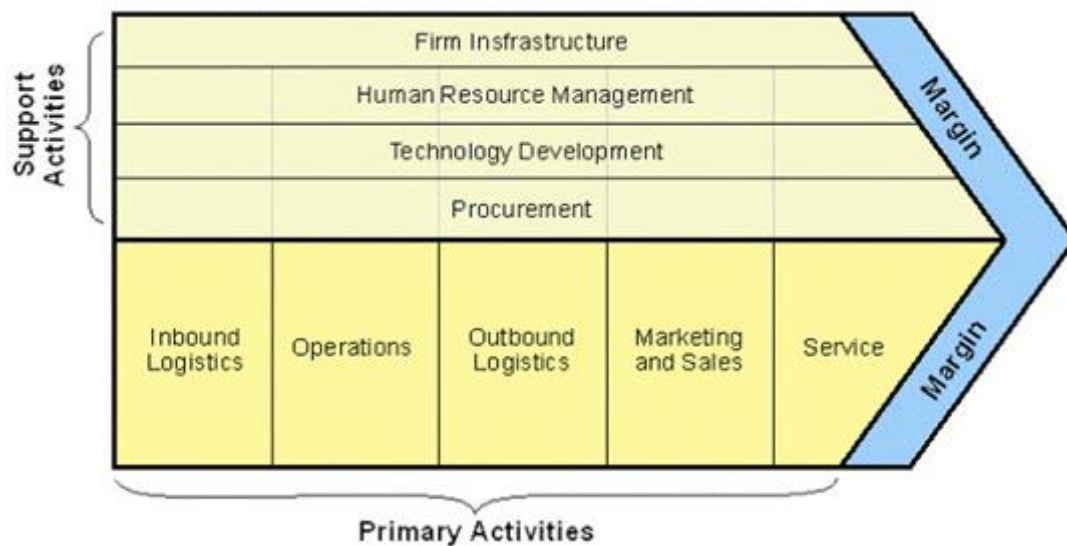


Figure n. 1 The value of chain (Porter, 1985)

Starting from the analysis conducted by Porter, it is possible to apply the same principles to the cultural institutions, especially museums, as they can be considered as organizations oriented towards the **creation of cultural value**.³³

However, cultural value may contain elements that cannot be easily expressed according to any quantitative and qualitative scale.³⁴

As a matter of fact, according to Throsby in his article concerning the determining of value of cultural goods, “ the characteristics of cultural goods which give rise to their cultural value might include their aesthetic properties, their spiritual significance, their role as purveyors of symbolic meaning, their historic importance, their significance in influencing artistic trends, their authenticity, their integrity, their uniqueness and so on”.

³³ Curioni S. B., (2008), *I processi di produzione del valore dei musei*, Aedon, *Rivista di arti e diritto on-line*, n. 2.

³⁴ Throsby D.,(2003), *Determining the Value of Cultural Goods: How much (or how little) does contingent valuation tell us?* in *Journal of Cultural Economics*, 27, pp. 275-285.

This is the main reason why measuring performance of museums does not mean a simple evaluation of financial indicators. Rather it entails an evaluation of other qualitative performance indicators related to the so called “value creation”.

Based on the model of Porter, Curioni developed a similar model which he applied to museums, identifying their activities in the following way:

MANAGEMENT OF THE COLLECTION	Referring to the loan of the collections and to the new acquisition and management of the existing works of art in museums.
SCIENTIFIC RESEARCH	Refers not only to the research concerning the collection of the museum, but it also includes all the activities of inventory and cataloguing of the collections.
PRESERVATION	It concerns the activities of evaluation of the risks related to the works of art as well as the maintenance of the collections.
PUBLIC SERVICES	It covers all the activities carried out by museums for its visitors (permanent and temporary exhibitions, set-up, sales desk, editorial, didactic activities, laboratories and cultural events).
BUSINESS TO BUSINESS	It refers to the management of the rights of property of the cultural institution (rights to spaces, image and collections).

Figure n. 2 Primary activities of a Museum (adapted from S. B. Curioni)

Based on the above analysis, focusing on the managerial areas of a museum is needed, in order to identify the peculiarities of such cultural institutions.

The **main mission** of museums is to collect, preserve, study, exhibit and stimulate visitors knowledge about works of art as well as all the collateral activities carried out by these cultural institutions, such as planning of temporary exhibitions, concerts, seminars, book launches and conferences.

The **collection** represents the **core activity** of museums for the fulfilment of their mission.

Two different types of **main activities** carried out by museums in order to reach their mission are:

- 1) **the management of the core activities** related to the institutional mission of museums;
- 2) **the management of the non – core activities** which include bookshops, cafès and restaurants.

Analyzing processes and activities of museums is necessary in order to measure their results.

A process is a set of interrelated activities that transforms inputs into outputs, while the activities are a series of homogenous procedures for the fulfilment of the outputs.

According to Dainelli, the macro – processes of museums can be illustrated in the following way³⁵:

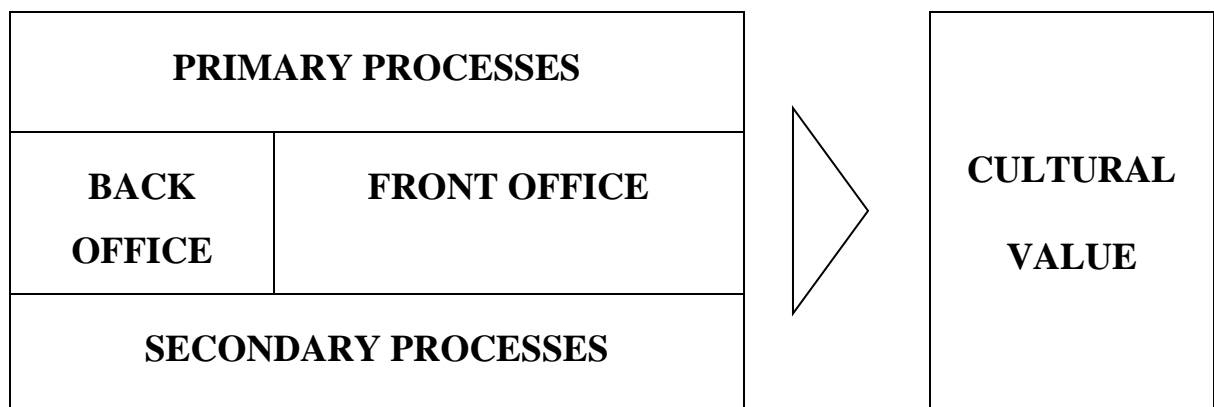


Figure n. 3 The macro processes of museums (adapted from Dainelli)

³⁵ Dainelli F. , (2007), *Il Sistema di Programmazione e Controllo del Museo*, Franco Angeli,. Milano, p. 108.

More specifically, Dainelli distinguishes between **primary processes** and **secondary processes**.

The **former** can be divided into **back office and front office activities**; while the **latter processes** concern all the **administrative and financial aspects of the management of museums**.

More in particular, the **back office activities of museums are as follows**:

- 1) research and innovation
- 2) the acquisition of new works of art
- 3) the management of storage
- 4) restoration and maintenance
- 5) cataloguing
- 6) the management of loans of works of art

More in detail, the following table shows the **back offices processes** related to the above mentioned activities.

RESEARCH AND INNOVATION	ACQUISITION OF NEW WORKS OF ART	MANAGEMENT OF STORAGE VAULTS	RESTORATION AND MAINTENANCE	CATALOGUING	MANAGEMENT OF ART LENDING
Research	Purchasing of work of arts	Archiving	Formal renovation	Study of the collections	Incoming works of art
Vocational education	Inventory	Relocation	Pictorial renovation	Documentation	Outgoing works of art
Innovation			Ordinary maintenance	Analysis of the value of the work of arts	

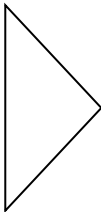


Figure n. 4 The value of chain of back- office processes

(adapted from Dainelli, 2007, p. 109)

The main **back office activities** of museums are as follows:

- 1) set – up
- 2) interpretation
- 3) facilities
- 4) customer services
- 5) additional services

The figure below shows the **main front office processes** related to the main **front office activities**.

Set - up	Interpretation	Facilities	Customer services	Additional services
Study of the exhibition itinerary	Conception of the message	Sales desk	Guided tours	Seminars
Planning of communication channels	Interpretation and explanation of the message	Cloakroom	Interactive displays in exhibition spaces	Film exhibitions
Creation of exhibition			Equipment in exhibition spaces	Conferences

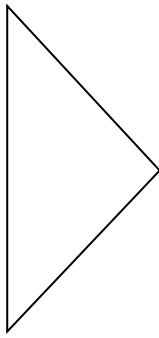


Figure n. 5 The value of chain of front - office processes

(adapted from Dainelli, 2007, p. 109)

Finally, **the secondary processes** and their related **activities** are:

Technical	Administrative and economical	Financial
Maintenance of the property	Accounting	Financial aspects
Management of outdoor areas	Quality and accreditation	Fundraising
Preventing structural risks	Staff management	Management of funding system

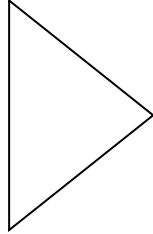


Figure n. 6 The value of secondary processes
(adapted from Dainelli, 2007, p.109)

The cultural value of museums is connected to the contribution which various *stakeholders* give to the functioning of the museum.

As a matter of fact, the actual museums may be situated in a specific territory, however their influence can be noted throughout the whole community.

Hence, an analysis of their stakeholders is necessary in order to understand more clearly the mission of museums and how they contribute to the development of the community³⁶.

The stakeholders of museums can be divided into two groups:

- 1) *primary stakeholders*
- 2) *secondary stakeholders*

³⁶ F. Dainelli, (2007), *Il Sistema di Programmazione e Controllo del Museo*, Franco Angeli, Milano, pp. 83 – 88.

Among the *primary stakeholders* we can mention all those who contribute to the fulfilment of the mission of museums such as :

- Regional Governments, Mayors, Deans
- Patrons
- Volunteers
- Art critics and scientific communities
- Institutional bodies such as the Ministry of Cultural Heritage
- Media

Among the *secondary stakeholders* we can observe all those who participate in the activities of museums and contribute to the improvement of its image, such as:

- Workers
- Tour operators
- Sponsors, Banks, Trade Associations
- Suppliers
- Companies
- Donors

Visitors have a key role in museums since they are the actual and potential users of the cultural product as well as people who use the bookshops, café and restaurants inside museums.

In a certain sense, visitors are the main stakeholders seeing that they contribute the fulfilment of the mission of museums not only as visitors but also as taxpayers.

Among stakeholders, the category of *competitors* also merits particular attention.

Since visiting museums is a way of spending free time, cinemas, parks, monuments, theatres as well as other cultural institutions and museums in the territory become competitors.

Consequently, understanding visitors needs is an important element for the “competition of museums on the market” as well as the improvement of the quality of their performance.

2.3 From the role of the museum based on research and preservation toward a new role based on visitors

For the past half century, museums have been facing a change in their institutional identities. These cultural institutions have shifted their attention from a role based on research and preservation towards a new role focusing on visitors and their needs³⁷.

According to the legislative decree n. 490 of 29 October 1999³⁸, a museum is a structured institution aiming at preserving and valuing its collection of cultural goods for the public enjoyment.

Undoubtedly, the main mission of cultural institutions like museums is to spread and foster the cultural heritage and to favour its research and preservation³⁹.

ICOM (International Council of Museums) Statutes, adopted by the 22nd General Assembly hold in Vienna in 2007, defined the museum as: “ a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education,

³⁷ Shauble L., Leinhardt G. and Martin L., (1997), *A Framework for Organizing a Cumulative Research Agenda in Informal Learning Contexts*, in *Journal of Museum Education*, 22, pp. 3 – 8.

³⁸ The legislative decree 29 October 1999, n. 490 is a text, called “*Testo Unico*”, which reorganizes all the juridical rules about cultural and environmental resources in Italy. It was replaced by the Legislative decree n. 42 of 22 January 2004 called “*Codice dei Beni Culturali e del Paesaggio*”.

³⁹ Kotler N. G., Kotler P., Kolter W. I., (2008), *Museum Marketing and Strategy: Designing Mission, Building Audiences, Generating Revenue and Resources*, Jossey – Bass, San Francisco.

study and enjoyment”⁴⁰.

Since its creation in 1946, ICOM updates the definition of museum with the realities of the global museum community⁴¹.

In the traditional concept of the museum, as it was defined in the XIX century, the arts were seen as something external from the productive processes of society and from economic development of the territory where the museum was located.

The traditional museum was an entity for the élite and so it was not intended to have an educational function towards the community, instead, museums were defined only as places to collect, catalogue and exhibit.

This traditional vision of the museum was partially substituted in the XX century by a new one based on research and didactics, in order to spread knowledge and to guarantee different levels of access towards information concerning the arts.

The modern museum is a complex organization and has an active role in the production of culture through its collection, the study and the “divulgation” of some historical elements which constitute the history, the roots and the tradition of a territory.

This new role of the museum in society has an impact on the urbanisation of the city and on the conception of its space.

Museums have become, therefore, the instrument to discover the relationship between a city and its own territory and to define a new link between the arts and

⁴⁰ ICOM, the International Organization of Museums and Museum Professionals, created in 1946, is a non - governmental organization (NGO) that carries out part of UNESCO’s programme for museums. ICOM’s activities are focused on the following themes: professional cooperation and exchange; dissemination of knowledge and raising public awareness on museums; training of personnel; advancement of professional standards; elaboration and promotion of professional ethics; preservation of heritage and combating the illicit traffic in cultural property (from <http://archives.icom.museum/mission.html>).

⁴¹ For further information, check the following link: <http://icom.museum/the-vision/museum-definition/L/12/>.

society⁴².

Hence, it is possible to define a museum as a complex organisation which aims at offering some cultural activities to its visitors in order to contribute to its cultural growth⁴³. Therefore, museums have become a place of learning that respond to the needs and interest coming from those who visit and benefit from their services⁴⁴.

According to this modern role of museums in society, the new concept of the Gallery of Modern Art, chosen as empirical case study of the present research, is based not only on the traditional form of protection and preservation of its collections but also on its social value.

Furthermore, the key role of a museum is to offer a “cultural product” to its visitors. Therefore, it is essential to understand firstly the motivation and the needs of its different “audiences”⁴⁵.

The process of reaching new audiences is called “**audience development**”. Audience development is an Anglo-American term; it is a management process to meet the needs of actual and potential audiences and to help cultural organizations to develop on-going relationships with audiences⁴⁶.

According to Waltl, the basis of all audience development initiatives, is to identify the different needs of visitors and convince visitors to become regular museum goers⁴⁷.

⁴² Costantino D., Pinzello I., (1990), *Museografia e territorio, Il sistema museale integrato come istituzione didattica attiva, multimediale per la conoscenza storicizzata e contestualizzata dell'ambiente e del territorio*, Edizioni Grifo, Palermo, pp. 11 – 12.

⁴³ Bagdadli S., (1997), *Il Museo come Azienda. Management e organizzazione al servizio della cultura*, Etas, Milano; Zan L. (a cura di), (1999), *Conservazione e innovazione nei musei italiani. Management e processi di cambiamento*, Etas, Milano.

⁴⁴ Kelly L., (2004), *Evaluation, Research and Communities of Practice: Program Evaluation in Museums*, in *Archival Science*, 4, pp. 45 – 69.

⁴⁵ Waltl Ch., (2006), *Museum for visitors: Audience development- A crucial role for successful museum management strategies*, Intercom 2006, Conference paper.

⁴⁶ <https://it.wikipedia.org/>

⁴⁷ Waltl Ch., *Museum for Visitors: Audience development – A crucial role for successful museum management strategies*, Conference paper, Intercom 2006, p. 3.

Audience development means enriching the experience of visitors by helping them to learn more and deepening their enjoyment of what you have to offer. It therefore combines the aims of the curator, educator and marketer⁴⁸.

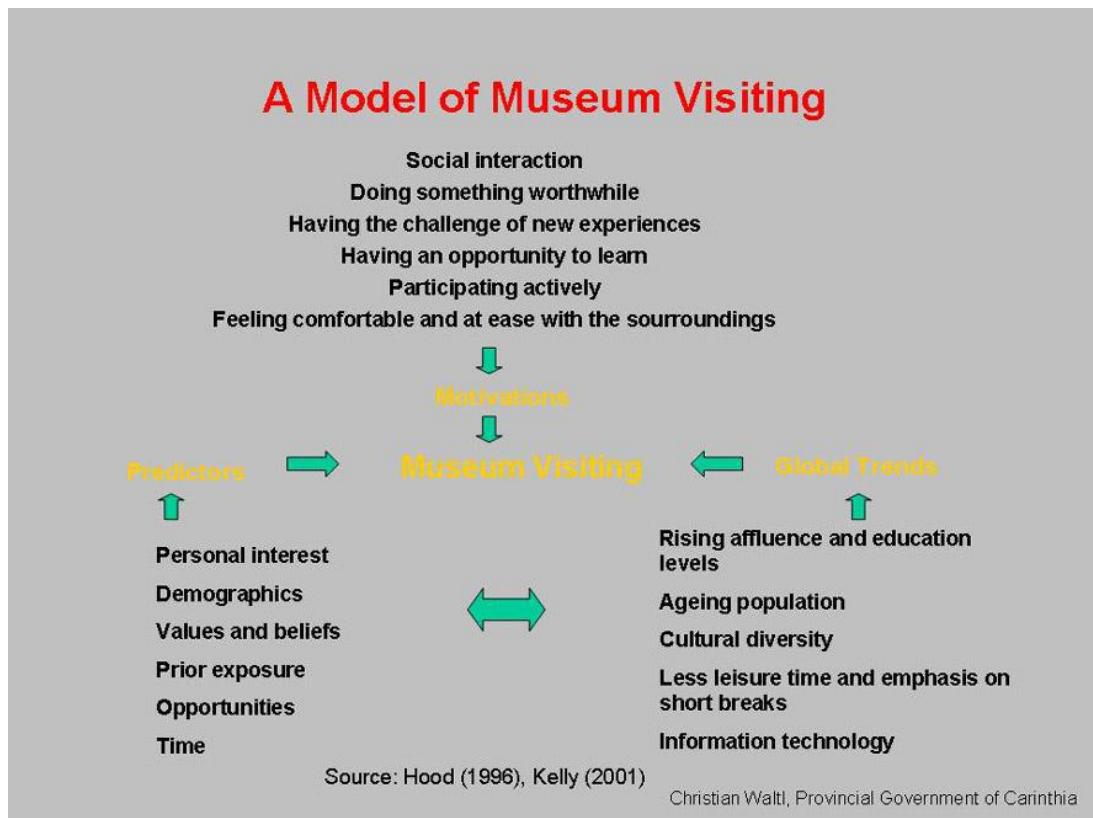
“The goals of a sustainable development strategy are:

- To refine and enhance communication with visitors;
- To achieve an attainable and sustainable audience;
- To turn non visitors into visitors, visitors into repeat visitors and regular museum goers into supporters;
- To enhance access;
- To offer multiple experiences;
- To engage visitors (hands on & minds on);
- To establish an active network with special target groups”⁴⁹.

Waltl in his research gets inspiration from Hood (1996) and Kelly’s (2001) model and elaborate the following **“model for museum visiting”, based on the motivation for a museum visit.**

⁴⁸ Waltl Ch., *Museum for Visitors: Audience development – A crucial role for successful museum management strategies*, Conference Paper, Intercom 2006, p. 3.

⁴⁹ Waltl Ch., *Museum for Visitors: Audience development – A crucial role for successful museum management strategies*, Conference paper, Intercom 2006, p. 4.



Waltl observes that changes in society have had strong implications for museums and their services.

He describes a visitor survey of the State museums in Vienna in 2004.

According to this survey, 58% of visitors visit a museum because of a special exhibition and another 14% because of an event or special programme. That means that two in three Austrians pay a visit to a museum because of “special programmes” or “exhibitions”.

The results achieved by the above survey, are important for strategic planning. As it is shown in the figure below, special exhibitions in addition to permanent ones, seems to have an important role in attracting potential visitors.

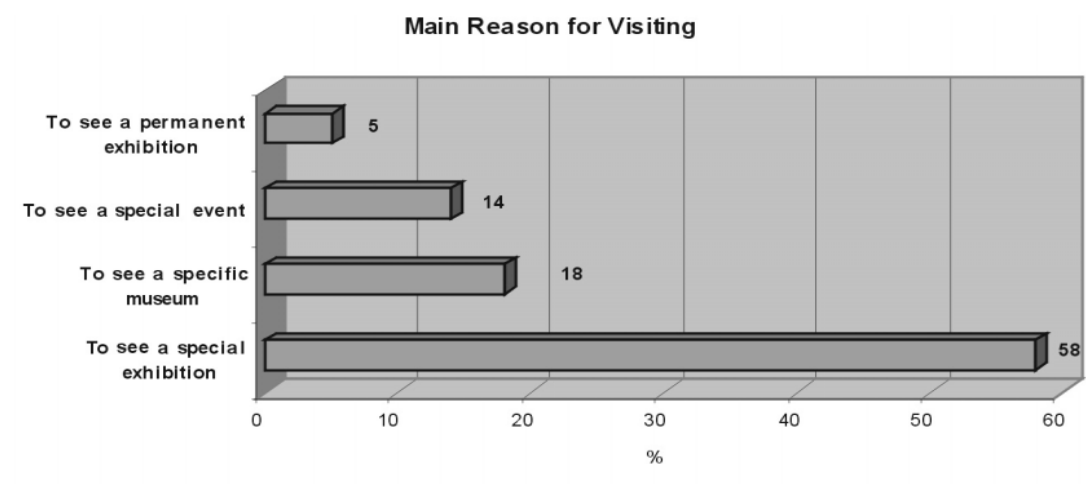


Figure n.7 Reasons for visiting museums (source: Waltl, 2006)

However, the present research aims at demonstrating that not only the temporary exhibitions and big events generate a positive effect in the performance of museums, but also their institutional activities such as the loans of works of art, the works of art borrowed from other museums as well as the scientific publications concerning the museum collection.

Hence, the combinations of many factors have an impact on the quality of a museum and they will be analyzed according to a systemic and learning oriented approach in the present research.

2.4 An overview of the legislative framework in the management of museums

The **Ministry of Heritage, Cultural Activities and Tourism**, in Italian called “Ministero per i Beni e le Attività Culturali e del Turismo”(MIBACT), is the actual Culture Ministry of the Italian Republic. It was created in 1998 with the legislative decree n. 368.

All the functions of the Minister of Cultural and Environmental Heritage (established in 1975 by Giovanni Spadolini) as well as the promotion of sports, show business, theatre and cinema were conferred to the Ministry of Cultural Heritage.

However, in 2007 all of the competences regarding sports were attributed to the Ministry of Youth Policies and Sporting Activities.

MIBACT is articulated in the following sectors:

- One General Secretariat
- Nine General Directorates, one for each of the following areas:
 - 1) General Affairs, Innovation, Economical aspect and Personnel;
 - 2) Archaeological heritage;
 - 3) Architectonic Heritage; Artistic Heritage, Contemporary Arts and Landscape;
 - 4) Archives;
 - 5) Promotion of Cultural Heritage
 - 6) Libraries, Cultural Institutes and copyrights;
 - 7) Cinema;
 - 8) Performing Arts;
 - 9) Policies for tourism
 - 17 Regional Directorates
 - 4 Research Institutes;
 - Central institute for Cataloguing and Documentation;
 - Superior Institute for Restoration and Conservation;
 - *Opificio Pietre Dure*;
 - Superior Institute for Restoration and Conservation of Archivist and Librarian Heritage;
 - Central Institute for Unique Catalogue Documentation.

The **General Directorate** for Landscape, Fine Arts, Contemporary Architecture and Art is the **central body in charge of the conservation and restoration** of cultural heritage, in the field of landscapes, monuments, museums, contemporary architecture and fine art.

It coordinates **108 national museums and 50 territorial offices (called “Soprintendenze”)**.

The General Directorate, in coordination with the Regional offices of MIBACT, directly manages public cultural heritage and control and survey the Italian private cultural heritage.

2.4.1 International and European legislation

Cultural heritage is protected at an international level by the General Conference of the **United Nations Educational, Scientific and Cultural Organization** (better known as UNESCO).

Following the Second World War, UNESCO adopted the Hague Convention (1954) which established some rules to protect cultural goods during armed conflicts. This Convention was the first international treaty aimed at protecting cultural heritage in the context of war⁵⁰.

At the beginning of the 1970s, UNESCO adopted another Convention “on the means of prohibiting and preventing the illicit import, export and transfer of ownership of cultural property”.

According to the above mentioned Convention, with the term “**cultural property**” one refers to the property which is “specifically **designated by each State as being**

⁵⁰ For further information, check the following link:
<http://www.unesco.org/new/en/culture/themes/armed-conflict-and-heritage/the-hague-convention/>

of importance for archaeology, prehistory, history, literature, art or science”.⁵¹

The Convention was adopted in order to secure the protection of the cultural heritage and particularly to avoid the illicit import, export and transfer of ownership of important cultural property.

During the meeting of UNESCO held in Paris in 1972, a **definition of Cultural and Natural Heritage** was established.

Specifically, the following assets were defined as **cultural heritage**:

- 1) “**monuments**: architectural works, operas of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;
- 2) **groups of buildings**: groups of separate or connected buildings which, because of their architecture, their homogeneity or their position in the landscape, are of outstanding universal value from the point of view of history, art or science;
- 3) **sites**: manmade works or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view”.⁵²

The Convention, therefore, defines the following assets as **natural heritage**:

- 1) “**natural features** consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;
- 2) **geological and physiographical formations** and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;

⁵¹ For further information, check the following link:

<http://www.unesco.org/new/en/culture/themes/armed-conflict-and-heritage/the-hague-conventio>

⁵² <http://whc.unesco.org/en/conventiontext/>

3) natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty”⁵³.

According to this Convention, the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage belongs primarily to that State where the asset is situated.

As it is defined in article 6 of the same Convention of UNESCO, “according to the sovereignty of the States on whose territory the cultural and natural heritage is found, and without prejudice to property right provided by national legislation, the States Members of the above Convention recognize that **such heritage constitutes a world heritage for whose protection it is the duty of the international community as a whole to co-operate**”.

The European Union doesn't have a specific common policy in the cultural sector.

According to **art. 6 of the Lisbon Treaty**, the role of the European Union is to support national policy following the principle of subsidiarity.

More specifically, in those areas which do not fall within its exclusive competence, such as cultural ones, the Union shall act only if and in so far as its action is more efficient than one taken at a national, regional or local level.

European policy in the field of culture, is regulated by **art. 167 of the Treaty of the Functioning of the European Union**.

According to the above mentioned article:

1. “The Union shall contribute to the prosperity of the cultures of the Member States, while respecting their national and regional diversity and at the same time bringing the common cultural heritage to the fore.

⁵³ *Ibidem*

2. Action by the Union shall be aimed at encouraging cooperation between Member States and, if necessary, supporting and supplementing their action in the following areas:

- improvement of the knowledge and dissemination of the culture and history of the European people;
- conservation and safeguarding of cultural heritage of European significance;
- non-commercial cultural exchanges;
- artistic and literary creation, even in the audiovisual sector (...)

2.4.2 National legislation

Prior to the birth of the Italian Republic, two laws called “twins laws”

- 1) law n. 1089 (better known as “Legge Bottai”) regarding the safeguard and valorisation of cultural heritage and
- 2) law n. 1497 of 1939 concerning environmental conservation, regulated the historical, archaeological, artistic and natural assets of the Italian nation⁵⁴.

Bottai’s law” was the first juridical law concerning the activity of protection of the cultural, historical and artistic Italian heritage.

According to the two above mentioned laws, the **IX article of the Italian Constitution**, which entered into force the 1 January 1948, establishes that the Italian Republic promotes the development of culture and of scientific and technical research and it safeguards the natural landscape and the historical and artistic heritage of the Nation⁵⁵.

⁵⁴ Mignosa A., Rizzo I., (2005), *Tutela e Valorizzazione dei Beni Culturali in Sicilia*, Franco Angeli, Milano, p.20

⁵⁵ *Ibidem*, pp. 20 – 21.

During the **1970s and 1980s**, the transformations in society lead to a new concept of the museum. It was considered not only a container of artworks but also a service for citizens.

The attention shifted from a static outlook of the museum to a managerial set up.

With the **reform of the Italian Public Administration**, starting from the **law 241/90**, we may observe:

- a new redistribution of the institutional tasks between the State and the local government;
- a process of transparency towards citizens;
- the privatization of many public sectors;
- the application of the criteria applied in the private sector to the public one.

The law n. 4, 14 January 1993, better known as **Ronchey's law**, represents a change in the field of management of cultural heritage.

It recognizes not only the longer opening hours of museums but also the possibility to give the so called “**additional services**” in concession to private institutions⁵⁶.

Added services not only contribute to increasing the liquidity of museums, but they also improve their image.

This law assigns the possibility for museums to offer the following services:

- reproduction of works of art for catalogues, publications and other informative material;
- reproduction of book images or material from the archive;
- info desk offering services related to the entertainment of children, informative services, guides and didactic assistance;

⁵⁶ Vergelli M.L., Trimarchi M., (2009), *Private and public in the museum sector: the provision of services*, ECCOM (European Centre for Cultural Organization Management), Rome, available at the following link:
http://grupo.us.es/aeep/WORKSHOP_EGC_2009/Sevilla_09_Vergelli_Trimarchi.pdf

- restaurants and cafès;
- cloakrooms;
- organizations of exhibits, cultural manifestations and promotional initiatives.

According to this law, the primary goal of a museum is not only to preserve and research, but also lies in its capability to offer a cultural service to its citizens.

Hence, museums have changed their identity, becoming not only places of production of culture, but also places of meeting and exchange of social and cultural experiences.

According to this new concept of managing cultural institutions, current museums are oriented not only towards the traditional way of managing the protection and the preservation of their collections, but they also aim at having a social role in the place in which they are located.

In fact, they contribute to the cultural and socio economical development of the local community.

The **reform of Title V II Part of the Italian Constitution**, carried out by the **Constitutional Act no. 3 of 2001**, has modified the distribution of power in the Italian Republic. This act modified the second part of Title V of the Italian Constitution regarding the “ Organization of the Republic”.

The adoption of the above constitutional law, established the **concurrent competences between the State and the Regions in the field of enhancement of cultural heritage and promotion of cultural activities.**

The **Italian State** reserves the exclusive power in the “**cultural heritage protection**” as well as the “**protection and the safeguard of the environment**”.

The **Regions** are responsible for **governing and managing lands and territories**, for the **valorisation of cultural and environmental heritage and for the promotion and management of such activities**.

Hence, the constitutional law n. 3/2001 enhanced the role of the 20 Italian Regions in the cultural sector, attributing the activity of protection to the State and the activity of management and promotion to the Regions as well as local authorities⁵⁷.

The **legislative decree of 22 January n. 42/2004** recognized as “*Il Codice dei Beni Culturali e del Paesaggio*” also known as “*Codice Urbani*” defines the way public cultural assets should be promoted.

It also specifies the different power competences for the State and the Regions in the field of cultural and environmental goods⁵⁸.

Article 3 of the above mentioned legislative decree 42/2004, specifies the meaning of the term **protection**, while **article 6** defines the term **valorisation**.

Protection consists in a set of activities, aimed at identifying the goods belonging to cultural heritage and to guarantee their preservation and conservation, while the valorisation consists in a set of activities addressed to endorse the knowledge of cultural heritage and to ensure better conditions in order to allow citizens to enjoy the benefits.

According to **article 111 of the above mentioned Code**, the activities of promotion and valorisation of the patrimony are carried out by the establishment and the management of financial and instrumental resources, facilities and networks in order to enhance the cultural heritage.

⁵⁷ Mignosa A., Rizzo I., (2005), *Tutela e Valorizzazione dei Beni Culturali in Sicilia*, Franco Angeli, Milano, p. 24.

⁵⁸ Colavitti A. M., Usai N., (2005), *The integration between protection, enhancement of the cultural heritage and town planning in the historical city, Elements for reflection* presented in 15th ICOMOS General Assembly and International Symposium: ‘Monuments and sites in their setting - conserving cultural heritage in changing townscapes and landscapes’, 17-21 Oct 2005, Xi'an, China.

According to **article 115 of the “Codice dei Beni Culturali e del Paesaggio”**, the activity of management of public patrimony, can be managed both in a direct and an indirect way.

A **direct management** implies a public management of the cultural asset. This situation is verified when the public administration possesses the financial and professional resources to solely manage the cultural good.

An **indirect management** implies a tender notice and the concession of some services to private institutions.

The concession is assigned through a selection procedure based on the best economic offer. Companies can participate in this tender notice as an individual or as a temporary enterprise consortium. They must also demonstrate that they hold the economical, technical and professional prerequisites.

The Gallery of Modern Art in Palermo, which is the case study of this research, is a typical example of indirect management of museums.

2.4.3 Regional legislation

The Italian Region of Sicily has full autonomy in the field of heritage policy.

This independence arises from the Sicilian Regional Statute of 1948, which established the autonomy of the Sicilian Region in cultural heritage in the articles 14, 32 and 33 of the same Statute.

However, the regional law n. 80/1977 is the first law which regulates the organisational set-up of the Sicilian cultural heritage.

According to art. 3 of the same law, all the regional jurisdictions in the field of cultural and environmental heritage, are transferred to the “*Assessorato*”, which is a public branch of the regional government, which deals with cultural patrimony.

Article 11, establishes the peripheral organisation of the above mentioned “*Assessorato*”.

It is articulated in nine provincial “*Soprintendenze*”, one for each Sicilian province.

Each provincial *Soprintendenza*, is articulated in the following sections:

1. archaeological
2. architectural and urban
3. historical – artistic
4. environmental
5. bibliographic

On the contrary, the national system is characterized by more than one “*Soprintendenza*” for each province and each of them deals with a specific subject.

The main functions of the “*Soprintendenza*” are the following:

- census, inventory, cataloguing and scientific research and
- restoration of cultural heritage, protection and surveillance of environmental and cultural heritage within the territory where they exercise their power.

The law n. 116 of 7 November 1980, establishes that libraries, museums and galleries are technical authorities of the “*Assessorato*” of cultural and environmental heritage.

Art. 5 of the above mentioned law, establishes the following functions of museums:

1. classification, cataloguing and preservation of cultural and environmental heritage;
2. increasing of collections through donations, bequests, new acquisitions or through works of art coming from the storage;

3. planning of exhibitions and promotion of cultural activities for the surrounding territory⁵⁹.

Hence, political decisions in the cultural heritage sector, are taken at a central level by the Regional Government while their implementation is carried out by the above mentioned nine local authorities called “*Soprintendenze*” which are responsible for any decisions regarding heritage conservation⁶⁰.

2.5 A framework of the Italian and Sicilian museums

From a study carried out in 2011, concerning the **Italian territory**, there are 4.588 cultural institutions, both public and private, open to the public, of which:

3.847 museums, galleries and collections;

240 archaeological parks and areas

501 monuments and historical buildings

The regions with the highest number of cultural institutions are: Tuscany (550), Emilia-Romagna (440) and Piedmont (397). 52.1% of the archaeological sites are found in the South and in the Islands, while 48% of the museums and 43.1% of the monuments are located in the North.

The main types of museum collections are: ethnography and anthropology (16.9%), archaeological (15.5%), arts (11.9%), history (11.4%), religious art (10.2%) and Modern and Contemporary Art (9.9%).

The three regions with the highest average number of cultural visitors are: Lazio (67.746), Tuscany (42.359) and Campania (37.646). At the bottom of the list is Marche (5.323), Abruzzo (4.428) and Molise (4.319).

⁵⁹ Mignosa A., Rizzo I., (2005), *Tutela e Valorizzazione dei Beni Culturali in Sicilia*, Franco Angeli, Milano.

⁶⁰ Castro M. F. Rizzo I., (2009), *Performance Measurement of Heritage Conservation Activity in Sicily*, in *International Journal of Art Management*, vol. 11, n. 2, pp. 29 – 41.

Furthermore, museums are central not only for their collections, but also for the historical and artistic value of the building that contains such collections.

As a matter of fact, about 70% of Italian museums are located in a building of historical or artistic value; therefore, archaeological areas, parks and monuments (44.3%) host a museum or a collection open to public⁶¹.

The hinterland of Palermo boasts 24 museums, while in the city of Palermo itself there are 18 museums of both historical, naturalistic, ethnographic, anthropological and artistic value.⁶²

There are also scientific museums of mineralogy, palaeontology and zoology interests. They date back to the second half of XVIII century and the beginning of the XIX century.

While the Gallery of Modern Art as well as the ethnographic museum, the Diocesan Museum, the Sicilian Regional Gallery, the Mormino Foundation and the International Museum of Puppets were born at the beginning of the XX century.

The Gallery of Modern Art in Palermo, which is the case study of the present research, cannot be considered the most important museum or cultural institution in the territory of Palermo, but it represents an empirical evidence of how a museum is managed and it has been chosen for its role in the historical centre of Palermo as well as for its connections with the history and traditions of our land.

⁶¹ Museums and archaeological areas and monuments in Italy (28 November 2013) available at the following link: <http://www.istat.it/it/archivio/105061>

⁶² <http://www.provincia.palermo.it/provpalermo/allegati/995/Elenco%20musei.pdf>

CHAPTER THREE

A DYNAMIC PERFORMANCE MANAGEMENT APPROACH IN ORDER TO EXAMINE THE ORGANISATION OF MUSEUMS

3.1 Introduction

The purpose of this chapter is connected to the analysis of the dynamic performance management approach as a methodology to frame organisational performance of the reality of museums as complex systems investigated in the present research.

Over the last few years, various methodologies have been applied in order to measure organisations performance.

An example could be the Management by Objectives (MbO) conceived by Peter Drucker in the late 1950s, based on the identification of clear objectives and on the measurement of their performance.

According to the above mentioned theory, firstly the organisation's objectives must be identified. Following that, individual objectives connected to the organisation's goals must be outlined so as to understand the goals to be achieved and to address people to reach their goals.

Based on the actual and the desired performance, the corrective actions for the fulfilment of the desired targets are put into practice.⁶³

However, traditional systems of planning and control often lack the ability to capture the main interrelationships among variables and the complexity of the managerial decision making processes. Furthermore, they overlook some aspects such as time

⁶³ Dransfield R., (2000), *Human Resource Management*, Heinemann Educational Publishers, Oxford, pp. 69 – 71.

delays between the adoption of a given policy and its effects, non-linearity of phenomena, the measurement of intangible resources, human perceptions and behaviour, as well as the definition of proper system boundaries in strategic planning.⁶⁴

Moreover, according to Bianchi, “a mechanistic approach to P & C systems design and implementation has often generated an illusion of control and a risk of manipulation in goal setting and performance evaluation”.⁶⁵

The same author asserts that the introduction of formal performance management systems into the public sector has generated various unintended effects such as an increase of bureaucratization, a lacking definition and alignment of goals, activities and performance indicators as well as a low level of interconnections among them, a weak connection between the political and the managerial level, a lack of coordination between the policies undertaken at different levels and an unfocused communication to the community of the outcomes related to some policies.⁶⁶

To face such kind of limitations, the Balanced Scorecard (BSC) methodology developed by Robert Kaplan and David Norton in the early 1990s, has been used as a methodology to frame an organisation’s performance, organisational assessment and operational alignment.⁶⁷

⁶⁴ Bianchi C., (2012), *Enhancing Performance Management and Sustainable Organizational Growth Through System Dynamics Modelling*, in *System Management for Intelligent Organizations*, Grosser S. N., and Zeier, p. 146.

⁶⁵ Bianchi C. (2010), *Improving Performance and Fostering Accountability in the Public Sector through System Dynamics Modelling: From an ‘External to an ‘Internal perspective*, in *System Research and Behavioural Science*, 27, p.364.

⁶⁶ Bianchi C. (2010), *Improving Performance and Fostering Accountability in the Public Sector through System Dynamics Modelling: From an ‘External to an ‘Internal perspective*, in *System Research and Behavioural Science*, 27, p. 364.

⁶⁷ Weinstein L., Bukovinsky D., (2009), *Use of the Balanced Scorecard and Performance Metrics to Achieve Operational and Strategic Alignment in Arts and Culture Not for Profits*, in *International Journal of Arts Management*, vol. 11, No. 2, p. 42; Kaplan R. and Norton D., (1992), *The Balanced Scorecard-Measures that Drive Performance*, in *Harvard Business Review*, pp. 71 – 79; Kaplan R. and Norton D., (1996), *The Balanced Scorecard: Translating Strategy into Action*, Harvard Business School Press, Boston.

The Balanced Scorecard is based on the following main concepts:

1. Organisational performance cannot be managed by only focusing on end – results, rather it is important to understand how these end-results are generated and those factors affecting them;
2. Performance cannot be measured solely in financial terms. As a matter of fact, a “customer”, a “ process” and “learning and growth” perspectives are also essential.⁶⁸

Nevertheless, according to Bianchi, even the Balanced scorecard presents some limitations.

Notably, “it does not support an understanding of how end- results can be affected by performance drivers, how performance drivers can, in turn, be affected by the use of policy levers aimed at influencing strategic resources accumulation and depletion processes, and how the flows of strategic assets are affected by end – results”.⁶⁹

Hence, the adoption of a new approach seems necessary in planning a more systemic and learning oriented perspective, able to make explicit mental models and to support public decision makers in understanding the causal relationships among the main variables of the explored system as well as to identify alternative strategies to be adopted.⁷⁰

⁶⁸ Bianchi C., Rivenbark W. C., (2012), *Using System Dynamics to Enhance Performance Management in Local Government: An application to Residential Refuse Collection*, Paper presented at the 2012 APPAM Fall Research Conference, November 8-10, Baltimore (USA), p. 9; Bianchi C., (2012), *Enhancing Performance Management and Sustainable Organizational Growth Through System Dynamics Modelling*, in *System Management for Intelligent Organizations*, Grosser S. N., and Zeier, p. 150; Bianchi C., (2000), *Processi di Apprendimento nel Governo dello Sviluppo della Piccola Impresa. Una prospettiva basata sull’Integrazione tra Modelli Contabili e di System Dynamics attraverso I micromondi*, Giuffrè, Milano.

⁶⁹ Bianchi C., Rivenbark W. C., (2012), *Using System Dynamics to Enhance Performance Management in Local Government: An application to Residential Refuse Collection*, Paper presented at the 2012 APPAM Fall Research Conference, November 8-10, Baltimore (USA), p. 9.

⁷⁰ Bianchi C. (2010), *Improving Performance and Fostering Accountability in the Public Sector through System Dynamics Modelling: From an ‘External to an ‘Internal perspective*, in *System Research and Behavioural Science*, 27, pp. 361 – 384; Bianchi C., (2000), *Processi di Apprendimento nel Governo dello Sviluppo della Piccola Impresa. Una prospettiva basata sull’Integrazione tra Modelli Contabili e di System Dynamics attraverso I micromondi*, Giuffrè, Milano.

Based on the utility of this approach, this chapter applies the dynamic performance management perspective to examine the organisation of museums.

Since the Dynamic Performance Management approach consists in combining Planning and Control Systems and System Dynamics methodology, firstly an analysis of the dynamic performance management approach will be carried out and secondly an explanation of the system dynamics methodology will be conducted in the present chapter.

Before going into depth describing the methodology applied to the analysis of the system of museums, an analysis of the main characteristics of the New Public Management should be introduced.

Following this, an analysis of performance management and performance measurement, will be carried out as an essential part of performance management in the public sector.

Finally, the contribution of system dynamics methodology in framing the system of museum performance will also be analyzed in the latter part of the present chapter.

3.2 The introduction of the principles of New Public Management and performance measurement in the public sector

The socio-economical transformations of society in the last thirty years, has lead to the introduction of a discipline called “New Public management” in the public sector. According to Shamsul Haque, “one of the most influential factors leading to the emergence of NPM has been the historical shift in State ideology since the late 1970s in advanced capitalistic nations towards a neo – liberal framework, which rejects the

Welfare State, doubts government capacity, blames public bureaucracy, believes in private sector superiority and emphasizes market competition in service delivery”.⁷¹

The New Public Management represents “ an approach in public administration that employs knowledge and experience acquired in business management and other disciplines to improve efficiency, effectiveness and the general performance of public services in modern bureaucracies”.⁷²

During the last two decades, many definitions of New Public Management have been suggested by various authors and it has been defined by some as “an administrative revolution or post-bureaucratic paradigm”.⁷³

According to Gray, the core ideas underlying the origin of New Public Management are:

- decentralisation of managerial control;
- managerial empowerment: ‘ letting managers manage’;
- concentration on results (outputs and outcomes) rather than inputs and processes;
- the promotion of competition in the provision of public services;
- the promotion of performance measurement;
- management through contract rather than hierarchy.⁷⁴

As already mentioned, one of the most important factors connected to the emergence of New Public Management has been the “weakness or failures of traditional State

⁷¹ M. Shamsul Haque, (1995) *New Public Management: Origins, Dimensions and critical implications*, in *Public Administration and Public Policy*, vol. 1, pp. 209 – 229.

⁷² E. Vigoda, (2003), *New Public Management*, in Encyclopaedia of Public Administration and Public Policy.

⁷³ Shamsul Haque M., (1995) *New Public Management: Origins, Dimensions and critical implications*, in *Public Administration and Public Policy*, vol. 1, pp. 209 – 229.

⁷⁴ Gray C., (2007), *Instrumental Cultural Policies: Causes, Consequences and Museums*, Paper to the Art and Humanities Research Council Instrumental Museum and Gallery Policy Workshop, University of Glasgow, October 2007.

bureaucracy, especially in terms of its managerial inefficiency, public inaccessibility, excessive corruption, economic inertia and self - serving agenda”.⁷⁵

In the early 1980’s, Garson and Overman defined the New Public Management as “an interdisciplinary study of the generic aspects of administration [...] a blend of the planning, organizing and controlling functions of management with the management of human, financial, physical information and political resources”.⁷⁶

Furthermore, according to Christopher Hood, the origin of New Public Management derives from the following administrative aspects:

- 1) “attempts to slow down or reverse government growth in terms of overt public spending and staffing;
- 2) the shift towards privatization and pseudo-privatization and away from core governmental institutions, with renewed emphasis on “subsidiarity” in service provision;
- 3) the development of automation, particularly in information technology, in the production and distribution of public services;
- 4) the development of a more international agenda, increasingly focused on general issues of public management, policy design, decision styles and intergovernmental cooperation, as well as the older tradition of individual country specialism in public administration”.⁷⁷

The introduction of New Public Management in various countries, has made public sector organisations focus their attention on **performance measurement systems**.

⁷⁵ Shamsul Haque M., (1995) *New Public Management: Origins, Dimensions and Critical Implications*, in *Public Administration and Public Policy*, vol. 1, pp. 209 – 229; further analysis can be found in: Dunleavy P. and Hood C., (1994), *From Old Public Administration to New Public Management*, in *Public Money and Management*, vol. 14, (3), pp. 9 – 16.

⁷⁶ E. Vigoda, (2003), *New Public Management*, Encyclopaedia of Public Administration and Public Policy.

⁷⁷ Hood C., (1991), *A Public Management for all Seasons?*, in *Public Administration*, Vol. 69, pp. 3-19.

According to Poister, “performance measurement is intended to produce objective, relevant information on programmes, or organisational performance that can be used to strengthen management and inform decision making, achieve results and improve overall performance and increase accountability”.⁷⁸

Performance measurement is an essential aspect of performance management.

The performance management applied to the public sector, in fact, is the capability of a public administration to answer to the needs coming from society as well as from its workers.⁷⁹

According to Wilson, administration is the most obvious part of government; it is government in action; it is the executive, the operative, the most visible side of government; public administration is execution of public law since every application of general law is an act of public administration.⁸⁰

Performance in the public sector organisations is usually defined in terms of the outcomes and outputs that succeed a public production process.

Outcomes are the results of activities that convert inputs into outputs.

Outputs are the goods and services that public administrations supply in response to demand, while outcomes are the consumption of the goods and services (intermediate outcomes) as well as the effects these consumptions entail (final outcomes).⁸¹

⁷⁸ Poister T.H., (2003), *Measuring Performance in Public and Non Profit Organizations*, Jossey Bass, San Francisco, p. 4; about the concept of organisational control check: Flamholtz E. G., Das T. K., (1985), *Toward an Integrative Framework of Organisational Control*, in *Accounting, Organisations and Society*, Vol. 10, No 1, pp. 35-50; Flamholtz E., (1996), *Effective Organisational Control: A Framework, Applications and Implications*, in *European Management Journal*, Vol. 14, No 6, pp. 596-611.

⁷⁹ Borgonovi E., Fattore G., Longo F., (2009), *Management delle Istituzioni Pubbliche*, Egea, Milano; Borgonovi E., (2005), *Principi e Sistemi Aziendali per le Amministrazioni Pubbliche*, V edizione, Egea, Milano.

⁸⁰ Wilson W., (1887), *The Study of Administration*, in *Political Science Quarterly*, vol. 2, no. 2, pp. 197-222.

⁸¹ Van Dooren W., De Caluwe C., Lonti Z., (2012), *How to Measure Public Administration Performance*, in *Public Performance & Management Review*, Vol. 35, No. 3, pp., 489 – 492.

Effective performance management involves the sharing and understanding of what needs to be achieved and consequently managing and developing people in a way that enables such shared objectives to be reached”.⁸²

As pointed out by Bianchi “Improving performance and fostering accountability in the public sector requires an understanding of the impact of back office units on delivered services”. The same author asserts that “this is not an easy task, since a bureaucratic perspective tends to be adopted when the contribution of such units to public service is considered.”⁸³

Therefore, the passive observance of the rules, should be replaced by an analysis of the dominant cause and effect relationships which are the base of the structure of museums.

A correct definition of objectives, activities and results appears necessary in order to define a satisfactory system of planning and control based on strategic learning.

The objectives are not activities, rather they are the results of such activities.

Defining objectives doesn't mean establishing a set of activities as it may sometimes occur in the public sector organisations; on the contrary, it means focusing on the **available tangible resources** such as the number of works of art within a museum, the number of donations and the number of loans as well as on **intangible resources** such as the image of museums, the quality of museum services and customer satisfaction, so as to achieve the desired results.

After identifying the objectives in relation to the available strategic resources of a given organisation, final and intermediate results must be identified.

⁸² Dransfield R., (2000), *Human Resource Management*, Heinemann Educational Publishers, Oxford, p. 69.

⁸³ Bianchi C. (2010), *Improving Performance and Fostering Accountability in the Public Sector through System Dynamics Modelling: From an 'External to an 'Internal perspective*, in *System Research and Behavioural Science*, 27, p.362.

More in depth, *final results* are connected to the goals achieved by an organisation in relation to its environment as well as its products and services offered.

The final results can be:

- **economical/financial** such as the change in cash flow,
- **-competitive** like the change in number of visitors and the change in number of museum collections
- **social results** for example the variation of the image of museums.⁸⁴

On the other hand, *intermediate results* are important instruments in achieving end results. They are drivers related to the critical factors of success of an organisation upon which to intervene in order to obtain the final objectives.⁸⁵

However, a valid system of planning and control implies not only the identification of intermediate and final results, but also the choice of appropriate indicators to measure such results.

The above **indicators** should be:

- 1) **Specific:** clear and comprehensible;
- 2) **Measurable:** in terms of quantity, quality, time and money;
- 3) **Achievable:** realistic;
- 4) **Relevant** to the organisation: significant;
- 5) **Time-framed:** completed within a time scale.⁸⁶

According to Poister, the most relevant types of performance measurement include measures of output, efficiency, productivity, service quality, effectiveness, cost-effectiveness and customer satisfaction.

⁸⁴ Cosenz F., (2011), *Sistemi di Governo e di Valutazione della Performance per l'Azienda "Università"*, Giuffrè, Milano, p. 78.

⁸⁵ Cosenz F., (2011), *Sistemi di Governo e di Valutazione della Performance per l'Azienda "Università"*, Giuffrè, Milano, p. 78.

⁸⁶ Conzemius A., O' Neill J., (2006), *The Power of SMART goals: Using Goals to Improve Student Learning*, Solution Tree, Bloomington.

For instance, output indicators are often measured as the amount of work that is performed, for example the number of administrative procedures related to loans implemented by back-office staff in museums.

Efficiency indicators concern those outputs consumed in the production of several relevant resources.

Productivity indicators measure the rate of production for a specific unit of resource.

Service quality indicators are related to service delivery processes and are connected to some concepts such as accuracy, accessibility, courtesy and safety.

Indicators of effectiveness are the most important category of performance measures since they show the degree of achievement of the desired results. For instance, effectiveness measures might include the percentage of returning visitors to museums.

Cost-effectiveness measures may be expressed as the cost per visitor in museums.

Customer satisfaction indicators are related to service quality and they can be measured, for instance, through the number of complaints filed in museums.⁸⁷

3.3 An analysis of the system of performance measurement of museums

Performance measurement has an important role in non-profit organisations.

By the early 1990s, non-profit health and human service agencies began identifying measures regarding financial accountability, quality standard in service delivery, efficiency and client satisfaction⁸⁸.

⁸⁷ Poister T.H., (2003), *Measuring Performance in Public and Non-Profit Organizations*, Jossey Bass, San Francisco, pp. 48 – 55.

⁸⁸ Poister T.H., (2003), *Measuring Performance in Public and Non-Profit Organizations*, Jossey Bass, San Francisco, p. 4.

However, defining a complete system of performance measurement of museums is not an easy task since a system of measuring performance valid for every genre of museum does not exist.

As a matter of fact, measuring performance of museums depends on the characteristics of their collections, on their dimensions as well as on their location.

Measuring museums performance is even more difficult and complex, since Italian museums are extremely connected to the public sector.

Therefore, an evaluation of economical and financial aspects is not easy due to the close connection between museums and public authorities.

In fact, Italian State museums are usually a branch of a central administration; they depend on local authorities called “*Soprintendenze*” which are public ramifications of the Ministry of Cultural Heritage.

In the same way, Municipal museums depend on the Regional authority called “Assessorato”.

For instance, the Gallery of Modern Art in Palermo, which is the empirical case study of the present research, is subordinated to the “Assessorato alla Cultura” which is the local municipal authority which deals with the cultural sector.

Hence, the lack of autonomy in defining their objectives and the lack of auto generation of financial resources, implies an interdependent relationship with the public sector and a consequent difficulty in finding a system of performance applicable to every museum⁸⁹.

However, a system aiming at verifying the **quality of museums’ procedures** has been established in industrialized countries with the aim of guaranteeing the efficient running of museums.

⁸⁹ Monti A., (2002), *Politiche di Sviluppo dell’Offerta Culturale. “Standard” di qualità e autonomia finanziaria per la gestione dei musei pubblici*, in *Studi e note di economia*, 1/2002, pp. 7- 46.

This system, which began in the USA mid 1900's under the name of "Accreditation Scheme", indicates the minimum level of efficiency and effectiveness which museums should reach.

In 1988, the "Accreditation Scheme for Museums" was applied in the UK where nationally agreed standards for museums were fixed.

Since its establishment, the measuring of museum performance established by the Museums Association (UK), has backed these institutions, focusing on standards and identifying some areas of improvement.

The criteria defined by the "Accreditation Scheme for Museums" have also been adopted by other European countries such as Ireland, Poland, Denmark and the Netherlands.

Accreditation enables museums and governing bodies to assess their current performance and it supports them in planning and developing their services.

Furthermore, it assists museums in:

- 1) fixing some quality standards which serve as an authoritative benchmark for assessing performance and driving their improvement;
- 2) enhancing their strategies on meeting users needs and interests and in developing their workforce;
- 3) planning procedures and policies for their improvement.⁹⁰

More specifically, the Museums Association in the UK suggested some indicators of performance in the following areas:

- 1) collections
- 2) communications
- 3) operating activities

⁹⁰ For further information, check: <http://www.artscouncil.org.uk/what-we-do/supporting-museums/accreditation-scheme/>

- 4) external services.

Each of these sectors have been divided into several sub-areas where activities and a measure of performance have been established.⁹¹

For instance, the collection area has been split into the following activities:

- 1) acquisition and transfer
- 2) maintenance
- 3) preservation and restoration works
- 4) storage
- 5) research
- 6) inventory

Within the activities related to storage, the following **processes** have been identified:

- 1) policies for storage
- 2) access to storage
- 3) responsibility related to storage

In relation to the above mentioned processes, the following **indicators of performance** have been identified:

- 1) number of works of art non exhibited
- 2) frequency of access to storage
- 3) time expired from the last inventory of storage
- 4) storage costs
- 5) percentage of improvement concerning storage conditions.

⁹¹ Bagdadli S., (1997), *Il Museo come Azienda, Management e Organizzazione al Servizio della Cultura*, Etas, Milano, pp. 209 - 214

The above mentioned indicators still have an important role in Great Britain where public funds for museums benefit above all, those institutions which offer the levels of quality defined by the “Accreditation Scheme”.

The process of transferring public funds to museums follows certain accords which are called “*Funding Agreements*” where museums, together with the central administration establish the following requirements:

- 1) strategic objectives to be reached (*Key Performance indicators*);
- 2) levels of efficiency of the processes of museums (*Secondary Indicators*).

Hence, in Great Britain, the transfer of public funds is subordinated to the fulfilment of these indicators of performance⁹² for those museums which follow these standards and who intend to obtain the above mentioned registration of quality.

On the other hand, in Italy, the system of public funding for museums is not subordinated to the attainment of such parameters.

Nevertheless, the Italian region of Lombardy situated in Northern Italy, under the Deliberation of Regional Government (20 December 2002) defined a “Criteria for the acknowledgment of museums and museum collections”.

In this way, museums in Lombardy are conforming to other European countries and similarly other Italian regions such as Tuscany, Emilia Romagna, Liguria and Veneto are following suit.⁹³

However, the **Ministerial Decree 10 may 2001**, represents a turning point for Italian museum regulations, since it has distinguished State museums from Regional and Municipal ones and has defined the technical and scientific criteria as well as some standards to be observed by Italian museums.

⁹² F. Dainelli, (2007), *Il Sistema di Programmazione e Controllo del Museo*, Franco Angeli, Milano, p. 52.

⁹³ F. Dainelli, (2007), *Il Sistema di Programmazione e Controllo del Museo*, Franco Angeli, Milano, p. 56.

Programmes concerning quality and procedures of validation by the American Association of Museums (USA), Deontological Code of ICOM and Registration Scheme for Museums and Galleries (UK) have been analysed and some of their principles have been introduced through the above mentioned Ministerial decree ⁹⁴ into Italian systems, in order to guarantee the transparent conduction of museums.

The following sectors have been identified for the definition of **standards of quality**

in museums:

I Juridical status

II Financial structure

III Structures of museums

IV Human resources

V Security

VI Management of museum collections

VII The relationship between the museum and the public

VIII The relationship between the museum and its territory

Concerning the **juridical status**, the first standard is the **Statute and/or the Regulation** of museums.

They are instruments which regulate the organization and the management of every kind of museum. In fact, they establish goals and activities, rights and duties financial aspects, regulations for the management of human resources as well as administrative and operative principles connected with the management and the custody of the collections and regarding all services for visitors.

As far as the **financial aspect** is concerned, each museum should have economical resources related to its own dimensions and characteristics.

⁹⁴ Ministero per I Beni e le Attività Culturali, Decreto Ministeriale 10 maggio 2001, “*Atto di indirizzo sui criteri tecnico scientifici e sugli standard di funzionamento e sviluppo dei musei (D.Lgs. 112/1998, art. 150 comma 6)*.”

In particular, it is necessary that the **revenues** are distributed among:

- a) self-financing;
- b) external resources such as money transfers, public and private contributions as well as sponsorships;

It is also required that the **expenses** are divided into:

- a) functioning and routine maintenance, human resources, administrative and operative management;
- b) management, studies and scientific activities of the collections;
- c) public services and cultural activities;
- d) investments and extraordinary maintenance.

Referring to the **structures of the museums**, organisational arrangements, procedures and specific resources are needed for the maintenance of specific standards of quality.

The organisation of the structures of the museums are important instruments to pursue, in the long run, as well as procedural standards related to the quality of services.

Human resources are mandatory in the achievement of standards of quality.

Taking on skilled people is essential in order to guarantee a certain stability, continuity and high quality services in museums.

The **safety of the museums** is another important aspect to take into consideration. A strategy of security consists in preventative and protective measures for the structural and environmental security of the museum.

The management of collections is the key element of the organization of a museum.

The collections should be preserved, managed and accessible.

Each museum should adopt a general document which identifies the way of managing the collections where the two fundamental needs concerning conservation and fruition of the collections must be balanced.

Therefore, the management of the collections of the museums must follow some rules of quality based on:

- a) **preservation and restoration;**
- b) **registration and documentation;**
- c) **permanent and temporary exhibition and borrowing;**
- d) **research and development**

As far as the **relationship between the museum and its visitors** is concerned, a museum must interpret its heritage and allow visitors to be part of a cultural experience, based on its own traditions.

The disposition and the set up should give visitors essential information to allow them to visit and understand the concept of the museum.

Each museum has to guarantee a suitable level of utilities for its clients.

In particular every museum should guarantee:

- a) access to exhibition areas
- b) consultation of existing documentation inside the museum;
- c) fruition of cultural and scientific activities of the museum

The relationship between the museum and the surrounding territory is also an important aspect to take into consideration, since cultural institutes such as museums are seen as centres for the interpretation of the territory itself.

The art. 114 of the “ *Codice dei Beni Culturali e del Paesaggio*” (22 January 2004, n. 42) is another important step towards the acquisition of some standards of quality applied to museums in Italy.

Hereby, it declares that “Ministers, Regions and other public territorial authorities, with the aid of Universities define some standards of quality regarding the activities of promotion of cultural heritage which must be followed”.

However, we must underline that a unique, collective system of measuring performance does not exist and the main difficulty could be seen in the complexity of each museum.

Measuring performance means taking care of the peculiarities and characteristics of each museum in relation to the cultural, socio-economical and political context of its location. Hence, the success of institutions like museums is based on the balance of the above mentioned performance dimensions.

Therefore, according to Bianchi, performance measurement systems have to consider a multidimensional perspective, not overseeing short-term and long-term perspectives as well as the different strategic areas of a company, in order to evaluate its performance and assess a set of alternative strategies to be adopted.

The same author emphasizes that sustainable growth underlines a performance rate that is consistent with the above mentioned perspectives based on:

- 1) the analysis of short vs. long-term;
- 2) a given business area vs. another
- 3) the results achieved in terms of financial, competitive and social perspective.⁹⁵

The same author asserts that, “framing performance inclusively under financial, competitive and social dimensions provides a reliable measure of the organisational growth rate and sustainability”.⁹⁶

⁹⁵ Bianchi C., (2012), *Enhancing Performance Management and Sustainable Organizational Growth Through System Dynamics Modelling*, in *System Management for Intelligent Organizations*, Grosser S. N., and Zeier, pp. 146 – 161.

⁹⁶ Bianchi C., (2012), *Enhancing Performance Management and Sustainable Organizational Growth Through System Dynamics Modelling*, in *System Management for Intelligent Organizations*, Grosser S. N., and Zeier, p. 146.

3.4 The Dynamic performance management approach as a systemic and learning oriented perspective

Traditional systems of planning and control often lack to capture the main interrelationships among variables and the complexity of the managerial decision making processes. They often overlook some aspects such as delays, non-linearity of phenomena, human perceptions and behaviour.⁹⁷

As a matter of fact, according to Bianchi, “ a mechanistic approach to Planning & Control systems design and implementation, has often generated an illusion of control and a risk of manipulation in goal setting and performance evaluation”⁹⁸.

The same authors asserts that the introduction of formal performance management systems into the public sector has generated various unintended effects such as an increase of bureaucratization, a lacking definition and alignment of goals, activities and performance indicators as well as a low level of interconnections among them, a missing connection between the political and the managerial level, a lack of coordination between the policies undertaken at different levels and an unfocused communication towards the community, concerning the outcomes related to some policies⁹⁹.

Hence, the adoption of a new approach seems necessary in order to plan a more systemic and learning oriented perspective, to make explicit mental models and to support public decision makers in understanding the causal relationships among the

⁹⁷ Bianchi C. et al., (2013), *A Dynamic Performance Management Approach to Evaluate and Support SMEs Competitiveness: Evidences from a case study*, Paper presented at the 31st International Conference of the System Dynamics Society, July 21-25 2013, USA, p.2.

⁹⁸ Bianchi C. (2010), *Improving Performance and Fostering Accountability in the Public Sector through System Dynamics Modelling: From an 'External to an 'Internal perspective*, in *System Research and Behavioural Science*, 27, p.364.

⁹⁹ Bianchi C. (2010), *Improving Performance and Fostering Accountability in the Public Sector through System Dynamics Modelling: From an 'External to an 'Internal perspective*, in *System Research and Behavioural Science*, 27, p. 364.

main variables of the system, as well as to identify some alternative strategies to be adopted.¹⁰⁰

The Dynamic Performance Management approach consists in combining Planning and Control Systems with System Dynamics methodology to support public decision makers and managers within museums in finding those policy levels in order to improve the performance of museums.

System Dynamics is used to map the structure of investigated systems and to understand the behaviour which drives such processes as well as the relationships among the main variables of the system.

According to Bianchi, “if process structure determines system behaviour and system behaviour determines organization performance, then the key for developing sustainable strategies aimed at improving strategic learning processes and maximizing performance, is acknowledging the relationship between processes and behaviour and managing the leverage points”¹⁰¹.

Two different, but converging points of view regarding the application of System Dynamics to performance management may be identified:

1. *Resource -Based View of Performance Management*
2. *Dynamic View of Performance Management*

According to the *Resource-Based View of Performance Management*, organisations are analyzed by focusing on their strategic resources.¹⁰²

¹⁰⁰ Bianchi C. (2010), *Improving Performance and Fostering Accountability in the Public Sector through System Dynamics Modelling: From an ‘External to an ‘Internal perspective* ,in *System Research and Behavioural Science*, 27, pp. 361 – 384.

¹⁰¹ Bianchi C. et al., (2013), *A Dynamic Performance Management Approach to Evaluate and Support SMEs Competitiveness: Evidences from a case study*, Paper presented at the 31st International Conference of the System Dynamics Society, July 21-25 2013, USA, p.7.

¹⁰² Wernerfelt B., (1984), *A Resource-Based View of the Firm*, in *Strategic Management Journal*, Vol. 5, pp. 171 – 180; Mahoney J. T., Pandian J. R., (1992), *The Resource-Based View within the Conversation of Strategic Management*, in *Strategic Management Journal*, Vol. 13, pp. 363 – 380; Peteraf M. A., (1993), *The Cornerstones of Competitive Advantage: A Resource-Based View*, in *Strategic Management Journal*, Vol. 14, No. 3, pp. 179 -191.

In fact, **strategic resources** are seen as the key resources of organisations to reach a sustainable development and growth.

They are modelled as a **stock of tangible and intangible resources which increase or decrease over time, through the effect of corresponding inflows and outflows.**

Such flows are modelled as “valves” which can be affected by decision-makers through their policies, in order to influence the dynamics of each strategic resource and subsequently, the performance indicators influenced by the effect of strategic resources.¹⁰³

The *Dynamic View of Performance Management* is based on:

- 1) the identification of end-results which affect strategic resources by increasing or decreasing them;
- 2) the recognition of performance drivers which affect the end results as a consequence of an action carried out by decision makers.¹⁰⁴

According to Bianchi, to affect such drivers of performance each decision maker must build up, preserve and deploy strategic resources that are systemically linked to each other. “This also implies that decisions made by different policy makers, concerning the relevant strategic resources of the investigated system, should be coordinated, according to a systemic view.”¹⁰⁵

The Dynamic Performance Management system is based on three different but interrelated perspectives:

- a. the *objective view*

¹⁰³ Bianchi C., Rivenbark W. C., (2012), *Using System Dynamics to Enhance Performance Management in Local Government: An application to Residential Refuse Collection*, Paper presented at the 2012 APPAM Fall Research Conference, November 8 – 10, Baltimore (USA), pp. 1- 25.

¹⁰⁴ Bianchi C. et al., (2013), *A Dynamic Performance Management Approach to Evaluate and Support SMEs Competitiveness: Evidences from a case study*, Paper presented at the 31st International Conference of the System Dynamics Society, July 21-25 2013, USA, p.10.

¹⁰⁵ Bianchi C. et al., (2013), *A Dynamic Performance Management Approach to Evaluate and Support SMEs Competitiveness: Evidences from a case study*, Paper presented at the 31st International Conference of the System Dynamics Society, July 21-25 2013, USA, p.10.

b. the *instrumental view*

c. the *subjective view*

1) The **objective view** is based on the “product” as a result of administrative tasks carried out by the investigated system.

The product is the result of the duties and activities of people employed within a public institution such as museums and it is connected to processes and activities related to such products.

According to Bianchi, the product is not the object of a commercial transaction, rather the output of an administrative task aimed at creating value towards external and internal clients of the analyzed system¹⁰⁶.

The same author, in fact, asserts that in the public sector “**an administrative product may take on a different connotation when seen as a function of the client or user to whom it is delivered.**”¹⁰⁷,

The administrative product is a *final product* when it is addressed toward *external clients*, which are those subjects operating outside the public administration and who receive the *outcome* of the various processes fulfilled by different public sector institutions.

In relation to the same administrative product, various *intermediate products* can be identified when these products are the results of the fulfilment of processes whose *clients* are *internal* in a given public sector organisation¹⁰⁸.

¹⁰⁶ Bianchi C. (2010), *Improving Performance and Fostering Accountability in the Public Sector through System Dynamics Modelling: From an ‘External to an ‘Internal perspective*, in *System Research and Behavioural Science*, 27, p. 365.

¹⁰⁷ Bianchi C., (2012), *Enhancing Performance Management and Sustainable Organizational Growth Through System Dynamics Modelling*, in *System Management for Intelligent Organizations*, Grosser S. N., and Zeier, p. 152.

¹⁰⁸ Bianchi C., (2012), *Enhancing Performance Management and Sustainable Organizational Growth Through System Dynamics Modelling*, in *System Management for Intelligent Organizations*, Grosser S. N., and Zeier, p. 143 – 161.

The identification of the clients/products of a given system implies an analysis based on an external perspective of the system under observation, while the identification of the processes and the related activities implies an internal perspective of analysis.¹⁰⁹

Mapping managerial processes means emphasizing the responsibility areas of a given organisation and their interconnections, the available strategic resources, the performance drivers on which to act so as to improve the performance of the analyzed system as well as the expected results of a given “business area”.

This approach underlines the relevance of the back-office units in supplying a given public service.

As a matter of fact, according to Bianchi, particularly in the public sector, understanding the impact of back-office units on delivered services is necessary for the improvement of performance and the fostering of accountability in the public sector.

Therefore, the importance of back-office units in delivering public services makes public sector decision makers accountable and allows one to shift from a bureaucratic view of the public sector towards a citizen oriented approach.¹¹⁰

Analyzing the investigated system of the current research, the external clients of a museum can be considered:

- 1) the stakeholders involved in the process of the creation of value in museums;
- 2) all the actors to whom the analyzed museum interacts in the social and competitive system,

¹⁰⁹ Bianchi C., (2010), *Enhancing Planning and Control Systems to Foster sustainable growth*, Paper presented at the EMUNI Research Souk, pp. 1- 26.

¹¹⁰ Bianchi C., (2012), *Enhancing Performance Management and Sustainable Organizational Growth Through System Dynamics Modelling*, in *System Management for Intelligent Organizations*, Grosser S. N., and Zeier, p. 152; Bianchi C. (2010), *Improving Performance and Fostering Accountability in the Public Sector through System Dynamics Modelling: From an ‘External to an ‘Internal perspective*, in *System Research and Behavioural Science*, 27, p. 361 – 384.

On the contrary, internal clients are those responsible for all the back and front office units inside museums.

Therefore, the performance of museums is connected to the activities carried out both in the front and back-office units.

An exposition, for instance, is not only the result of front-office activities, rather it requires a sequence of back office tasks connected to the planning of such expositions in a given museum, like the study of the exhibition itinerary, the selection and the arrangement of the works of art and finally the display of collected artworks.

More precisely, studying and planning an exposition (back-office activities) is connected to the realization of the said exposition (front-office activities); these are different but interrelated aspects of the “product” which is called “exposition”.

Hence, the objective view of performance is based on the definition of **management processes** and **underlying activities**, in order to improve the results connected to such products towards external and internal clients in relation to a public sector organization.¹¹¹

The figure describing the objective view of performance can be observed below:

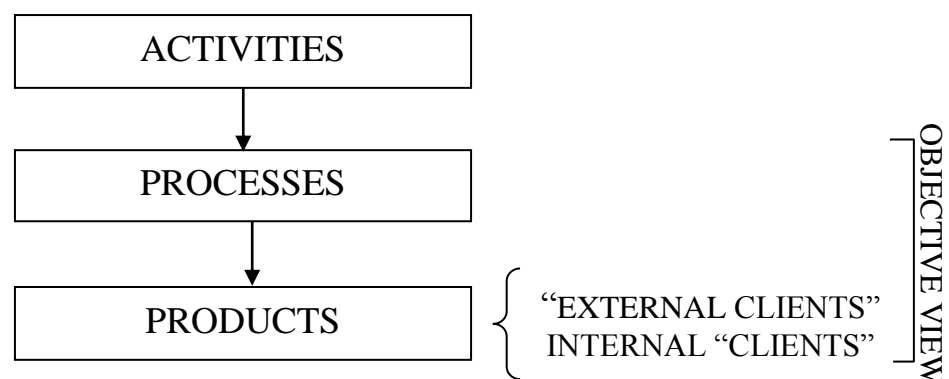


Figure n.8 The objective view perspective (source: Bianchi, 2010)

¹¹¹ Bianchi C. (2010), *Improving Performance and Fostering Accountability in the Public Sector through System Dynamics Modelling: From an ‘External to an ‘Internal perspective*, in *System Research and Behavioural Science*, 27, p. 366; read more in Cosenz F., (2011), *Sistemi di Governo e di Valutazione della Performance per l’Azienda “Università”*, Giuffrè, Milano.

Briefly, the objective view of performance management implies that “*the final and intermediate products*” delivered to “*external and internal clients*” are highlighted as well as the processes and the related activities of such processes in order to obtain the final desired results.

2) The **instrumental view of performance** aims at identifying some indicators of performance connected to the strategic resources (inputs) and to the end-results achieved (outputs).

It is considered to be instrumental since it is based on the relationships between strategic resources and end-results through the individuation of some policy levers in order to reach the final results.¹¹²

According to this perspective, the results achieved may affect strategic resources by increasing or decreasing them, as a consequence of an action carried out by decision-makers. In turn, each strategic resource can be affected by another. For instance, the image of a museum can affect its capability to attract more funds coming from sponsors or bank foundations.

Strategic resources can be:

- 1) **tangible** (for instance, the collections inside museums as well as the number of visitors);
- 2) **intangible** (for instance the quality of staff in a museum as well as its image).

Similarly, the **results** which affect such strategic resources can be:

- 1) **tangible** (for instance a change in collections or in the number of visitors);
- 2) **intangible** (for instance a change in the quality of museum staff or in its image).

¹¹² Read more in Cosenz F., (2011), *Sistemi di Governo e di Valutazione della Performance per l’Azienda “Università”*, Giuffrè, Milano, p. 100.

Determining and evaluating the results achieved by museums in terms of competition, profits and the satisfaction of stakeholder's expectations is necessary in order to evaluate the performance of museums.¹¹³

In fact, according to the *entrepreneurial formula* elaborated by Coda, organizational performance can be applied on three different levels:

- 1) competitive
- 2) social
- 3) economic

Competitive performance drivers can be measured as a ratio between the organisational performance perceived by customers and the benchmark which takes into consideration past performance, customer expectations or competitors performance.

Social performance drivers can be measured as a ratio between the actual performance of the organisation and the desired one, based on stakeholder's expectations or perceived past organisational performance.

Financial performance drivers must also be measured in relative terms as a ratio between the actual financial value and the desired one.¹¹⁴

Based on the definition of the entrepreneurial formula developed by Coda, the entrepreneurial formula applied to a museum is the actual outcome of various choices. More in depth, it takes into account:

- 1) the local competition which the museum faces (other museums, theatres, parks, monuments and suppliers);

¹¹³ Coda V., (2012), *The Evaluation of Entrepreneurial Formula*, in *European Management Review*, Vol. 9, pp. 63-74; Coda V., (1988), *L' Orientamento Strategico dell'Impresa*, Utet, Torino.

¹¹⁴ Bianchi C., (2012), *Enhancing Performance Management and Sustainable Organizational Growth Through System Dynamics Modelling*, in *System Management for Intelligent Organizations*, Grosser S. N., and Zeier, p. 155.

- 2) the services (quality of staff in museums, didactic laboratories and guided tours) and products offered (temporary and permanent exhibitions, concerts and other events);
- 3) the economic and social forces involved in the fulfilment of the mission of a museum such as workers, managers, shareholders, banks and the local community);
- 4) the stakeholders of museums (such as managers, workers and suppliers);
- 5) the structure of museums with their organizational arrangement (human resource management, planning and control systems, scientific activities and the preservation of collections).¹¹⁵

The main aspects of the entrepreneurial formula are described in the following figure:

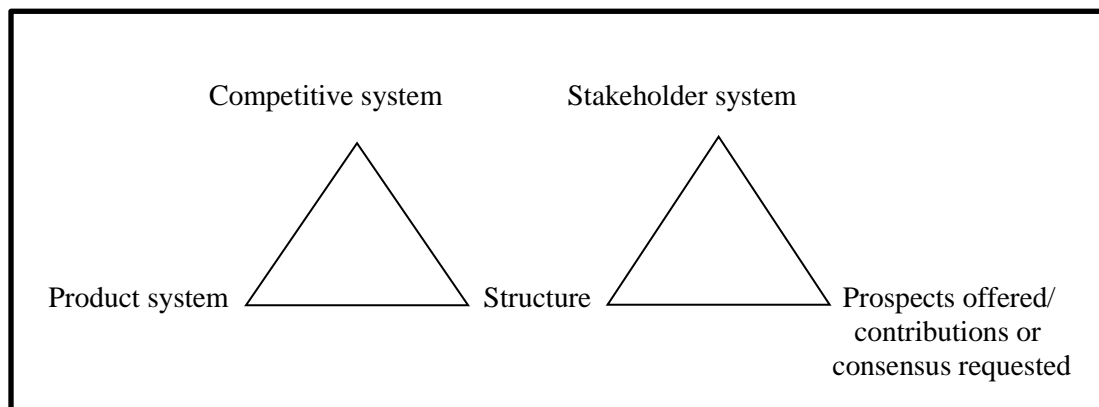


Figure n.9 Components of the entrepreneurial formula (source: Coda, 2012).

The figure below shows the relationships among variables according to the instrumental view of performance.

More in detail, it shows how strategic resources affect performance drivers and how the latter affect end results which, in turn have an effect on strategic resources.

¹¹⁵ Coda V., (2012), *The Evaluation of Entrepreneurial Formula*, in *European Management Review*, Vol. 9, pp. 63-74.

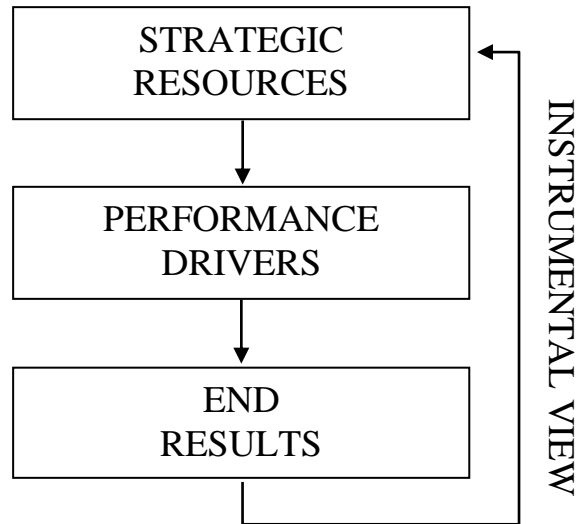


Figure n. 10 The instrumental view perspective (source: Bianchi, 2010)

3) the **subjective view** constitutes a synthesis between the objective and the instrumental view perspectives. In fact it aims at identifying the goals to be reached in each area of public sector institutions and in planning the connected activities to be carried out for each decision area.¹¹⁶

The figure below shows the main characteristics of the subjective view:

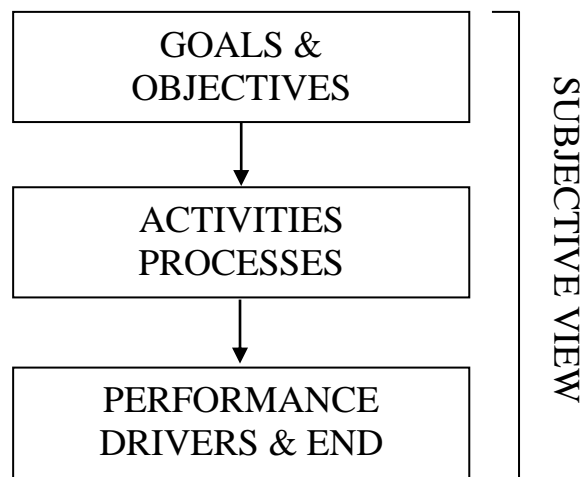


Figure n. 11 The subjective view perspective (source: Bianchi, 2010)

¹¹⁶ Bianchi C. (2010), *Improving Performance and Fostering Accountability in the Public Sector through System Dynamics Modelling: From an 'External to an 'Internal perspective*, in *System Research and Behavioural Science*, 27, p. 367; read more in Cosenz F., (2011), *Sistemi di Governo e di Valutazione della Performance per l'Azienda "Università"*, Giuffrè, Milano.

Hence, the three above mentioned perspectives assume a key role in the construction of a dynamic performance management system applied to the reality of a public sector organisation.

More in depth, the *objective view* underlines “what” the object of the performance management of a given organisation is; the *instrumental view* identifies “how” the above mentioned object can be influenced, while the *subjective view* shows “who” is responsible for the fulfilment of the goals inside the analyzed system.

In order to summarize, the following figure demonstrates the interrelationships among the three different perspectives described above.

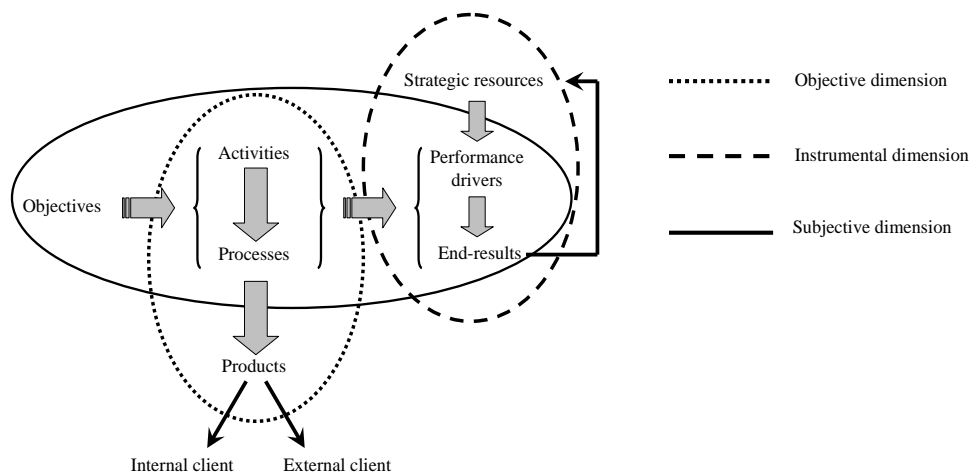


Figure n. 12 The three different perspectives of the dynamic performance management approach (source: Cosenz, 2011)

The present research focuses on the instrumental view of performance as a means of building a dynamic performance management approach which is applied to museums. This perspective explicates the accumulation of tangible and intangible resources over time, the end-results which influence their accumulation and depletion and the performance drivers which have a key role in the performance management perspective. As a matter of fact, the performance drivers are important levers to reach the desired results based on the goals of an organisation.

In the following chapter the instrumental view of performance will be used to analyze the relationships among the main variables of the Gallery of Modern Art, chosen as a representative case study in the present research.

3.5 An overview of the System Dynamics methodology

A dynamic performance management approach consists in applying System Dynamics methodology to the performance management of the investigated organisations.

Hence, once the performance management has been defined, an introduction of the System Dynamics methodology becomes necessary.

System Dynamics is a methodology which began during the late 1950's at the Massachusetts Institute of Technology under Jay Forrester.

Over the years it has become a useful tool in system description, problem identification and qualitative analysis of the investigated systems.¹¹⁷

System Dynamics can be considered as a methodology which bridges the gap between understanding the structure and the behaviour of dynamic systems.

According to Hall, “the usual approach to building System Dynamics models is to structure the model around the basic feedback loops of the system, thus facilitating the interpretation of the structurally determined time-dependent behaviour”. However, the same author asserts that “this approach becomes less feasible for complex systems with many interacting components and intertwining loops. In such

¹¹⁷ Wolstenholme E. F., (1982), *System Dynamics in Perspective*, in the *Journal of the Operational Research Society*, Vol. 33, pp. 547-556; Forrester J. W., (1961), *Industrial Dynamics*, MIT Press, Cambridge, MA; Morecroft J., (2007), *Strategic Modelling and Business Dynamics: A Feedback System Approach*, John Wiley & Sons Inc.; Warren K., (2008), *Strategic Management Dynamics*, John Wiley & Sons Ltd, Chichester; Warren K., *Competitive Strategy Dynamics*, Wiley, Chichester.

circumstances it is replaced by a series of building blocks that partition the complex system into more tractable subsystems”.¹¹⁸

The method is useful to identify a system’s mode of behaviour based on an investigation of the underlying structure and it facilitates the identification of system structure, given its behavioural characteristics.

Hence, the relationship between structure and behaviour takes on great importance.¹¹⁹

According to Sterman, the System Dynamics methodology helps policy makers to expand the boundaries of their mental models, to become aware of and take responsibility for the feedbacks created by their decisions.

However, “expanding the boundaries of our mental models is much more than just recognizing the delayed and distant effects of the undertaken decisions. It requires crossing disciplinary boundaries, those margins between departments and functions in a company, between specialities in the academy”.¹²⁰

The same author asserts that almost nothing is exogenous and one of the main challenges in teaching system dynamics is helping people to see themselves as part of a larger system, one in which their actions return to shape the world in ways large and small, desired and undesired.¹²¹

¹¹⁸ Hall R. I., (1976), *A System Pathology of an Organisation: The Rise and Fall of the Old Saturday Evening Post*, in *Administrative Science Quarterly*, Vol. 21, No. 2, pp. 188-189.

¹¹⁹ Davidsen P.I., (1989), *The Structure-Behaviour Graph, Understanding the Relationship between Structure and Behaviour in Complex, Dynamics Systems*, Department of Information Science, University of Bergen, Norway, pp. 1- 42.

¹²⁰ Sterman J. D., (2002), *All Models are Wrong: Reflections on Becoming a Systems Scientist*, in *System Dynamics Review*, 18, p.511.

¹²¹ Sterman J. D., (2002), *All Models are Wrong: Reflections on Becoming a Systems Scientist*, in *System Dynamics Review*, 18, pp. 501-531.

3.5.1 The qualitative and quantitative analysis

System Dynamics is based on two different but interrelated perspectives, more specifically the qualitative and quantitative approach.

Qualitative system dynamics models include many tools; **causal loop diagrams** and **stock and flow maps** are the main ones taken into account in the present research.

Causal loop diagrams depict the relationship among the main variables and the feedback processes of the investigated system. They are useful tools for diagramming the main feedback structure of systems in any domain. They are simply maps showing the causal links among variables with arrows pointing from cause to effect.¹²²

The arrows indicate the causal relationship between connected variables, while the signs adjacent to the arrows indicate the polarity which can be expressed by the minus or plus sign.

A plus (+) sign implies that a change in the variable at the end of the arrow will cause a change in the variable at the top of the arrow in the same direction.

In the same way, a minus (-) sign implies that a change in the variable at the end of the arrow will cause a variation in the variable at the top of the arrow in the opposite direction¹²³.

The causal loop diagram is the diagramming tool for the conceptualization of feedback system models. A feedback system is a closed system since its dynamic behaviour arises from its internal structure.

¹²² Sterman J. D., (2000), *Business Dynamics. System Thinking and Modelling for a Complex World*, Irwin McGraw- Hill, Boston, p. 102.

¹²³ Richardson G.P., (1986), *Problems with causal- loop diagrams*, in *System Dynamics Review* 2,no. 2, pp. 158-170.

Hence, the closed-boundary concept implies that the system behaviour is not a consequence of external variables, but created within the boundary of the system.

For this reason, the boundaries of the system should be identified, with its relevant main variables in which the dynamic behaviour under observation is generated¹²⁴.

Wolstenholme recognises the importance of boundaries within organisations, considering them as a determinant of organisational evolution over time.

According to the same author, boundaries may be distinguished in the following ways:

1. between the organisation and its environment;
2. between different functional parts of the same organisation;
3. between management teams;
4. mental barriers within individuals.¹²⁵

Feedback loops are the consequences of the assumption of a closed causal boundary.

According to Richardson, “without loops, all causal influences would trace to dynamic forces outside the system boundary. Feedback loops thus enable the endogenous point of view and give it structure”.¹²⁶

System Dynamics methodology is based on the concept of a bounded system in its interrelated parts. These interconnections include the essential system states and activities that characterize the behaviour of the investigated system.¹²⁷

¹²⁴ Richardson G.P., (2011), *Reflections on the Foundations of System Dynamics*, in *System Dynamics Review*, vol. 27, No 3, pp. 219-243.

¹²⁵ Wolstenholme E. F., (2003), *Toward the Definition and Use of a Core set of Archetypal Structures in System Dynamics*, in *System Dynamics Review*, Vol. 19, No. 1, pp. 7-26.

¹²⁶ Richardson G.P., (2011), *Reflections on the foundations of system dynamics*, in *System Dynamics Review*, vol. 27, No 3, p. 222.

¹²⁷ Hall R. I., (1976), *A System Pathology of an Organisation: The Rise and Fall of the Old Saturday Evening Post*, in *Administrative Science Quarterly*, Vol. 21, No. 2, pp. 185-211.

The following figures show two examples of qualitative analysis based on causal loop diagrams to define positive and negative feed-back loops in the analysis of the systems of museums.

The arrow from “loans of works of art” to “image” of museums is an example of a reinforcing loop which determines a positive influence.

In fact, the first figure shows how an increase in loans determines an increase in the image of a museum since the loans are a means of diffusing the knowledge concerning a museum’s collections and consequently of improving the image of the museum.

An improved image, would lead to an increase in ulterior loans of works of art to other museums, thereby closing the loop.

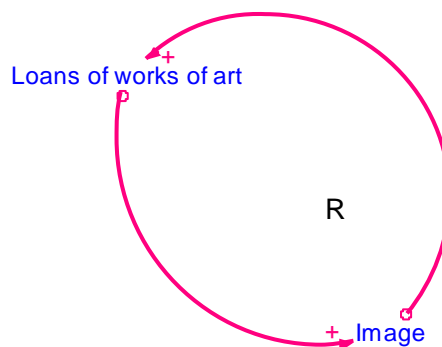


Figure n. 13 An example of a reinforcing loop

On the other hand, the second figure shows an example of negative influence. In fact, the balancing loop demonstrates how an increase in loans might reduce the number of works of art in the museum’s collection; at the same time an increase in the museum’s collection would lead to an increase in loans of works of art and so closing the loop in this way.

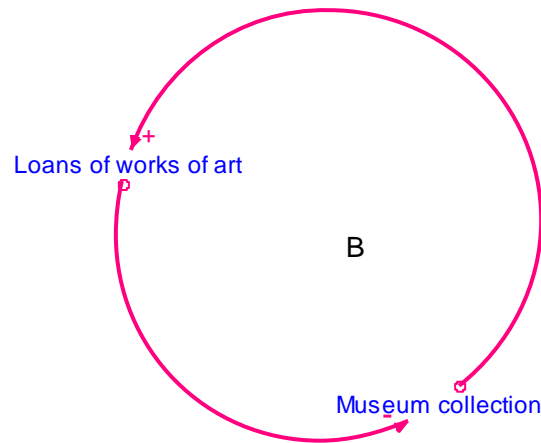


Figure n. 14 An example of a balancing loop

Causal loop diagrams are a useful tool to supply a qualitative analysis of a given phenomena, however they do not distinguish between the accumulation of resources (stocks) and the rates of change that alter those resources (flows)¹²⁸.

According to Richardson, in fact, the main critical aspect of causal loop diagrams arises because they obscure the stock and flow structure of the system¹²⁹.

As a matter of fact, while causal loop diagrams show the feedback structure of the analyzed system, **stock and flow maps** emphasize their underlying physical structure.

Dynamic behaviour is the consequence of the interaction among the main variables characterizing the system structure.

The main variables of a given system are:

1. **level variables** which describe the level of the system and are represented as **stock variables**.

The state trajectory is obtained by the integration of rates, a process which reflects the causality of the accumulation and depletion affecting the stock variables which

¹²⁸ Sterman J. D., (2000), *Business Dynamics. System Thinking and Modelling for a Complex World*, Irwin McGraw- Hill, Boston, p. 140.

¹²⁹ Richardson G. P., (1986), *Problems with Causal- Loop Diagrams*, in *System Dynamics Review* 2, No. 2, pp. 158-170.

represent the level of the key resources of the investigated system and their accumulation over time.¹³⁰

Stocks which can change only through an inflow or an outflow accumulate past events.

They characterize the state of the system and provide the basis for corrective actions¹³¹.

The collection of a museum could be considered as an example of a stock variable.



Figure n. 15 An example of a stock variable

The stock museum collection can be increased or decreased by actions which affect the flows coming in or out of the museum collection.

2. **rate levels** which describe the state transition and identify the process of accumulation and depletion of strategic resources.

Rate levels also called **flow variables** are represented as inflows or outflows of a given strategic resource.

The figure below shows an example of rate level, represented by:

- 1) the increase of the museum's collection which is the inflow of the stock museum collection;
- 2) the decrease of the museum's collection which is the flow which drains and reduces the same stock.

¹³⁰ Davidsen P.I., (1989), *The Structure-Behaviour Graph, Understanding the Relationship between Structure and Behaviour in Complex, Dynamics Systems*, Department of Information Science, University of Bergen, Norway, p.4.

¹³¹ Sterman J. D., (2000), *Business Dynamics. System Thinking and Modelling for a Complex World*, Irwin McGraw- Hill, Boston.

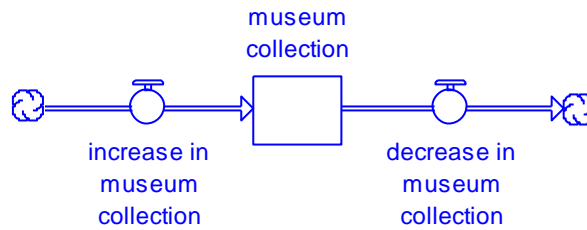


Figure n. 16 An example of flow variables

Hence, stocks characterize the state of the system, they increase or decrease depending on their flows. The decisions alter the rates of flows, altering the stocks and closing the feedback loops within the system¹³².

3. **input variables** are exogenous parameters of the system, however they can also be levels of intervention as a means of modelling some policies so as to influence the analyzed system.



Figure n. 17 An example of an input variable

4. **auxiliary variables** are intermediate concepts added to the model to aid clarity.

Performance drivers, defined as a ratio between the actual level of a variable and the desired one, are examples of auxiliary variables.

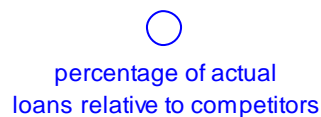


Figure n. 18 An example of an auxiliary variable

¹³² Sterman J. D., (2000), *Business Dynamics. System Thinking and Modelling for a Complex World*, Irwin McGraw- Hill, Boston, p. 102.

To summarize, the stock “museum collection” is increased by the “increase in museum collection” flow and decreased by the “decreased in museum collection” flow.

In turn, the increase in museum collection is determined by:

- 1) new donations and bequests
- 2) new purchases of works of art

On the other hand, the decrease is determined by factors such as works of art on loan to other institutions or works in temporary restoration.

Hence, the purpose of the stocks and flows map is to demonstrate the relationship among variables analyzing which variables determine the variation of flows and how this variation influences stocks.

On the other hand, **quantitative system dynamics models** are based on numerical values, expressed by units of measures in order to run the simulation of the system and test the effect of different policies towards the analyzed system.

3.6 Previous research concerning the application of System Dynamics methodology to the study of museums

Many authors have dealt with museums over the last few years, however their contributions have concentrated on visitors and on customer satisfaction, overlooking their attention on the interrelationship between front-office and back-office activities as a basis for the satisfactory management of museums.

Some writers have examined the relationship between service quality and user loyalty, while others have analyzed the relationship between consumer satisfaction and post-purchase intentions and many more have concentrated on the marketing

management in cultural organisations, analyzing how marketing influences the museum's performance.¹³³

However, as far as the application of system dynamics concerns the study of museums, two main contributions merit attention:

- 1) the first is related to the system dynamics approach to visitors' long-term satisfaction;
- 2) the second regards the strategic development of museums through a system dynamics approach.

More in detail, Hsiao and Yao analyzed visitors' long-term satisfaction in museums, basing their study on the analysis of the National Museum of Natural Science in Taiwan.¹³⁴

They concentrated on the long - term satisfaction of visitors which has become a key issue in attracting more visitors in museums facing strong competition.

According to the same authors, the problem of satisfying visitors is dynamic and complex, since it involves the interrelationship among many factors such as government policies, museums service quality, visitors expectation and social environment¹³⁵.

Due to dynamism and the complexity of the system analyzed, the two above mentioned authors applied system dynamics methodology to investigate those factors

¹³³ Backman S.J., Veldkamp C., (1995), *Examination of the Relationship between Service Quality and User Loyalty*, in *Journal of Park and Recreation Administration*, Vol. 13, No 2, pp. 29 -41; Harrison P., Shaw R., (2004), *Consumer Satisfaction and Post-Purchase Intentions: An exploratory study of museum visitors*, in *International Journal of Art Management*, Vol. 6, No 2, pp. 23-32; Paulus O., (2003), *Measuring museums performance: A study of museums in France and the United States*, in *International Journal of Arts Management*, Vol. 6, No. 1, pp. 50 -63.

¹³⁴ Hsiao C. T., Yao M. H., (2012), *System Dynamics approach to visitors' long-term satisfaction with museum: a case study of the National Museum of Natural Science*, in *International Journal of Electronic Business Management*, Vol. 10, No 2, pp. 113-121.

¹³⁵ Hsiao C. T., Yao M. H., (2012), *System Dynamics approach to visitors' long – term satisfaction with museum: a case study of the National Museum of Natural Science*, in *International Journal of Electronic Business Management*, Vol. 10, No 2, p. 113.

affecting visitors long-term satisfaction concentrating on employees attitude and expertise, ticket prices, as well as the image of the museum towards competitors.

Since the income of the National Museums of Natural Science depend on ticket prices and on equipment and site management expenses, the policies they suggest are based on two different but interrelated perspectives:

1. the increase in ticket prices in order to raise the possibility of obtaining a larger budget for the following year and, at the same time, to control the number of visitors by preventing overcrowding which could lead to a decrease in service quality;
2. the increase in scientific displays and equipment, thus cutting down on personnel expenses and in this way increasing visitors satisfaction as well as the number of visitors.

This study is useful, since it highlights the main factors which have an impact on visitors' long-term satisfaction.

However, the empirical case study of the present research, that is the Gallery of Modern Art in Palermo, is quite different from the National Museum of Natural Science in Taiwan under many aspects which can be seen below:

1. the incomparable number of visitors, since the Taiwanese museum is one of the top five largest museum worldwide;¹³⁶
2. the diverse equipment owned by the Taiwanese museum and the Gallery of Modern Art in Palermo;
3. the different ways of financing the two museums since the income generated by the ticket revenues in the Gallery of Modern Art is not part of the balance sheet of the Gallery rather it belongs to the balance sheet of the Municipality and it will not increase the budget of the Gallery the following year.

¹³⁶ Hsiao C. T., Yao M. H., (2012), *System Dynamics approach to visitors' long- term satisfaction with museum: A case study of the National Museum of Natural Science*, in *International Journal of Electronic Business Management*, Vol. 10, No 2, pp. 113-121.

The study by Bernardi concerning the strategic development of museums is another contribution to the application of the System Dynamics methodology to the study of museums.

The purpose of Bernardi's study is to show how the growth of a museum may be problematic and difficult in the long-term.

As a matter of fact, the classical loop formed by investments, growth, profit and investment, meet some difficulties when the system analyzed is a public museum characterized by strong interconnections with its stakeholders in the territory.¹³⁷

The same author underlines how the management literature in the field of cultural heritage has overestimated the virtuous process of services offered to visitors.

Bernardi, in fact, asserts that “the literature review and the evidence of the empirical analysis shows how museums are intricately interconnected with the public and private actors that support investment and the current functioning of these institutions. The myth of revenues from visitors that many contributions will serve as a solution to a museum's problem should be set aside so a realistic view of how this sector works can be developed¹³⁸”.

As a matter of fact, museums often have a financial dependence on public authorities and their development is connected to the capability of the various stakeholders (such as Municipality, Province, Regions, private sponsors such as bank foundations), to support their development and growth.

Museums found in the same area have access to the same resources which are limited because of the limited number of financing stakeholders and due to the competition

¹³⁷ Bernardi C., (2005), *The Strategic Development of Museums: A system dynamics approach*, paper presented at the International Conference on Arts and Cultural Management, 3-6 June 2005, Montréal, pp. 1-22.

¹³⁸ Bernardi C., (2005), *The Strategic Development of Museums: A System Dynamics Approach*, paper presented at the International Conference on Arts and Cultural Management, 3-6 June 2005, Montréal, pp. 1-22.

between museums and other institutions involved in different fields, in acquiring public funds.¹³⁹

So, according to Bernardi, museums can not continue growing forever.

In accordance with Bernardi, Bianchi applies the system dynamics approach to show how this methodology is useful to enhance planning and control systems to foster sustainable growth in the cultural sector.

Bianchi hypothesizes that an investment in the quality of existing museums through the Regional Government, would lead to an increase in the quality in the wider cultural system.

Quality is considered an intangible strategic resource of museum performance.

An increase in quality would lead to an increase in attractiveness of the system, generating an increase in the number of visitors and, as a consequence, more financial resources could be invested to further improve quality.¹⁴⁰

However, the above explained reinforcing dynamic finds a limit, the so called “limit to growth”, since an increase in investments in quality has an impact on operating costs and would generate an increasing budget gap between the financial resources available from museums and the effective expenses a museum would have to face due to the increasing operating costs.

In this case, an improved image for museums, would generate an increase in terms of financial resources, with a consequent need to further public funding from the Government.

¹³⁹ Bernardi C., (2005), *The Strategic Development of Museums: A System Dynamics Approach*, paper presented at the International Conference on Arts and Cultural Management, 3-6 June 2005, Montréal, p. 9.

¹⁴⁰ Bianchi C., *Sistemi di Programmazione e Controllo per l'Azienda "Regione"*, Giuffrè, Milano.

Considering the reduction of public expenditure, this dynamic would lead to an increase in non financial requirements with a consequent decrease in terms of the image of museums.

Therefore, an excessive increase in quality would lead to a decline in the image of museums in the case of the system being unable to face the increase of financial requirement of the museums in a given territory.¹⁴¹

In order to face the above mentioned limit to growth, Bianchi suggests a policy addressed to the improvement of the quality of museums and at the same time to the opening of new museums.

As a matter of fact, the attractiveness of museums is affected not only by their quality but also by the investments of new openings of museums, which would increase the **image of the wider cultural system** in the Region and consequently the number of visitors of museums as well as the financial resources to be further invested in the new opening of museums.

Therefore, the new opening of museums would lead to an improvement in their image, but at the same time the average quality of museums would be reduced.

Hence, the following policies have been considered:

1. investments in quality;
2. investment in opening new museums

A balance between the two above mentioned policies determines the efficient running of the system.

Nevertheless, this present research concentrates on the internal dynamics of a museum, describing the back-office and front-office activities which have an impact

¹⁴¹ Bianchi C., *Sistemi di Programmazione e Controllo per l'Azienda "Regione"*, Giuffrè, Milano, pp. 389-394.

on the image of the Gallery of Modern Art and demonstrates how the interaction among these activities is essential for the satisfactory conduction of a museum.

3.7 The benefits of the introduction of the System Dynamics methodology in the analysis of museum performance

The analysis of the cultural sector, particularly museums, isn't an easy task since such genre of cultural institutions are characterized by huge complexity and dynamism.

Museums have been studied from diverse perspectives, from museology to sociology, from economics to management and each of these approaches have captured different aspects of the inter-related variables characterizing the system of museums¹⁴².

Nevertheless, the system dynamics methodology appears to be a useful tool to adopt when applied to the performance management of museums, chosen as an example of cultural resources in the present research.

In fact, the support of System Dynamics methodology is important in order to identify the main tangible and intangible strategic resources characterizing the system of a museum, as well as those performance drivers which affect the end-results which in turn have an effect on the strategic resources according to a dynamic perspective.

Such indicators of performance are important instruments since they drive those people who make relevant decisions within an organisation towards the desired outcomes.

¹⁴² Bernardi C., (2005), *The Strategic Development of Museums: A System Dynamics Approach*, International Conference on Arts and Cultural Management, July 3-6 2005, Montréal, pp. 1- 22.

The drivers of performance can be defined as a ratio between the actual level of a given resource and a benchmark.

The above mentioned methodology is important in the construction of the causal loop diagrams showing the main feed-back loops among some variables characterizing some aspects of a museum.

Furthermore, the dynamic performance management approach appears useful since it allows the author to depict a stock and flow map, demonstrating how the main variables characterizing the system of the Gallery are affected and interconnected to each other.

More in depth, the major feedback loops concerning the scientific activities of the Gallery will be analyzed in the following chapter.

The relationship between the image of the Gallery and the donations will also be underlined as an important factor affecting the museum's collection and, consequently, its image.

The identification of the "products" concerning the scientific activities of the Gallery will be carried out in order to map and frame all the main aspects characterizing the institutional activities of the Gallery.

CHAPTER FOUR

THE CONSTRUCTION OF A DYNAMIC PERFORMANCE MANAGEMENT SYSTEM APPLIED TO THE GALLERY OF MODERN ART IN PALERMO

4.1 Introduction

This part of the thesis focuses on an empirical case study conducted in a medium sized museum which is the Gallery of Modern Art, situated in the city of Palermo.

The analysis of the present chapter will not address a problematic aspect of the management of the Gallery, rather it will analyze the effect of loans of works of art and the works of art borrowed from other museums on the image of the Gallery and how, in turn, the image of the analyzed museum may affect and influence the donations of works of art to the Gallery.

The museum is initially analyzed on a whole, since the activities of preservation, safeguarding and promotion are extremely important.

A presentation of the main institutional, historical and organisational aspects of the Gallery will be carried out in order to give a clear picture of the Gallery and of the institutional context the museum belongs to.

Following that, the policy of loans of works of art to other museums and its effect on the image of the Gallery as well as the effect of the works of art borrowed from other museums, will be analyzed as a representative aspect of the organisation of the said museum.

The effect of the image of the Gallery on the donations will also be analyzed as another important aspect of the empirical research.

More in detail, the present chapter analyzes the organisational unit for what concerns the scientific activities of the Gallery since it represents the core activities of the museum under observation.

A qualitative analysis based on causal loop diagrams will be carried out in the present chapter.

This analysis highlights the effect of the policies concerning the loans of works of art and the borrowed works of art on the image of the Gallery, as well as the impact it has on the donations to the Gallery.

The quality of the museum collection as well as the scientific publications will be taken into account during the analysis of the core activities of the Gallery, as well as the contacts which the Gallery establishes with other museums or foundations which represent a means to further increase its loans as well as to increase the number of works of art borrowed from other museums or foundations..

The causal loop diagram will be the preamble to build a stock and flow map which replicates the same structure of the causal loop diagram, through a dynamic perspective.

More in detail, the “instrumental view” of performance has been used to illustrate the stocks and flows map representing the structure of the Gallery. Therefore, the business area concerning the “scientific activities” of the Gallery has been considered through a feedback analysis.

This kind of feedback analysis shows the accumulation and depletion of strategic resources through the influence of their flows and how these flows are affected by the identified performance drivers on which to intervene to improve the museum’s performance.

The combination of System Dynamics methodology with the so called “instrumental view” of performance management is considered a useful tool in order to identify the key variables of the system as well the process of accumulation and depletion of its main strategic resources.

Managing strategic resources to affect performance is a dynamic and complex task.

As a matter of fact, resources such as the quality of a museum collection, the quality of loans and the notion of image of a museum are intangible resources and are therefore difficult to identify and measure.

Furthermore, according to Bianchi the process of accumulation and depletion of strategic resources is inertial, since delays underlying them are difficult to be perceived by decision-makers and also because of the non-linear relationship between causes and effects.¹⁴³

The dynamic complex system of museums, the delays between causes and effects and the non-linearity among phenomena justify the use of the dynamic performance management approach. This methodology is clearly important since it allows a strategic and learning oriented approach to manage the complexity of the investigated cultural system of the Gallery of Modern Art in Palermo.

4.2 An overlook of the main institutional aspect of the GAM

The main goals of the cultural sector of the Municipality of Palermo are related to the spread and the promotion of culture, to the protection, preservation and fruition of the cultural, artistic and monumental heritage of the local territory.

¹⁴³ Bianchi C., (2012), *Enhancing Performance Management and Sustainable Organizational Growth Through System Dynamics Modelling*, in *System Management for Intelligent Organizations*, Grosser S. N., and Zeier, p. 149.

In order to reach these goals, many activities concerning photography, cinematography, editorial promotion, research and development, improving and promotion of museums, archives, libraries and expositive areas have been implemented by the Municipality of Palermo.

More precisely, the Municipality of Palermo is characterized by two distinct organisational levels:

- 1) the political level
- 2) the managerial and operational level.

The political level incorporates the Mayor, the executive branch (Municipal Government) and the legislative branch (City Council).

The executive branch encompasses offices called *Assessorati*. The political chief of each *Assessorato*, is called “*Assessore*” whose role is to define the strategic objectives that concern his/her area.

Therefore, the activities of the different administrative areas of the Municipality of Palermo should be addressed towards the definition and implementation of managerial and operational goals that should be coherent and consistent with the strategic ones defined at a political level.

However, the public sector is often characterized by a lack of coherence between strategic, managerial and operational goals, by a poor definition and alignment of goals, activities to be implemented and results to be reached and by an unclear understanding of administrative processes, strategic resources and policy levers on which to intervene to affect the performance of the investigated system.

Moreover, the figure below shows the organisation of the Municipality of Palermo with particular attention being paid to the cultural sector.

The Gallery of Modern Art in Palermo is a branch of the wider and more complex system of the Municipality of Palermo.

The picture below shows the overall structure of the cultural sector, comprehending the Gallery of Modern Art, which belongs to the area of “Museums and Expositive Areas”.

This sector deals with the Gallery of Modern Art, the “*Gipsoteca di Palazzo Ziino*”, the “*Cantieri Culturali alla Zisa*”, expositive areas of Villa Niscemi, as well as the “*Complesso monumentale di Santa Maria dello Spasimo*”, defining their strategies and activities.

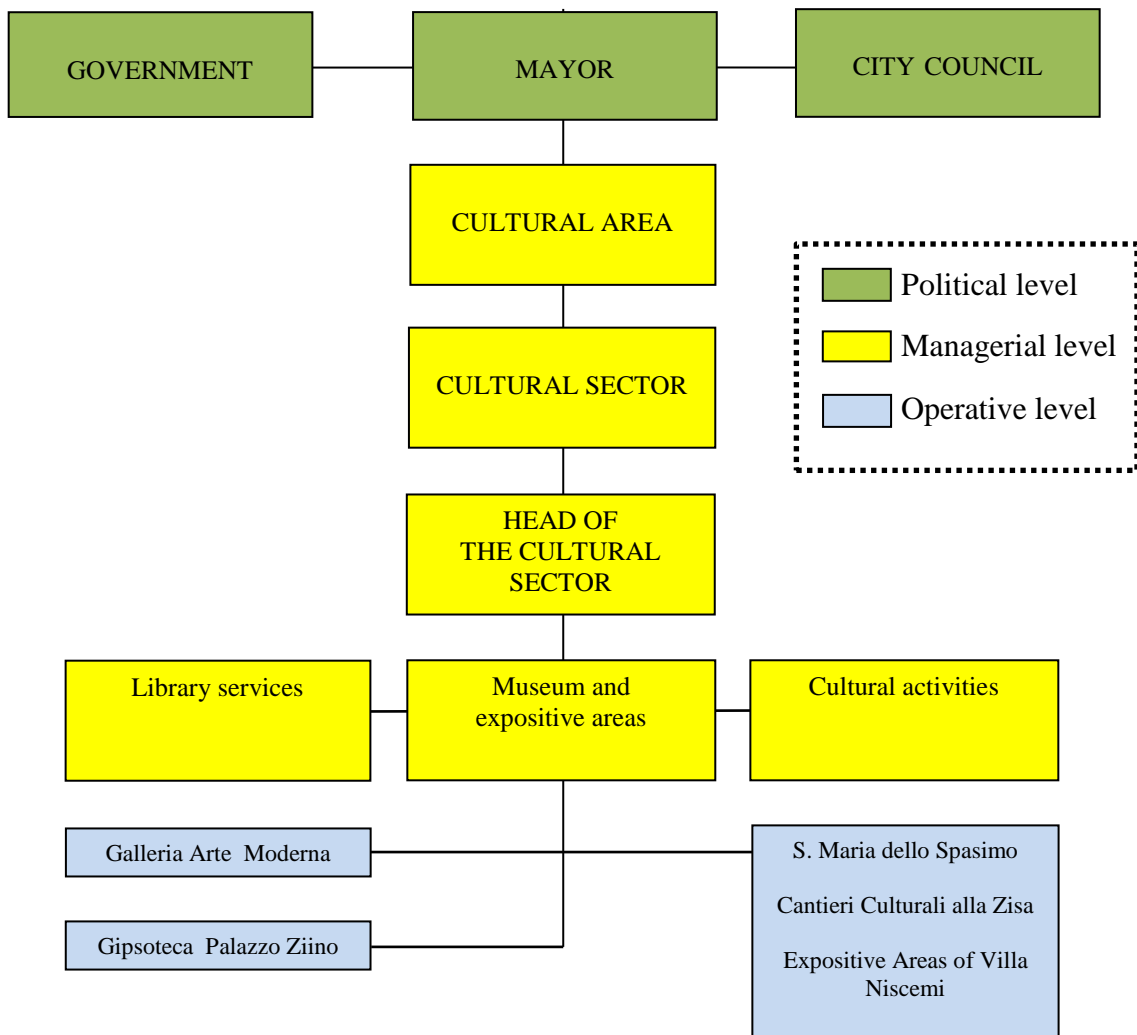


Figure n. 19 The Cultural sector of the Municipality of Palermo

4.2.1 A presentation of the more relevant historical aspects concerning the GAM

The foundation of the Gallery of Modern Art in Palermo dates back to **1910** when the foyer of the Politeama Theatre became the seat of the Civic Gallery of Modern Art of Palermo. The Gallery was named “**Empedocle Restivo**” as a tribute to the man who promoted its foundation.

The purposes for this choice were motivated by two factors:

- 1) the symbolic value of the monument, which was the expression of the **Belle Époque**;
- 2) its position in the heart of the modern city of Palermo.

At that time, when the Gallery used to be located within the foyer of the Politeama Theatre, there were 1171 pieces of art including both paintings and sculptures. 210 operas were exhibited in 11 expositive rooms, 698 operas were kept in storage while 263 operas were borrowed by other public offices.¹⁴⁴

The necessity to adapt the Civic Gallery of Modern Art to the needs of a 21st- century museum, began in **2006** when the Museum was moved to the historical centre of Palermo, inside the “*Complesso monumentale di Sant’ Anna*” where it is still located today.

From then on, the museum was called “*Galleria d’Arte Moderna*”, better known as **GAM**.

The Department of the historical centre of the City of Palermo, with the advice of some experts in museology, followed the renovation of the “*Complesso Monumentale di Sant’Anna*”.

¹⁴⁴ Costantino D., Pinzello I., (1990) *Museografia e territorio, Il sistema museale integrato come istituzione didattica attiva, multimediale per la conoscenza storicizzata e contestualizzata dell’ambiente e del territorio*, Edizioni Grifo, Palermo, p. 29.

The new location was considered the ideal place to run the activities of a Modern Art museum. Hence, it was natural to reconsider the exposition of the permanent collection for exhibitions in the new space¹⁴⁵.

As a Gallery of Modern Art, the **permanent collection** is the **institutional activity** of the museum.

Considering the dimensions of the new museum, initially **214 artworks** were selected: **176 paintings and 38 sculptures**.

The collection of artworks is distributed on three different floors:

- on the ground floor we can find: the art and the great Exhibition, the passage between the Neoclassic and the Romantic period, the long sunset of neoclassical mythology, the celebration of Garibaldi between history and myth and local artist Francesco Lo Jacono with his new image of Sicily;
- on the first floor we can see: the poetics of “realism” in literary and genre scenes, aestheticism and exoticism between the 1800s and 1900s, Antonino Leto and the Mediterranean landscape, Ettore De Maria Bergler and lyrical naturalism at the end of the century, the last expression of the landscape in naturalism at the end of the century and Michele Catti and his inner landscape;
- on the second floor we may observe: the “taste” of the Venice Biennale between symbolism and modernism and the 1900s in Sicilian art.¹⁴⁶

Nowadays, the Gallery of Modern Art in Palermo, represents an important centre for the cultural life of the city, a place of research and debate among different cultural identities.

¹⁴⁵ <http://www.galleriadartemodernapalermo.it/MEDIACENTER/FE/CategoriaMedia.aspx?idc=28&explicit=SI>

¹⁴⁶ For further information check the website of the Gallery of Modern Art in Palermo at the following link: <http://www.galleriadartemodernapalermo.it/mediacenter/FE/home.aspx>

4.2.2 An overview of the main organisational aspects of the GAM

According to the definition of ICOM, a museum is as a “non-profit, permanent institution serving society and contributing to its development, which is open to the public and that acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and leisure activity”.

The Gallery of Modern Art in Palermo aims at reaching its goals through:

- 1) activities of acquisition, conservation, documentation, exhibition, study and communication regarding its own collections;
- 2) cultural, educational training and informational activities such: as temporary exhibitions, seminars, meetings, training courses and stages, didactic activities, guided tours and laboratories in relation to different target groups;
- 3) scientific research and publications on the cataloguing of the collections.¹⁴⁷

In order to reach its goals, the Gallery of Modern Art in Palermo, must have a functional and scientific support in the development of educational services, in the activity of fruition and in the cultural diffusion of its collections.

As a matter of fact, the management of collections in museums requires various competences such as front-office assistants, didactic operators, collection and exhibition managers, restorers as well as security for the safeguard of the museum collection.

The number of workers employed at the Gallery of Modern Art amounts to 94 units distributed in the following categories:

- 1 director
- 21 full-time employees

¹⁴⁷ Charter of services of the Gallery of Modern Art approved by Managerial Deliberation n. 54 of 7 July 2013.

- 61 part-time employees
- 10 workers from “*LSU*” which is a socially protected category and
- 1 employee from “*COIME*” which is a society belonging to the local council.

However, external staff are still required for the scientific management of the collection, for the organizational management of the museum, for the activities of marketing, promotion as well as for museum didactics and laboratories.

Due to the lack of people with this kind of specialization within the organization of the museum, the Gallery of Modern Art has appealed to external human resources who are part of a society called CIVITA, according to national parameters connected to the so called “integrated management”, as defined by the **Legislative Decree 29 January 2008** concerning “ **The commitment of additional services to private organizations within institutes and places of culture.**”

According to the above mentioned legislative decree, companies can take part in the public tender as individuals or as a temporary enterprises consortium. Concession is assigned through a public selection procedure based on the best economic offer, on the condition that enterprise demonstrates the possession of the required economical, technical and professional characteristics.

The concession is based on:

- 1) the management **of integrated services for the Gallery of Modern Art** such as the cafè, restaurant, bookshop, didactics and the ticket office;
- 2) the support regarding the management of **scientific activities** such as educational services, cultural dissemination, preservation and fruition of the collection of the Gallery.

These actions should support the managers of the museum in their technical activities, in the achievement of their goals, in their scientific research as well as in the process of promotion of the museum collection.

More in detail, **outsourced services** of the Gallery of Modern Art can be grouped in two types:

1) **Services for the public** which include:

- a) café and restaurant;
- b) bookshop;
- c) information desk;
- d) didactic assistance, thematic laboratories for different target groups and guided tours for permanent and temporary exhibitions;
- e) exhibitions and cultural events such as conferences or other activities concerning the promotion of culture.

2) **Functional and scientific support, educational services, cultural diffusion and fruition of the collection** which refers to:

- a) cultural promotion at a local and national level for schools and universities as well as for cultural associations and non profit organisations;
- b) management and coordination between the Gallery of Modern Art and the “Cultural District” of Palermo created 06/12/2012 by a Municipal Deliberation;
- d) promotion of the participation of the local community to the cultural life of the museum;
- e) planning and organization of exhibitions and cultural events in line and coherent with the mission of the Gallery such as books launches, conferences and concerts as well as the implementation of those exhibitions suggested by the Direction of the Gallery of Modern Art.

Educational and social services are other important activity for the Gallery to consider, according to the idea of a museum as a means and a resource, able to generate social value.

Furthermore, the charter of services of the Gallery of Modern Art defines the fundamental principles which inspire the entire management of the museum.¹⁴⁸

The above mentioned principles can be expressed as follows:

1. **Equality and impartiality:** the GAM offers its own services without any distinction of gender, language, religion and public opinion and offers suitable structures for those with special needs and disabilities. Moreover, it follows the rules of objectivity, justice and impartiality.
2. **Continuity:** the GAM establishes its opening hours offering its visitors a continuous and regular service;
3. **Participation:** the museum encourages the participation of its users, both for individual visitors and for those who are part of a group in order to allow them to be part of the cultural activities of the Gallery;
4. **Security and privacy:** the museum follows the rules about security and privacy of its users for the preservation of the collections as well as for the security of visitors and personnel.

¹⁴⁸ The Charter of Services of the GAM is based on the following legislative acts:
Code of Professional Deontology ICOM-UNESCO adopted by the 15th General Assembly of ICOM held in Argentina in 1986;
Directive of the President of Council of Ministry of 1994 regarding the “Principles of services for the public”;
Directive of the President of Council of Ministry of 1994 concerning the “Principles for the creation and the functioning of the offices for the public relations”;
Legislative Decree 286/99, art. 11 about the “Reorganization and strengthening of the instrument for monitoring and evaluating costs and results of the activities carried out by the public administrations”;
Ministerial Decree 10 may 2001: “Act of addressing technical scientific criteria and standards of performance and development of museums with particular reference to the relationship between the museum and the public”;
Code of Cultural and Naturalistic Heritage approved by Legislative Decree 22 January 2004, n.42 and further modifications.

5. **Standards of quality** are another important aspect to be considered in analyzing the Gallery of Modern Art in Palermo. The GAM, in fact, follows the standards of quality adopted at a national level by the Ministerial Decree 10 May 2001 regarding “The act of addressing technical and scientific criteria and standards of performance and development of museums” and by the Deliberation of the Regional Government n. 309/2003 about “Approval of standards and objectives of quality for libraries, historical archives and museums according to art. 10 of Regional Act 18/2000”.

The above mentioned standards of quality have been introduced by the legislator to allow museums to acquire a managerial culture and to check the results achieved.

6. **Effectiveness and efficiency:** the GAM has to improve the effectiveness and the efficiency of its services, by adopting the technological and organizational procedures more suitable to its scope.

Effectiveness refers to the quantity and quality of services of the GAM with the purpose to satisfy the needs of its visitors. More in depth, the effectiveness concerns outputs and it measures the achievement of a goal by an organization or the way its output has an interaction with the socio and economical environments of such organization¹⁴⁹.

The efficiency, on the other hand, measures the relationship between inputs and outputs or how successfully the inputs have been transformed into outputs.¹⁵⁰ More in detail, efficiency refers to the quantity and quality of services compared with the available resources and the goals of the GAM, with the aim to reduce costs.

¹⁴⁹ Mouzas S., (2006), *Efficiency versus effectiveness in business networks* in *Journal of Business Research.*, Vol. 59, pp. 1124 -1132 .

¹⁵⁰ Mouzas S., (2006), *Efficiency versus effectiveness in business networks* in *Journal of Business Research.*, Vol. 59, pp. 1124 -1132.

4.3 The instrumental view of performance in order to analyze the structure of the Gallery

The design of a Dynamic Performance Management system, according to the “instrumental view” perspective, is a useful approach, since it explicates the interdependencies between performance drivers and end-results and the latter with the main strategic resources of the Gallery of Modern Art.

The **Gallery** is organised around the following **organisational units**:

- 1) scientific museum activities;
- 2) museum activities and added services;
- 3) technical and administrative aspects concerning the promotion of the cultural and artistic heritage of the Gallery and
- 4) security of the productive units of the Gallery

The **scientific museum activity** organisational unit can be considered as the most representative unit of the Gallery since it represents the main institutional and core activities of the Gallery regarding the care and the preservation of the collection, the permanent exhibition of the Gallery, the valorisation of its collections and the activities of loans.

The above mentioned organisational unit, in fact, manages all the administrative activities and procedures related to the loans process, to the establishment of partnerships with other cultural institutions, foundations and museums at a local, national and international level, in order to disseminate and promote the cultural and artistic heritage of the Gallery.

The activity of loans of works of art requires a cultural, technical and scientific evaluation of the artistic quality and of the cultural value of those museums or foundations which require the piece on loan from the Gallery.

The artistic quality of the exhibition where the work of art of the Gallery should be displayed is another important aspect to take into account while processing the evaluation of a loan.

The administrative procedures concerning the loan merit particular attention since they represent an important aspect in the process of loaning a work of art from the Gallery.

The security and insurance of the piece, the transportation as well as the method of preservation of the piece on loan are relevant aspects to be taken into account.

Hence, the image of the museum which receives the piece from the Gallery as well as the cultural and artistic value of its exhibitions have an impact on how the Gallery is perceived, when this latter decides to temporary loan a work of art.

These are the main reasons why the scientific board of the Gallery follows certain strict criteria before loaning a piece from the Gallery.

The Gallery draws up a formal technical and administrative document in relation to the activity of loaning, describing all the results related to each loan as well as the final verification of the preservation of the loaned piece.

One of the most important goals of the above described organisational unit concerns the digitalization of all the works from the Gallery and updating the data concerning the Gallery in a digitalized archive in order to facilitate the knowledge and the study of the collection of the museum.

The **museum activity and added services** unit deals with all the aspects related to the added services such as laboratories, events and temporary exhibitions as well as the digitalization of the archive and of the data concerning the invoices issued.

The **technical and administrative aspects concerning the promotion of the cultural and artistic heritage of the Gallery's** organisational unit manages the

human resources of the Gallery as well as its added services. In fact, it is responsible for dealing with the outsourced society and its relative activities such as laboratories, guided tours, seminars and events.

The **security of the productive units of the Gallery's** organisational unit deals with all the technical aspects related to the security of the personnel in the Gallery.

In the present research, the construction of the Dynamic Performance Management perspective applied to the Gallery of Modern Art is based on the identification of one business area concerning the main institutional activities within the museum under observation.

In the current analysis, the Gallery has been divided into two main business areas which concern the following activities:

- 1) institutional or “core activities” of the Gallery and
- 2) collateral activities also called “added services” or “integrated services”.

The **institutional activities** of the Gallery may concern the conservation, the preservation, the scientific study and research of the museum's collection, the management of the archive and library of the Gallery, the organisation of storage and its valorisation through the activities of loans of works of art to other museums as well as to all the activities concerning the works of art borrowed from other museums.

It also refers to the activities concerning the permanent exhibition and the promotion of the museum's collection which include the selection, the planning and the organisation of the exhibition rooms as well as the set-up.

On the other hand, the **collateral activities** of the Gallery, are those outsourced activities which concern the planning of temporary exhibitions, didactic assistance and thematic laboratories, events such as concerts, seminars, book launches,

conferences, services related to the café and restaurant as well as the Gallery bookshop.

However, due to the complexity of the museum system, only the business area concerning “scientific activities” of the Gallery has been considered, in order to depict a clear picture of the main core activities of the Gallery, according to a dynamic performance management perspective.

More in detail, within the business area concerning “scientific activities”, the permanent collection, the activities concerning the loans of works of art to other museums and the works of art borrowed from other museums as well as the scientific publications of the Gallery are all factors that have been taken into account.

Furthermore, the image of the Gallery, the quality of its collection and the number of contacts in terms of partnership established between the Gallery and other museums or foundations are important strategic resources of the present study and they, in turn, merit particular attention.

The permanent collection is the “core activity” of a medium size museum, as seen in the Gallery of Modern Art, which is the cultural institution under investigation.

The **permanent collection** of the Gallery, constitutes a **strategic resource** which can be increased in the following way:

- 1) **purchasing** works of art from other museums and public institutions as well as from private collectors
- 2) **donations** from bequests, collectors, heir of artists, associations and enterprises.

The collection can also be increased through the effect of the works of art which the Gallery borrows from other museums for its temporary exhibitions.

Hence, both the works of art of the museum's collection and the works of art borrowed from other museums represent the total works of art of the Gallery in the present analysis as shown in the GAM model.

Due to the uncertain percentage of financial amounts addressed to the purchasing of new works of art, solely donations have been considered as a way of increasing the collection in the Gallery. Furthermore, the image of the Gallery has been chosen as a driver of the above mentioned donations.

However, only a part of the collection is open to the public while the other elements are preserved in storage in the Gallery and these pieces are used both for the rotation of the permanent collection, for temporary exhibitions as well as for the loans of works of art to other museums or foundations.

Accessioning is the formal, legal process of accepting an object into a museum collection. **Museum curators must follow certain criteria in order to formally include a work of art into the museum collection.**

As a matter of fact, according to the collecting policy for new acquisitions, only objects with certain characteristics and which follow specific scientific standards of quality can be accepted.

This rule is valid both in the case of the Gallery borrowing a work of art from another museum for its permanent or temporary exhibition and likewise when the Gallery lends a work of art to another museum.

Hence, before being accepted into the GAM, a strict evaluation is effectuated by the scientific board of the museum in terms of quality, conceptual coherence with the other works of art in the Gallery besides a technical evaluation of the accepted work of art.

In the same way, before loaning a work of art to another museum, the scientific board of the Gallery must evaluate:

- 1) the genre of the museum where the piece will be located;
- 2) the quality of its collections and the coherence between the works of art of the GAM and the exhibition itinerary of the other museum or foundation.

The Gallery puts a lot of attention into analysing the works of art acquired from other museums or foundation since these works of art affect the performance of the Gallery, creating a return on its image in terms of quality of the collection of the same museum.

Borrowing as well as **loaning works of art** are important instruments to improve the image of the Gallery and such processes are taken into account in the present research.

A museum's works of art, once accessioned into the collection, must be listed by means of inventory which is an important activity for the Gallery since it is a way of monitoring its own heritage and patrimony.

The **activities regarding the inventory process** consist of a description of all the technical and objective characteristics of the works of art in the museum's collection, the author, the title, the date of its creation, the origin of the piece as well as the processes concerning its preservation.

While the activity of inventory is mandatory, the catalogue of the works of art is not, however it is also an important instrument to improve the knowledge regarding the museum's collection towards the whole community.

The classification of a museum's collection, in fact, is an important activity which is valuable in its preservation and promotion.

After being registered, the works of art entering the museum, must be given an appropriate location, either in the storage or in the permanent collection.

The works of art exhibited in the permanent collection must be relevant to the mission of the Gallery and to its scope of collecting.

In the same way, the works of art located in the storage must be coherent with the permanent exposition of the Gallery.

Hence, both the works of art exhibited in the permanent collection of the Gallery and the works of art located in its storage have a great historical, cultural and artistic value and are of great importance to the museum investigated in the present research.

The pieces in storage in the Gallery, in fact, have the same identical scientific importance as the exhibited pieces, since they too belong to the collection, even though they are not visible.¹⁵¹

In the current analysis, the collection of works of art in the Gallery, will be defined as a **“museum collection”**, including both **the works of art of the permanent collection which are displayed in the Gallery and the works of art located in its storage.**

Hence:

Museum collection = works of art of the permanent collection + works of art located in the storage.

Borrowers and lenders are the key actors in the loaning process.

The Gallery is a borrower when it requests a piece on loan from another museum or foundation and when this loan is accepted.

¹⁵¹ For more information about the storage of the Gallery of Modern Art in Palermo, consult the following book: Mazzocca F, Purpura A., (2013), *La Galleria d'Arte Moderna di Palermo, Il Museo tra storia e costume- Opere dai depositi*, Silvana editoriale, Milano.

On the contrary, the Gallery is a lender when a loan is requested from another museum or foundation and when such loan is approved by the scientific board of the Gallery.

A scientific evaluation must be carried out by the scientific board of the Gallery before accepting the request of a loan.

More in detail, the Gallery should:

- 1) check the coherence and consistency between the Gallery, the work of art loaned and the subject or topic of the exhibition where the piece would be temporary located;
- 2) verify the institutional reputation of the museum to whom the piece should be loaned to
- 3) follow all the administrative procedures concerning the loans of works of art, the insurance, its conditions of transport and all the activities concerning its preservation.

Starting from the end-results, the related performance drivers and strategic resources must be identified, in order to build a dynamic performance management analysis of the Gallery, according to the instrumental view perspective.

The identification of the key performance drivers affecting museum's performance is necessary since they generate an impact on the end- results.

The performance drivers are usually defined as a ratio between the current state of the system and a benchmark, which have an effect on the performance of the analyzed system.

More in depth, the expected end-results must be underlined in order to apply the Dynamic Performance Management framework to analyse the performance management of the Gallery.

The analysis of the performance management of the Gallery according to the instrumental view of performance perspective is shown in the following figure:

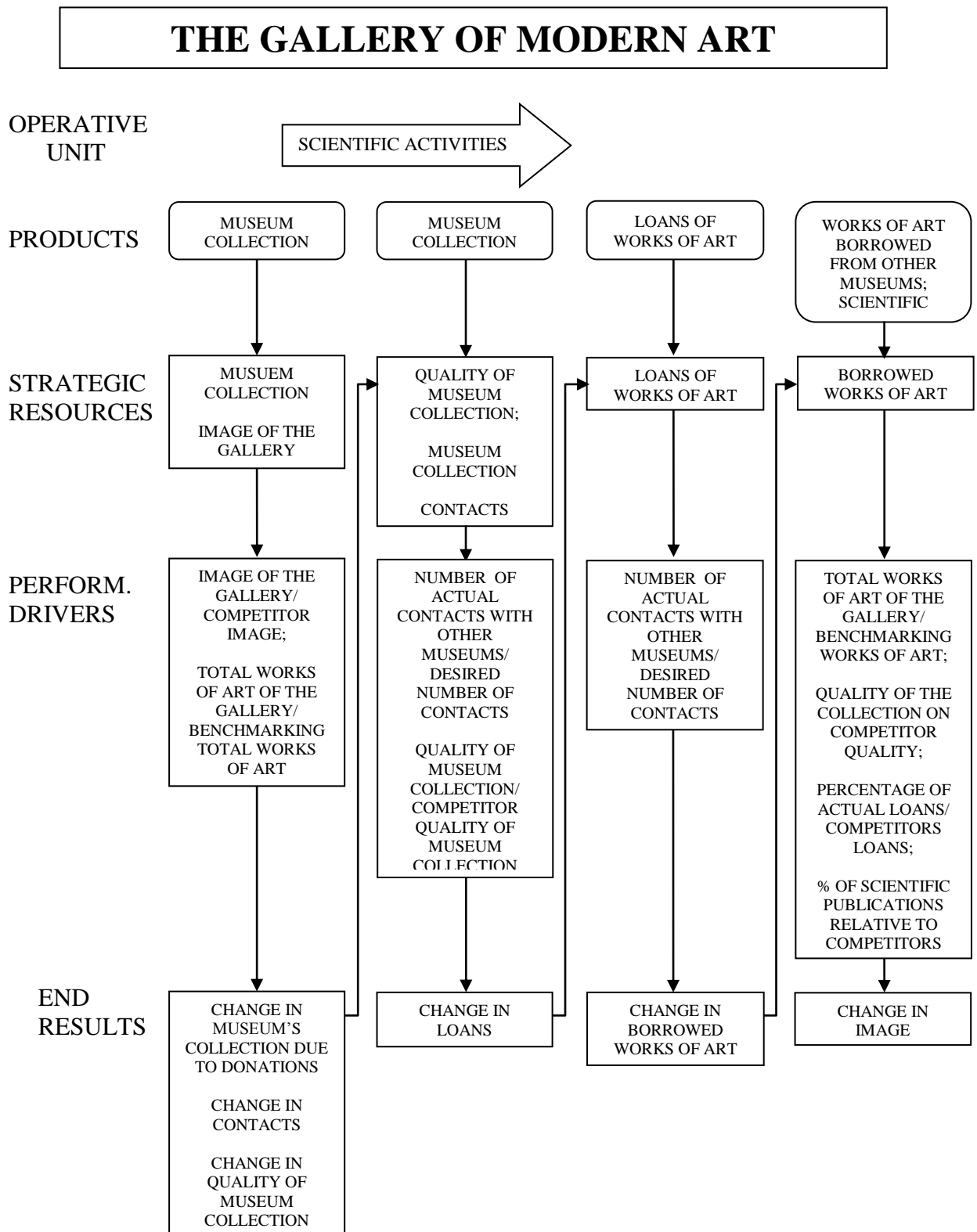


Figure n. 20 The instrumental view perspective applied to the analysis of the GAM

As it can be observed in the above figure, the **“business area” under investigation refers to the organisational unit concerning the “scientific museum activities”, since it represents the “core and institutional activity” of the Gallery.**

The **products** of the analysed business area have been identified as follows:

- 1) **museum’s collection**, which includes both the works of art displayed in the permanent collection of the Gallery and the works of art in its storage;
- 2) **loans of works of art** to other museums or foundations;
- 3) **works of art borrowed** by the Gallery from other museums or foundations;
- 4) **scientific publications** regarding the collection of works of art of the Gallery.

Initially, the end-results of the “scientific activities” of the analyzed organisational unit have been made explicit. Following this, the identification of the performance drivers which affect them has been carried out. Then, the strategic resources have been identified since their allocation allows decision makers to intervene on the identified performance drivers.

The **end- results** identified for the product **“museum collection”** are the following flows: **change in the museum collection deriving from donations, change in the number of contacts and change in quality of the museum collection.**

The above mentioned end- results are affected by the following **performance drivers** which are:

- 1) the ratio between the actual image of the Gallery on competitor image;
- 2) the ratio between the total works of art of the Gallery and the benchmarking total works of art.

The first performance driver identified is relevant to the present analysis, since it has been considered as a driver for donations or bequests from private collectors or donors.

Donations, in fact, have been considered the only means of increasing the museum collection of the Gallery, due to the lack of financial autonomy of the Gallery, which is a branch of the wider and more complex system of the Municipality of Palermo.

The other performance drivers are also significant, since they drive and affect the image of the Gallery as well as the quality of its collection.

The **total works of art of the Gallery** is determined by the importance of the works of art of the Gallery in terms of the artistic value of the artists' operas.

The **museum collection** and the **image of the Gallery** have been identified as main strategic resources of the "museum collection" product.

The other **end- result** identified for the same "**museum collection**" product is the flow labelled "**change in loans**" which is affected by two **performance indicators** which are:

- 1) the ratio between the actual number of contacts established with other museums on the desired number of contacts;
- 2) the ratio between the quality of the museum collection on competitor quality.

The quality of the analyzed museum collection depends on the importance of its works of art, in terms of number of relevant artists displayed in the Gallery.

The above mentioned drivers are important levels on which to intervene to increase the number of loans of the Gallery, increasing in this way the knowledge about its collection and, consequently, its image.

The **museum collection** (including both the works of art in the storage of the Gallery and the works of art exhibited in its permanent exposition), **the quality of the museum collection and the number of contacts** established between the Gallery and other museums or foundations have been identified as main **strategic resources** of the above mentioned product called "museum collection".

The same kind of approach has been applied for the “loans of works of art” product. The end-result identified is the flow labelled “**change in borrowed works of art**” which is affected by the performance drivers identified as a ratio between number of actual contacts with other museums and the desired number of contacts with other museums in terms of partnership and collaboration between the Gallery and other museums or foundations.

The main **strategic resources** connected to the “**product loans of works of art**” are the following:

- 1) **loans of works of art;**
- 2) **contacts.**

Finally, the other **end- result** identified in the current analysis of the Gallery, is the “**change in image**” which is affected by four **performance drivers which** are the following:

- 1) **the ratio between the total works of art in the Gallery and the benchmark total works of art;**
- 2) **the ratio between the quality of the collection in the Gallery and the competitor quality;**
- 3) **the ratio between the percentage of actual loans in the Gallery and the percentage of relative loans of competitors;**
- 4) **the percentage of scientific publications relative to competitors.**

The above mentioned drivers are key elements since they are closely connected to the image of the Gallery.

The total works of art of the Gallery compared to the total works of art of another competitor museum is particularly important since it drives the perception of the image of the Gallery towards the whole community of stakeholders.

The quality of the collection of the Gallery is another relevant driver since it affects not only the image of the Gallery but also the works of art loaned to other museum.

Furthermore, the percentage of actual loans of the Gallery compared to another competitor museum is also an essential performance indicator affecting the image of the Gallery. In fact, the higher the number of the loans of works of art, the better the image of the Gallery, since the works of art loaned to other museums are a means of further improving the knowledge concerning the collection of the Gallery, and consequently bettering its image.

Finally, the percentage of scientific publications compared to other competitors is another important driver affecting museum performance, since it affects the image of the Gallery. As a matter of fact, scientific publications concerning the works of art of the Gallery are important strategic resources since they increase the knowledge of the collection of the Gallery, improving in this way its portrayal.

Hence, the main **strategic resources** connected to the “**works of art borrowed from other museums**” and “**scientific publications**” **products** are the **works of art which the Gallery borrows from other museums for its exposition as well as scientific publications regarding the Gallery.**

The above explained analysis has shown how the end- results affect the strategic resources concerning the different products of the same “business area” defined as “scientific activities”.

An analysis of the main cause and effect relationship will be explained in the following paragraph in order to depict a clear picture of the main feed-back connections, among the principle variables characterizing the institutional activities of the Gallery.

4.3.1 The GAM model

Based on the dynamic performance management system which has been applied to the institutional activities of the Gallery, the resulting model shows the main cause and effect relationship describing the functioning of the institutional activities of the Gallery.

There is a growing awareness that it is not exclusively the collection, but also the body of a museum which have an effect on its image and nonetheless on the quality of its services.

However, the image of a medium sized museum such the Gallery of Modern Art in Palermo, is also affected by its policies regarding the loans of works of art to other museums or foundations, by the works of art which the Gallery borrows from other museums as well as by the scientific publications regarding the works of art of the Gallery which represent a means of improving the knowledge regarding its cultural and artistic patrimony.

Throughout the analysis of the Gallery, back-office and front-office activities are of great importance in the implementation of its institutional activities. Both of them generate a positive impact on the image of the analyzed museum.

The following qualitative model of the GAM shows the interrelationship among the main variables affecting museums performance, taking into consideration not only the museum collection but also the policies concerning the loans of works of art and their impact on the image of the Gallery as well as the impact of scientific publications on the image of the Gallery.

More in particular, the causal loop diagram described below, shows the effect of the museum collection, of the loans of works of art and of the works of art borrowed from other museums on the image of the Gallery of Modern Art of Palermo, likewise

the existing relationship between the scientific publications of the Gallery and its image.

In turn, the correlation between the image of the Gallery and the number of donations of works of art to the Gallery will be shown.

According to the dynamic performance management perspective, **museum collections, loans and borrowed works of art** are considered the **main strategic resources affecting the performance of the analyzed system besides the scientific publications carried out by the Gallery.**

The museum collection of the Gallery includes works of art in the permanent collection as well as the works of art in the storage. Both of them, in fact, can be given in loan to other museums and are a way of increasing awareness of the Gallery and its collection.

The following figure shows a picture of the main cause and effect relationship resulting from the introduction of a Dynamic Performance Management system in analysing the main institutional activities of the Gallery.

More in particular, the model below illustrates the feedback system describing the performance of the Gallery of Modern Art in Palermo as well as the interrelationships, the non-linearity and the delays among the main variables affecting the institutional activities of the Gallery.

Each loop will be described in detail in order to give a clear and understandable picture of the analyzed museum and to capture the complexity of its dynamics.

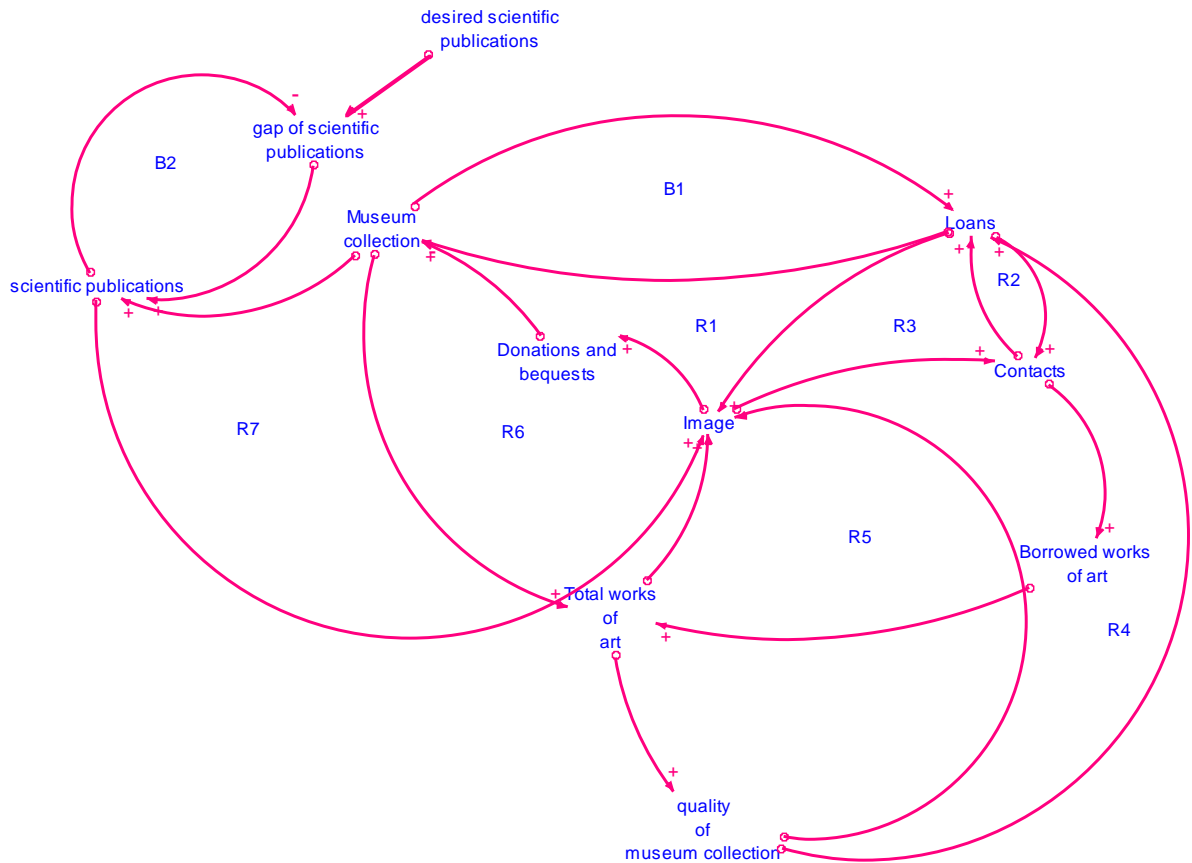


Figure n. 21 The causal-loop diagram of the main institutional activities of the GAM

The causal loop diagram consists of seven reinforcing loops and two balancing loops.

The first reinforcing loop (R1) shows how an increase in the museum collection of the Gallery may determine an increase in loans of works of art to other museums or foundations for their exhibitions.

The more the loans of works of art, the higher the possibility of increasing the number of contacts with other museums is, in terms of partnership. As a matter of fact, the more contacts the Gallery tries to create, the higher the possibility of the

works of art being borrowed from other museums, since an existing partnership between the Gallery and other museums facilitates, in a certain way, the borrowing of works of art of the Gallery.

The higher the number of the works of art borrowed from other museums, the more the total works of art of the Gallery is. An increase in terms of works of art of the analyzed museum, would determine an increase in the image of the Gallery.

An increase in the image of the museum, may determine an increase in donations and bequests, with a consequent increase in the acquisitions of works of art of the Gallery. More acquisitions of artwork would further increase the museum collection of the Gallery, closing in this way the main positive loop.

As previously explained, the museum collection of the Gallery includes both the works of art in storage and the works of art displayed in the permanent collection of the same museum.

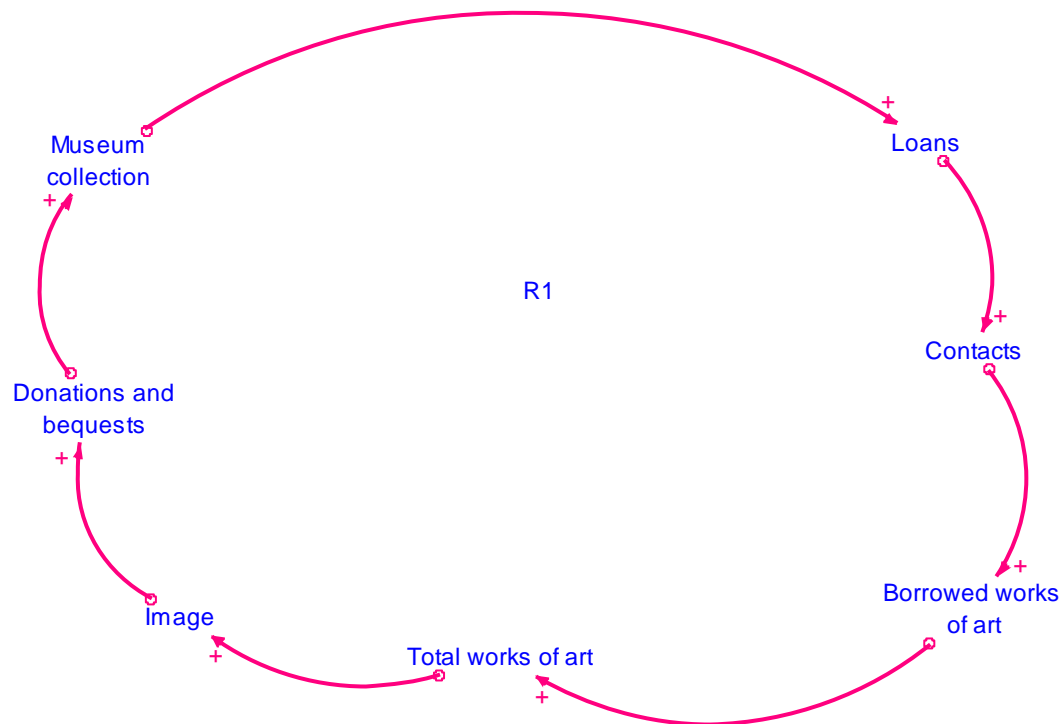


Figure n. 22 The reinforcing loop R1 of the GAM model

The second reinforcing loop (R2), shows the positive relationship between the loans of works of art and the number of contacts. In fact, the higher the number of works of art loaned, the more partnership the Gallery creates with other museums or foundations. In the same way, an increase in contacts with other museums would determine a further increase in loans requested by other museums or foundations to the Gallery.

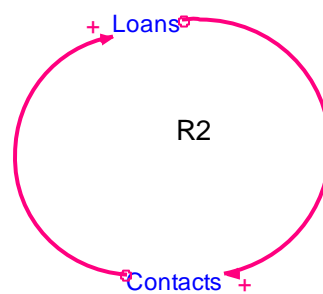


Figure n. 23 The reinforcing loop R2 of the GAM model

The third reinforcing loop (R3) displays how an improvement in the image of the Gallery would determine an increase in the number of contacts which the Gallery would be able to establish. The more contacts the Gallery tries to create, the higher the possibility of the number of works of art loaned to other museums or foundations, closing in this way the third reinforcing loop.

More loans would lead to an improvement of the Gallery's image. As a matter of fact, before loaning a work of art to another museum, the Gallery follows some strict scientific parameters defined by the management of the museum.

This evaluation ensures the quality of the loans of work of art of the Gallery with a consequent return in terms of improvement of its image.

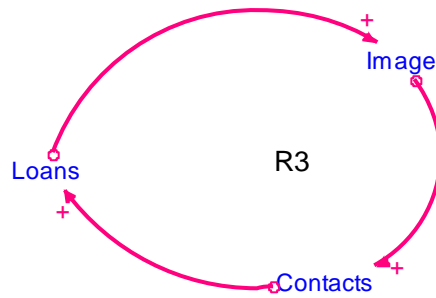


Figure n. 24 The reinforcing loop R3 of the GAM model

The fourth reinforcing loop (R4) is extremely connected with the quality of the museum collection. The higher the number of works of art loaned, the greater the possibility would be of creating partnerships and establishing contacts with other museums or foundations.

The more the contacts, the higher the possibility of borrowing works of art from other museums would be, based on an existing relationship between the Gallery and other museums. The higher the number of works of art borrowed from other museums or foundations, the greater the total number of works of art of the Gallery could be.

The total number of works of art, in fact, is determined by:

- 1) the museum collection (which includes the works of art displayed in the permanent collection as well as the works of art located in the storage);
- 2) the works of art borrowed from other museums.

The greater the total number of works of art, the higher the quality of the museum collection would be, since it would be enriched and developed by new artists and important new artworks. An increase in terms of quality of the museum collection, in turn, would determine an increase in loans, closing in this way the reinforcing loop.

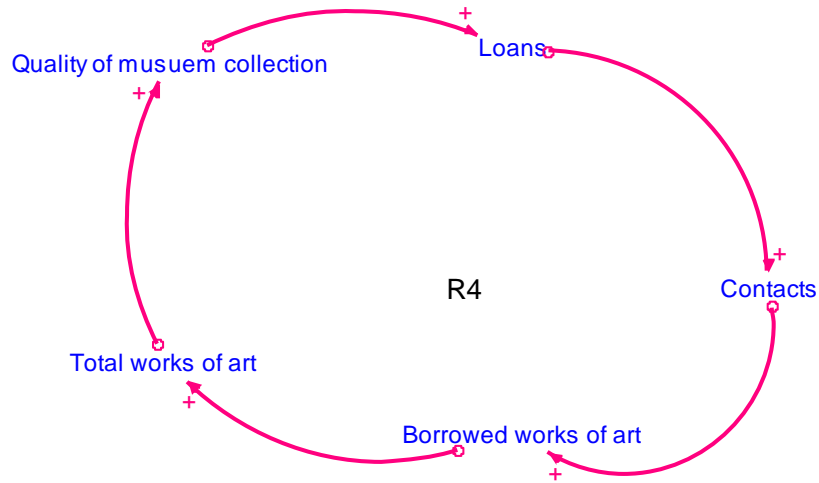


Figure n. 25 The reinforcing loop R4 of the GAM

The fifth loop (R5) is mainly based on the relationship between the works of art of the Gallery and the image of the same museum. The better the image of the Gallery, the easier it would be to establish contacts and to create partnerships with other museums. The more contacts the Gallery is able to activate, the higher the probability to borrow a piece from another museum would be, increasing in this way the total number of works of art within the Gallery. An increase in terms of the number of total works of art of the Gallery, in turn, would lead to an increase in the image of the Gallery, since new authors would be displayed in its museum collection.

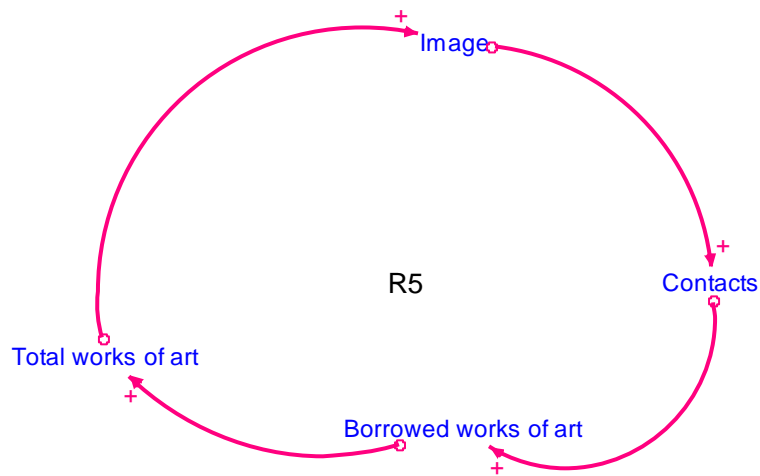


Figure n. 26 The reinforcing loop R5 of the GAM model

The sixth reinforcing loop (R6) shows how an improvement of the image of the Gallery would lead to an increase in the donations as well as bequests, which would increase the museum collection, improving in this way its image.

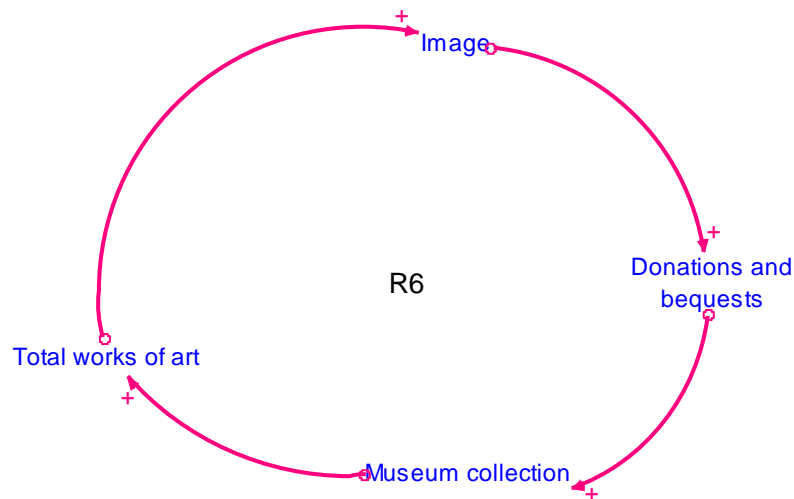


Figure n. 27 The reinforcing loop R6 of the GAM

The seventh reinforcing loop (R7), illustrates the effect of the scientific publications on the image of the Gallery and, consequently, the effect on the museum collection. The larger the museum collection, in fact, the higher the number of scientific publications regarding the works of art of the Gallery would be, both in terms of the artwork displayed in the permanent collection and in terms of the number of works of art located in the storage of the museum.

The scientific publications, in fact, are a way of enriching the awareness of the Gallery's museum collection. An increase in terms of scientific publications, would lead to an increase in the image of the Gallery, with a consequent increase in donations and bequests, which would further increase the museum collection of the Gallery.

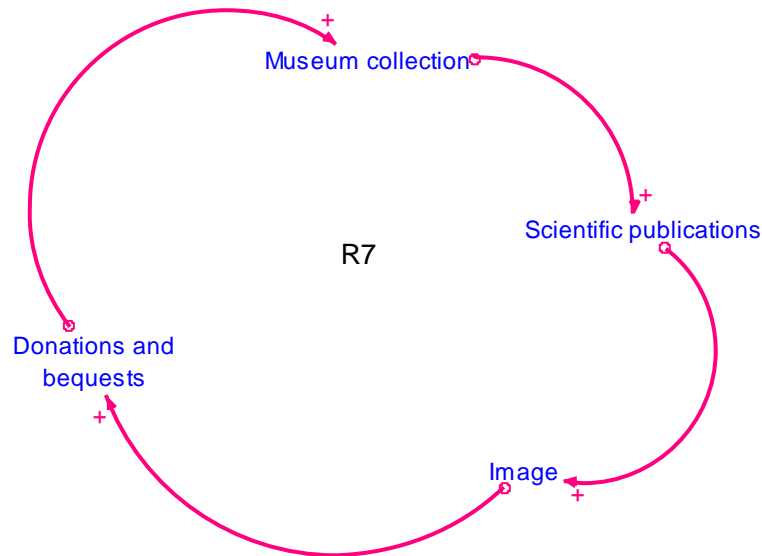


Figure n. 28 The reinforcing loop R7 of the GAM model

The first balancing loop (B1) shows that an increase in the museum collection would lead to an increase in the number of works of art loaned to other museums or foundations. This may decrease the museum collection, closing in this way the negative loop.

This mechanism represents a limit to growth since it would be impossible to loan all the works of art in the Gallery.

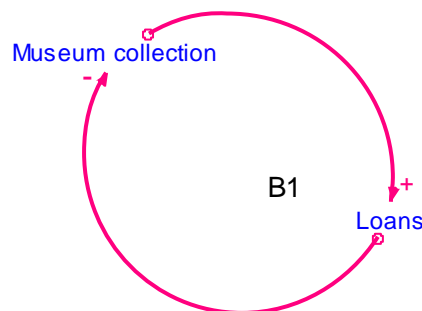


Figure n.29 The balancing loop B1 of the GAM model

The second balancing loop (B2) shows that an increase in scientific publications would decrease the gap between the actual and the desired number of publications. The larger the gap, the higher the number of scientific publications concerning the collection of the Gallery would be.

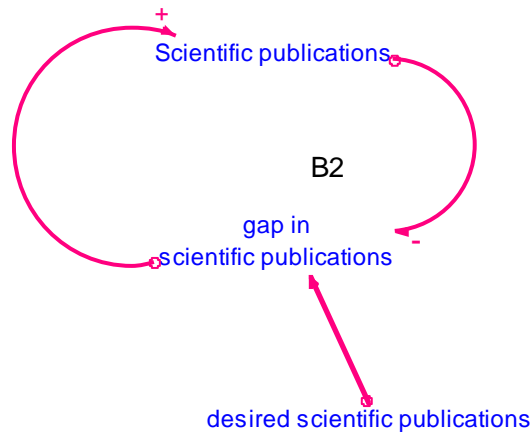


Figure n. 30 The balancing loop B2 of the GAM model

The following stock and flow map clearly highlights those drivers affecting the performance of the Gallery and the areas on which to act in order to improve its performance, according to a dynamic performance management perspective.

In particular, the following picture shows the main feedback relationship among the main variables characterizing the organisational unit regarding the scientific activities of the Gallery.

More in depth, the following aspects have been identified:

- 1) the process of accumulation and depletion of the more relevant strategic resources of the “business area” concerning the scientific activities of the Gallery;
- 2) those performance drivers which have an influence on the end-results of the systems, identified as a ratio between the actual state of the system and the desired one, based on a benchmark value.

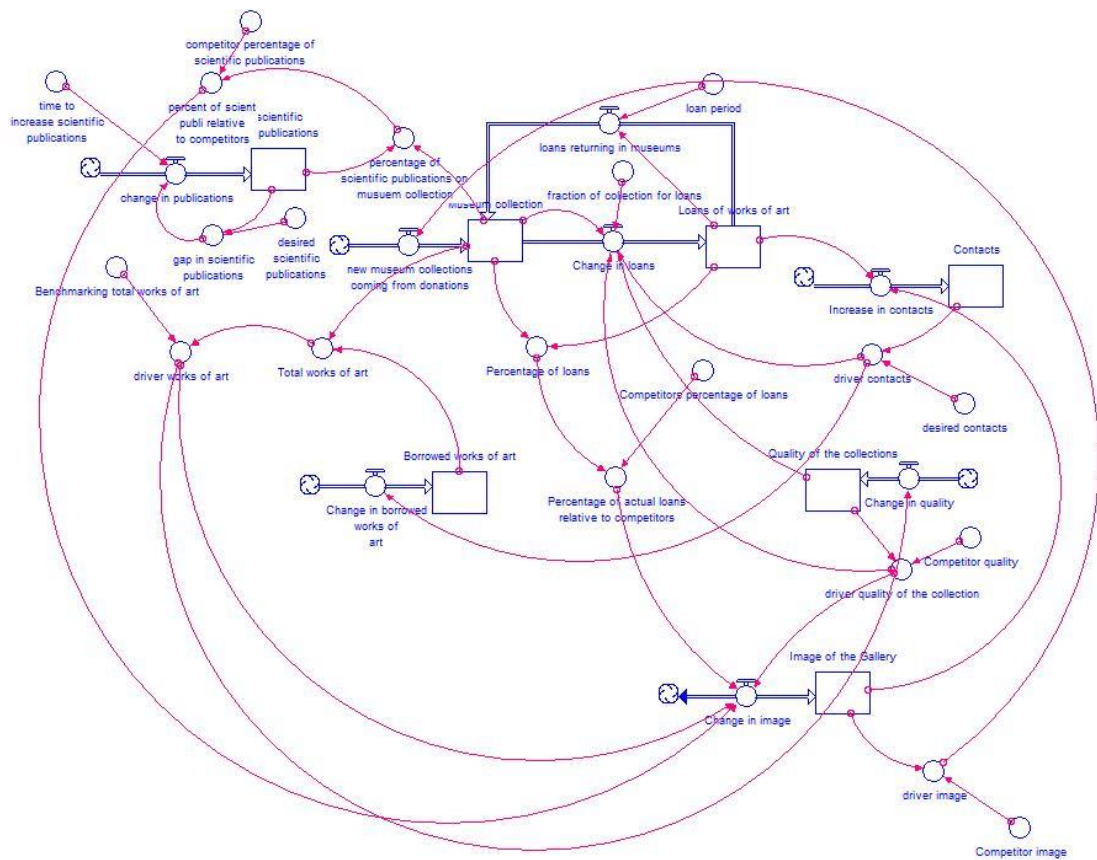


Figure n.31 The stock and flow map showing the GAM Model according to the “instrumental view” of performance

The period from 2012 to 2014 has been taken into account in the analysis of the investigated museum.

Nowadays the number of works of art in the permanent collection is 215, while the number of works of art in storage amounts to 1150.

There have been no donations in the year 2012, while one piece was donated in 2013 and 2 works of art have been donated in 2014.

As far as the number of works of art loaned to other museums are concerned, 16 pieces were loaned in 2012 alone, 45 were loaned in 2013 and 19 in 2014 with the total number of loans rising to 80.

In conclusion, 9 works of art were borrowed from other museums in the period from 2012 to 2014.

Based on the data collected during the current analysis, a simulation has been undertaken in order to show the behaviour of the main strategic resources of the analyzed system.

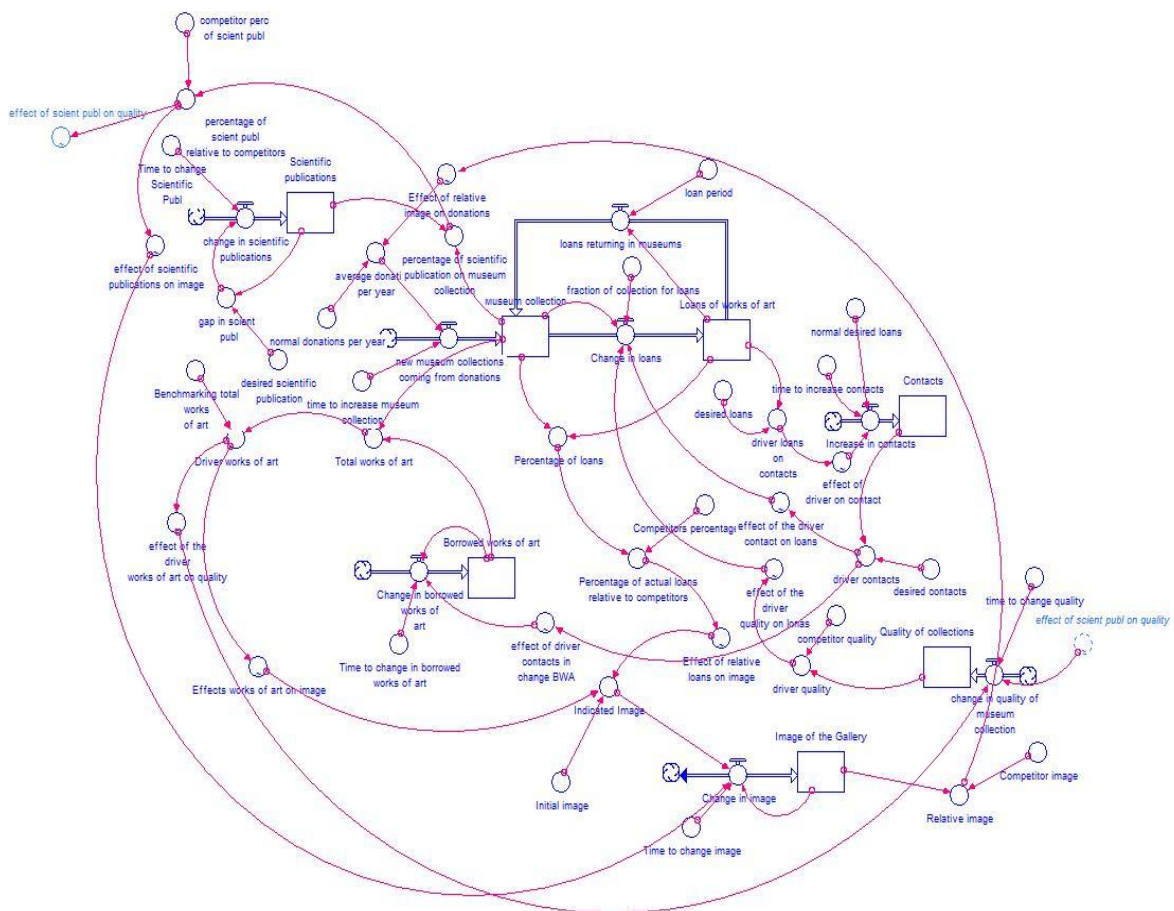


Figure n. 32 The SD GAM Model

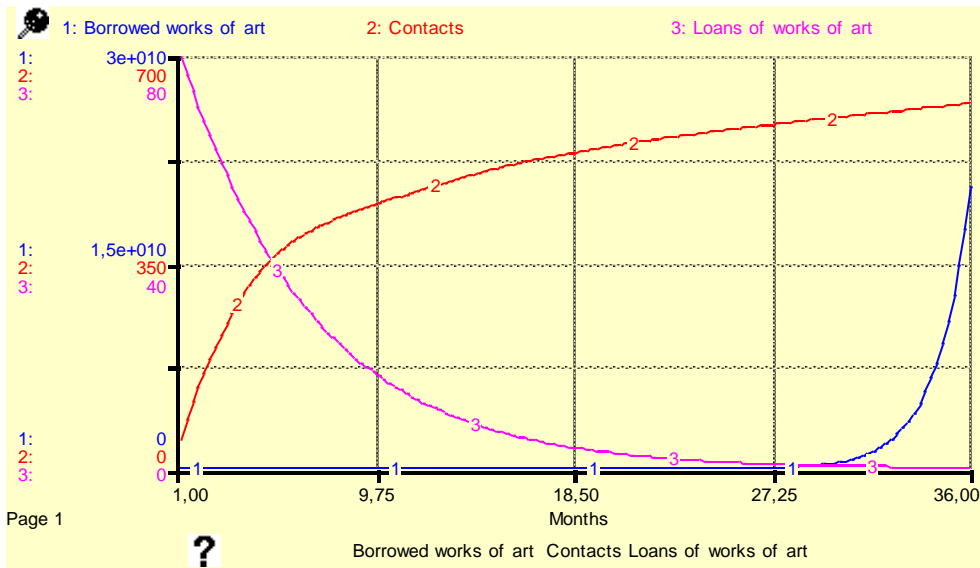


Figure n. 33 Behaviour of Borrowed works of art, Contacts and Loans of works of art

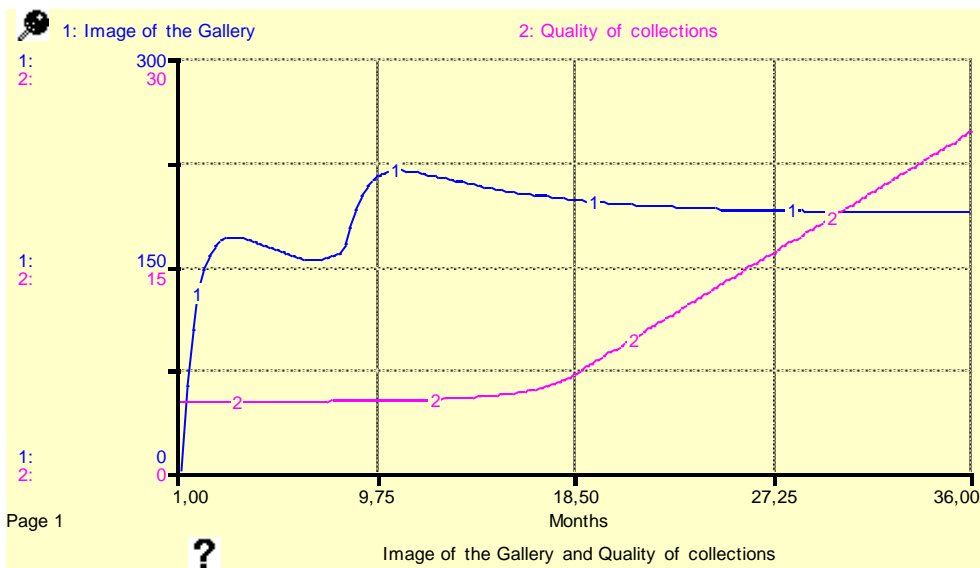


Figure n. 34 Behaviour of Image of the Gallery and Quality of collections

CHAPTER FIVE

CONCLUSION EXPLANATIONS

5.1 Conclusions, limitations of the study and further research

The present research has shown how useful the application of the Dynamic Performance management approach is in the analysis of a museum's performance.

In the investigation of the Gallery of Modern Art in Palermo, which has been chosen as a representative case study of the current empirical research, the main feedback relationships among the relevant strategic resources, end-results and performance drivers of the institutional activities of the Gallery, have been identified.

The analysis has shown the importance of performance drivers which are vital levels on which to intervene in order to affect a museum's performance.

The "business area" concerning the scientific activities of the Gallery has been chosen as an organisational unit to be investigated.

However, the present research does not consider the financial aspects of the investigated museum. According to the analysis carried out, the museum collection is increased only by donations or bequests, without considering the purchase of new works of art on behalf of the museum. Therefore, identifying the percentage of financial resources to acquire new works of art would have been complex in this phase of the current analysis, considering the lack of financial autonomy of the Gallery.

A suggestion for further research could be the investigation of the financial aspects related to the Gallery in order to investigate the museum through a wider perspective.

Another limitation, could be related to the works of art to be restored. The only outflow of the museum's collection considered in the present analysis concerns the loans of works of art to other museums or foundations, without considering the outflow related to the works of art to be restored. This stock would have been of great importance in the analysis of the performance of the Gallery, since the works of art restored enrich the cultural and artistic heritage of the Gallery.

Furthermore, although a deep analysis of the scientific activities of the Gallery has been undergone, the research has not given sufficient emphasis on the "added services" also called "collateral activities" such as temporary exhibitions and events which are means of influencing visitor satisfaction and of attracting more visitors.

This type of analysis would have considered other aspects such as visitors perceptions, expected quality of the services, possibly more related to the marketing rather than the performance management perspective.

The above mentioned limitations could be a suggestion for further researches in the interesting and complex system of the cultural field.

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RELEVANT LEGISLATION

Comune di Palermo, Settore Cultura, Servizio Musei e Spazi espositivi, Capitolato d'Oneri sulla "Concessione dei servizi museali integrati – Biglietteria, Servizi informativi, Prenotazione e Prevendita – Progettazione e Organizzazione di mostre ed eventi culturali – Bookshop – Bar . Caffetteria- Ristorazione – Didattica nonché supporto funzionale/ scientifico – Servizi educativi e diffusione culturale presso la Galleria Arte Moderna per il quadriennio 2014/2018".

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APPENDIX

List of equations

$$\text{Borrowed_works_of_art}(t) = \text{Borrowed_works_of_art}(t - dt) + (\text{Change_in_borrowed_works_of_art}) * dt$$

$$\text{INIT Borrowed_works_of_art} = 9$$

INFLOWS:

$$\text{Change_in_borrowed_works_of_art} =$$

$$\text{Borrowed_works_of_art}/\text{Time_to_change_in_borrowed_works_of_art} * \text{effect_of_driver_contacts_in_change_BWA}$$

$$\text{Contacts}(t) = \text{Contacts}(t - dt) + (\text{Increase_in_contacts}) * dt$$

$$\text{INIT Contacts} = 50$$

INFLOWS:

$$\text{Increase_in_contacts} =$$

$$(\text{effect_of_driver_on_contact} * \text{normal_desired_loans}) / \text{time_to_increase_contacts}$$

$$\text{Image_of_the_Gallery}(t) = \text{Image_of_the_Gallery}(t - dt) + (\text{Change_in_image}) * dt$$

$$\text{INIT Image_of_the_Gallery} = 1$$

INFLOWS:

$$\text{Change_in_image} = ((\text{Indicated_Image} -$$

$$\text{Image_of_the_Gallery}) * \text{effect_of_scientific_publications_on_image}) / \text{Time_to_change_image}$$

$$\text{Loans_of_works_of_art}(t) = \text{Loans_of_works_of_art}(t - dt) + (\text{Change_in_loans} - \text{loans_returning_in_museums}) * dt$$

$$\text{INIT Loans_of_works_of_art} = 80$$

INFLOWS:

$$\text{Change_in_loans} =$$

$$\text{Museum_collection} / \text{fraction_of_collection_for_loans} * \text{effect_of_the_driver_contact_on_loans} * \text{effect_of_the_driver_quality_on_loans}$$

OUTFLOWS:

$$\text{loans_returning_in_museums} = \text{Loans_of_works_of_art} / \text{loan_period}$$

$$\text{Museum_collection}(t) = \text{Museum_collection}(t - dt) + (\text{loans_returning_in_museums} + \text{new_museum_collections_coming_from_donations} - \text{Change_in_loans}) * dt$$

$$\text{INIT Museum_collection} = 1365$$

INFLOWS:

$$\text{loans_returning_in_museums} = \text{Loans_of_works_of_art} / \text{loan_period}$$

$$\text{new_museum_collections_coming_from_donations} =$$

$$\text{average_donations_per_year} / \text{time_to_increase_museum_collection}$$

OUTFLOWS:

$$\text{Change_in_loans} =$$

$$\text{Museum_collection} / \text{fraction_of_collection_for_loans} * \text{effect_of_the_driver_contact_on_loans} * \text{effect_of_the_driver_quality_on_loans}$$

$$\text{Quality_of_collections}(t) = \text{Quality_of_collections}(t - dt) +$$

$$(\text{change_in_quality_of_museum_collection}) * dt$$

$$\text{INIT Quality_of_collections} = 5$$

INFLOWS:

change_in_quality_of_museum_collection =
(effect_of_the_driver_works_of_art_on_quality*effect_of_scient_publ_on_quality
) / time_to_change_quality
Scientific_publications(t) = Scientific_publications(t - dt) +
(change_in_scientific_publications) * dt
INIT Scientific_publications = 3

INFLOWS:

change_in_scientific_publications =
gap_in_scient_publ / Time_to_change_Scientific_Publ
average_donations_per_year =
normal_donations_per_year * Effect_of_relative_image_on_donations
Benchmarking_total_works_of_art = 2000
Competitors_percentage_of_loans = 1
Competitor_image = 0.9
competitor_perc_of_scient_publ = 0.006
competitor_quality = 8
desired_contacts = 100
desired_loans = 100
desired_scientific_publication = 6
driver_contacts = Contacts / desired_contacts
driver_loans_on_contacts = Loans_of_works_of_art / desired_loans
driver_quality = Quality_of_collections / competitor_quality
Driver_works_of_art = Total_works_of_art / Benchmarking_total_works_of_art
fraction_of_collection_for_loans = 2.5
gap_in_scient_publ = Scientific_publications - desired_scientific_publication
Indicated_Image =
Effect_of_relative_loans_on_image * Effects_works_of_art_on_image * Initial_image
Initial_image = 1
loan_period = 6
normal_desired_loans = 30
normal_donations_per_year = 1/12
Percentage_of_actual_loans_relative_to_competitors =
Percentage_of_loans / Competitors_percentage_of_loans
Percentage_of_loans = Loans_of_works_of_art / Museum_collection
percentage_of_scientific_publication_on_museum_collection =
Scientific_publications / Museum_collection
percentage_of_scient_publ_relative_to_competitors =
percentage_of_scientific_publication_on_museum_collection / competitor_perc_of_scient_publ
Relative_image = Image_of_the_Gallery / Competitor_image
Time_to_change_image = 12
Time_to_change_in_borrowed_works_of_art = 6
time_to_change_quality = 12
Time_to_change_Scientific_Publ = 12
time_to_increase_contacts = 12
time_to_increase_museum_collection = 12
Total_works_of_art = Borrowed_works_of_art + Museum_collection
Effects_works_of_art_on_image = GRAPH(Driver_works_of_art)

(0.00, 1.00), (0.1, 11.0), (0.2, 16.5), (0.3, 24.0), (0.4, 30.5), (0.5, 38.0), (0.6, 45.0), (0.7, 53.0), (0.8, 57.0), (0.9, 64.5), (1, 94.0)

effect_of_driver_contacts_in_change_BWA = GRAPH(driver_contacts)
(0.00, 3.00), (10.0, 5.00), (20.0, 10.0), (30.0, 14.0), (40.0, 23.0), (50.0, 32.5), (60.0, 37.0), (70.0, 54.5), (80.0, 71.5), (90.0, 85.5), (100, 93.5)

Effect_of_relative_image_on_donations = GRAPH(Relative_image)
(0.00, 0.00), (0.05, 0.213), (0.1, 0.4), (0.15, 0.463), (0.2, 0.5), (0.25, 0.375), (0.3, 0.5), (0.35, 0.663), (0.4, 0.775), (0.45, 0.925), (0.5, 1.04), (0.55, 1.85), (0.6, 2.15), (0.65, 1.60), (0.7, 1.70), (0.75, 1.90), (0.8, 2.00), (0.85, 2.10), (0.9, 2.20), (0.95, 2.30), (1.00, 2.50)

Effect_of_relative_loans_on_image =
GRAPH(Percentage_of_actual_loans_relative_to_competitors)
(0.00, 2.00), (0.1, 5.00), (0.2, 15.0), (0.3, 23.5), (0.4, 35.5), (0.5, 44.0), (0.6, 49.0), (0.7, 52.5), (0.8, 60.0), (0.9, 68.5), (1, 96.0)

effect_of_scientific_publications_on_image =
GRAPH(percentage_of_scient_public_relative_to_competitors)
(0.00, 0.00), (0.1, 0.00), (0.2, 0.00), (0.3, 0.00), (0.4, 23.0), (0.5, 30.0), (0.6, 39.5), (0.7, 49.5), (0.8, 56.5), (0.9, 63.0), (1, 85.5)

effect_of_scient_public_on_quality =
GRAPH(percentage_of_scient_public_relative_to_competitors)
(0.00, 0.00), (10.0, 4.00), (20.0, 7.00), (30.0, 12.5), (40.0, 19.5), (50.0, 28.5), (60.0, 34.5), (70.0, 42.5), (80.0, 49.5), (90.0, 80.5), (100, 89.5)

effect_of_the_driver_contact_on_loans = GRAPH(driver_contacts)
(0.00, 0.00), (0.1, 0.00), (0.2, 0.00), (0.3, 10.5), (0.4, 14.0), (0.5, 16.0), (0.6, 24.0), (0.7, 33.0), (0.8, 49.0), (0.9, 60.0), (1, 75.5)

effect_of_the_driver_quality_on_loans = GRAPH(driver_quality)
(0.00, 0.00), (10.0, 0.00), (20.0, 0.00), (30.0, 10.5), (40.0, 12.5), (50.0, 24.5), (60.0, 31.5), (70.0, 38.5), (80.0, 56.5), (90.0, 61.5), (100, 77.0)

effect_of_the_driver_works_of_art_on_quality = GRAPH(Driver_works_of_art)
(0.00, 0.5), (10.0, 12.5), (20.0, 17.0), (30.0, 20.5), (40.0, 30.0), (50.0, 34.5), (60.0, 39.0), (70.0, 47.5), (80.0, 54.5), (90.0, 62.0), (100, 87.0)

effect_of_driver_on_contact = GRAPH(driver_loans_on_contacts)
(0.00, 1.50), (0.1, 4.50), (0.2, 5.00), (0.3, 8.00), (0.4, 13.0), (0.5, 23.0), (0.6, 31.5), (0.7, 37.0), (0.8, 53.0), (0.9, 65.0), (1, 94.5)