

## Architecture of the Museum as the Symbol of the Third Millennium

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**Abstract:** Undoubtedly, as a cultural institution, the museum has to exist in any society. The culture of society is a very general notion and includes all values and spiritual achievement of the people of that society. Thus the culture is the heritage of any nation that has been adopted from the precedent people, has undergone some changes and has transferred to the next generations. Many critics believe that the museum is a symbol of the contemporary architecture and it has the most important role in making the public people familiar with their culture and making them attracted to the art of architecture. This role used to be played by the skyscrapers at the beginning of the 20<sup>th</sup> century. But nowadays the extremist thoughts and excitations of heightening have vanished and the governments, intellectuals and people pay attention to the art and culture spaces more than any other buildings. Accordingly, the architecture of such spaces are more connected to the lives of the public rather than any other land uses, and they have managed to attract the attention of the people to the art of the architecture. As a result of all these changes, the architecture of the museum is now recognized as the symbol of the third millennium.

**Keywords:** Architecture, Museum, Site

### 1. Introduction

Clearly we have note that the building of the museum roots in several origins each of which has a different history including the treasures room, works of art and antiques exhibitions, natural history collections, photo gallery, archeology garden, state museums, science museums, social museums, etc. moreover, we have to know that the contemporary museums move simultaneously toward two opposite directions. On one hand, there are huge cultural collections that are a very important part of the museum and exhibition spaces. On the other hand there are some small private museums that focus on an especial subject and they get increasingly more common and attract more popularity. It seems that such museums focus merely on a specific artist or specific subject such as the archeology, industry, etc. or on specific dimensions of the contemporary culture such as the cinema, industrial planning, psychology, female artists, childhood etc. Thus

we observe the simultaneous evolution of two different trends: multi-purpose museums and professional museums. There is no doubt that the museums have become more complicated during the past few decades. Although one would expect that the museums of the 19<sup>th</sup> century act merely as a place for exhibiting the works of art, but the museums of the 21<sup>st</sup> century has to play several roles. Nowadays, the museums require a considerable space for the storing, maintaining and restoring their materials apart from their needed space for exhibiting their works of art. Besides, the increasing number of the visitors of the cultural buildings that are considered as the centers for the activity and consumption of the cultural commodities, the museums require additional spaces for shops, restaurants, amphitheater, and some spaces for the temporal fairs. Additionally, the complexity of administration of such institutes make the planners assign a considerable part of the building to the administrative departments.

## 2. Museum by definition

The International Council of Museums (ICOM) defines a *museum* as follows:

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.

Article 2 of the 46-154 Code (adopted in June 13<sup>th</sup> 1945) asserts that “a museum is any collection that has some valuable art, historic and archeological works which are permanently exhibited to the public”. The museums are generally classified in the following groups:

- Museums of the works of art
- Historical museums
- Scientific museums
- Professional museums

### 2.1. The history of the institutionalization of the museums

Some events made considerable effects on the political, economic and social settings of the west including the openness of the private collections to the public (17<sup>th</sup> and 18<sup>th</sup> centuries), renaissance and then the industrial evolution in England and the Western Europe (1750-1850). Accordingly, the people felt that they have to benefit from the social advantages equally. Thus in the mentioned period of time, some private collections were open to the public under the name of the museum. In 1683, in the Luxembourg Palace of Paris, a part of the industrial collection got exhibited to the public, and the Louvre Museum of Art was inaugurated at the first year of the Great French Revolution. The 19<sup>th</sup> and 20<sup>th</sup> centuries were the period of great and fundamental changes in terms of

welcoming different museum worldwide by the public people. The development of the museums made it necessary to employ more professional staff. Considering the attention of the people to the museums and making them benefitted from the different advantages of the museums, the cooperation of the professional staff changed to be more scientific and thus the training was recognized as a most important function of the museums. These activities made the museums richer and more professional with regard to their art, cultural and educational dimensions. The mentioned welcomes got so wide that the museums of the time felt obliged to plan their activities in line with the wants of the people. Accordingly, some professional museums such as the museum of the glasses, textiles, carpets, musical instruments, and biographies of the great writers and artists were born. After the World War II (1939-1945), the social, cultural, economic and political changes of the Western Europe changed the appearance of the museums. In this period of time, the museums recognized their cultural roles and so they began to conduct the trainings of the communication era in order to provide more educational services and to promote the culture and hence they planned new programs. These programs are now called the “practicality of the museums” in which the authorities of the museums move toward their audiences. The main tools for such practically are mainly the mass media such as the newspapers, radio, TV, cinema, and movies.

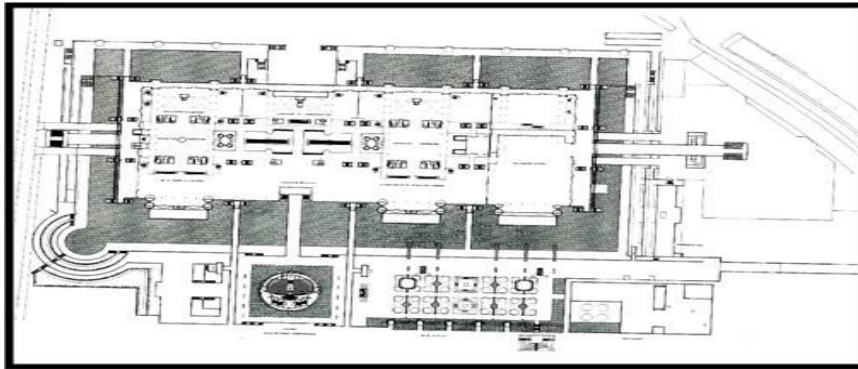
### 2.2. Samples of the important museums of the world

#### 2.2.1. National Museum of Science, Technology and Industry of Paris; 1980-1986

This museum has been planned by the winners of 1980 planning competitions. The National Museum of Science, Technology and Industry is a part of De La Villette Park in Paris which has been designed for promoting culture and

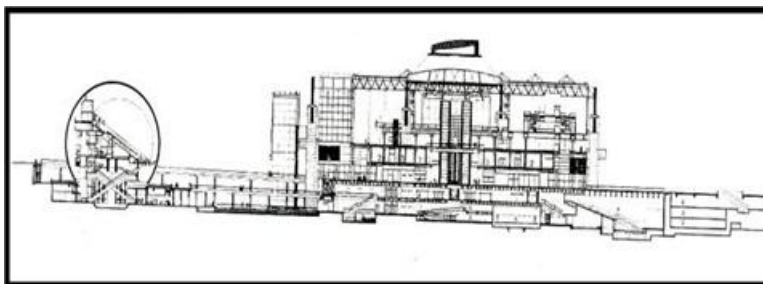
recreational activities and nowadays plays a very important role in the Paris culture. Following the arrangements and designs of Bernard Tschumi, this park has some gardens

and decorations. Moreover, it has a huge hall belonging to the 19<sup>th</sup> century and it is used for exhibitions and conferences.

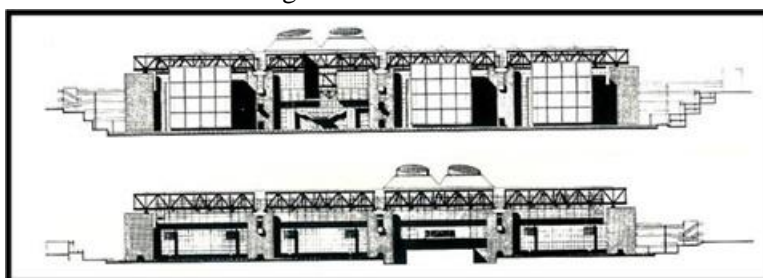


**Fig. 1.** National Museum of Science, Technology and Industry of Paris; 1980-1986

In this complex, there are modern buildings that are assigned for the culture and music such as the Music Center and Le Zenith. Besides, in this complex there is a modern museum and La Geode that is a theatre being designed by von Zilber in 1985. The site of the museum was originally a slaughterhouse that was later destroyed and built using armed cement. In this process, the shops and slaughterhouse were moved somewhere outside Paris. Indeed a part of De La Villete designing competition was to find a solution for using the benefits of the previous slaughterhouse buildings. The main objective of the mentioned competition was to build the biggest museum of the science. The constructional operation of the museum was a valuable combination of the technology and economy in planning. The result of this operation is now a museum that has spent huge amounts of budget and its dimensions and sizes are considerably larger than any other memorandums of Paris.



**Fig. 2.** Site of the Plan



**Fig. 3.** Some cuts of the Museum of Science and Industry

Von Zilber that is the largest section of the park includes the previous building of the slaughterhouse. The water channels pass through these areas. Since the significant part of the museum and cinema are surrounded by water, their sizes appear to be larger. The museum has a beautiful landscape and a light bioclimatic weather with a vertical greenhouse.



Fig. 4. A view of the French Museum of Science and Industry

In this park, using the advanced technology, the metal network has been built for the stainless pipes. These pipes are strengthened and connected to each other by a network of pre-compacted cables to hold the construct and to create a flat connected facet for it.



Fig. 5. Circulation in the French Museum of Science and Industry

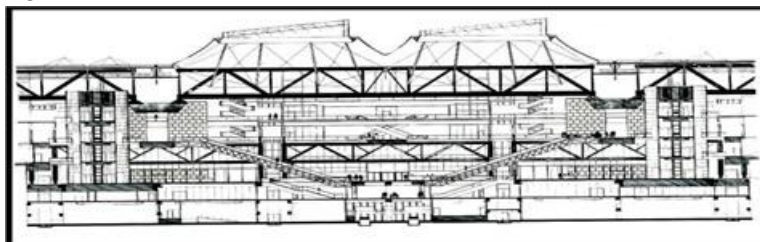


Fig. 6. A cut of the Museum of Science and Industry

Within the building one can find the response to different technical needs and requirements: rigid modern regulations for preventing the fire, installation and implementation of the exhibition codes for controlling and conducting large amounts of the visitors, etc. The internal structure of the museum is prefabricated and flexible with a diverse style of the architectures such as Brulemann, Lover Grool, and Bougrass. This structure acts a fulcrum for the ever-changing exhibitions and fairs.



### 2.2.2. Seoul National University Museum created by Rem Koolhaas



Fig. 7. A view of the Seoul National University Museum

Seoul National University Museum is a combination of the open spaces and cultural complex and the application of the interaction between these two categories. Indeed The design for the Seoul National University Museum is driven by the relationship of the campus to the community and serves as a link between them. This linkage is the defining operation behind the project's morphology. The operation is a slice through the maximum building envelope and establishes a pedestrian connection between the community and the campus.



Fig. 8. The combination of the museum and its environment

The hovering mass generated by this slice is modulated by the circulation path and site topography. This mass is a cantilevered structural steel shell bearing on a concrete core.



Fig. 9. Using the topography in Seoul National University Museum

Circulation through the building is a continuation of the defining slice, internally the path bifurcate and spirals inward. As one enters the building the circulation affords connections to the different programs.



Fig. 10. Circulation in Seoul National University Museum

There are four basic program areas:

- Exhibition,
- Educational and cultural area,
- Library, and
- Operations

The educational spaces, the lecture hall and auditorium, benefit from the slope formed by the slice, and internally accommodate ramped seating.

### 2.2.3. Museum of the Holocaust History

Holocaust is an undeniable event of the history. The word *holocaust* means to mass slaughter usually by burning the victims. In many textbooks, the term *holocaust* refers only to the mass slaughtering of the Jews by the Nazi Germans. This is while there are several holocausts in the history of the world, and as the latest one we can refer to the events happened in Darfur, Soudan.



Fig. 11. Preliminary view of the architecture



Fig. 12. Site of the plan



Fig. 13. Main entrance of the building



Fig. 14. A view of the museum

### 2.2.3. Tehran Museum of Contemporary Arts

In designing the Tehran Museum of Contemporary Arts there was two visions that were correctly selected and reviewed: the enclosures around the site, i.e. Park-e Laleh that is a relatively large park; and the access path to the museum that was located beside a pathway of Park-e Laleh.



Fig. 15. Site of the plan

The designer of this museum, Kamran Diba, chose the central yard. He intended to choose something that not only is a symbol of the Iranian architecture, but to separate the museum from the adjacent park. Moreover, Kamran Diba has designed the museum so that it has a suitable view to the park from (DOI: [dx.doi.org/14.9831/1444-8939.2014/2-7/MAGNT.78](https://doi.org/10.24018/magnt.2014.2-7.78))



the central yard of the museum in order to make the connection between the museum and the park. This connection has been preserved in the internal design of the building with its windows and roofs.

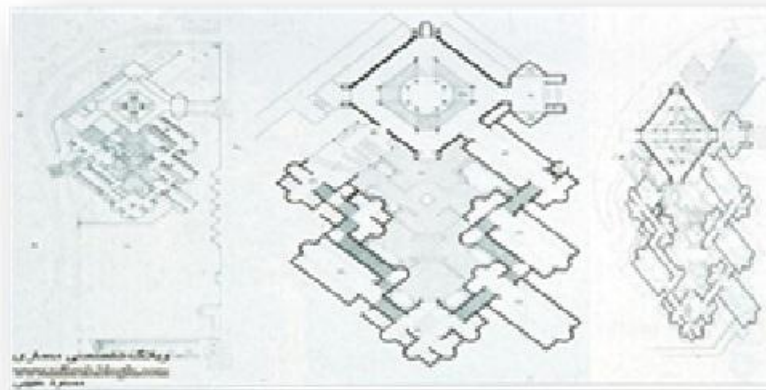


Fig. 16. The plan of Tehran Museum of Contemporary Arts

Karman Diba is an architect who knows the Iranian architecture and understands the foundations and concepts of this style of architecture very well. Tehran Museum of Contemporary Arts is a post-modern building which uses the elements of the Iranian old architecture while being appeared as a minimalistic monument.



Fig. 17. A view of Tehran Museum of Contemporary Arts

A considerable point of this monument is the pathway and the circulation of the museum. The starting path of the visitors is a ramp which conducts the visitors to the underground floor through its circulating movements. The visitors have to move slowly forward on the slope of the ramp. It seems that the designer had intended to release the visitors from the external turbulent environment to a calm separate space to return indeed to their internal feelings. There is a pathway in the ground with a gentle slope that conducts the visitors upward (opposite to the entrance ramp). Finally the visitors come to the very starting point of the ramp without feeling the slope.

### 3. Effective factors on the spatial quality of the museum

As far as relating to any architecture, architecture is the stream of a creative activity. The architect has an idea and thought in his mind and wishes to exhibit it with its personal emotions and affections in (DOI: [dx.doi.org/14.9831/1444-8939.2014/2-7/MAGNT.78](https://doi.org/10.24212/1444-8939.2014/2-7/MAGNT.78))



form of a building. He/she departs from the mere functionality and benefit to express a deeper meaning of the humanity. Of course the architect's success or failure is not an important condition. In other words, in the architect's mind, the architecture is a mental subject depending on his/her objective. Thus the target factor has to be explained in our definition of the architecture. The visitors usually don't know the intent of the architecture. The knowledge of the visitor is a mental subject as well. The objective of the architecture is to create a space, and several factors play role in perception of such a space among which some factors are more effective on the creation of the mentioned space rather than the other factors. The important point is that the foundations and concepts of the architecture are necessary for creation the architectural spaces. Some of the most important concepts and foundation of the architecture are as follow:

- Scale
- Movement
- Dimensions and compositions
- Visibility
- Light
- Color
- Context

**Table 1. Percent of the reflection of different colors**

Colors	Light	Medium	Dark
White	90	75	-
Milky	80	70	-
Yellow	70	55	45
Creamy	70	50	30
Beige	65	45	25
Pink	65	45	25
Purple	60	50	-
Dark yellow	60	45	-
Brown	50	25	8
Blue	50	25	10
Gray	60	35	20
Green	60	30	12
Red	35	20	10
Black	-	4	0.5

Considering the different dimensions and fields, we can specify the population structure of the visitors of museums as follow:

- Experts, thinkers, and professional researchers who form the special team of the project and include two main groups: those who are connected and related to the site of the museum for a long time; and those who are invited to the site as the guest.
- Researchers and students who are the most active group of the visitors and visit the museum for the research and educational purposes and being more involved in the art and the achievements of the works of art. For this group the authorities can conduct some training courses, discussion panels, forums, etc. in order to reinforce their personal and collective motivations.
- Public people whose presence in the museum with the needed trainings can be the most important factor in designing any space.

#### **4. Needed criteria for designing the site of museum**

The criteria for choosing the suitable site of the museum as a monument in desirable situations have to be as follow:

- a) The placement of the site has to be as safe as possible in terms of the hazards such as the flood, earthquake, and lethargy and loss of the soil.
- b) The site has to be coordinated with the environmental codes in terms of the climatic, natural and ecological borders.
- c) The needed materials for constructing the museum have to be suitable with regard to the climate of the region, and the constructional system and its type has to be suitably solid and purposeful.
- d) In planning the physical structure, the spatial characteristics have to be considered with regard to the flexibility of the space. This flexibility includes both the physical shape of the buildings (designing the light separators, the softness of the structure, compatibility to the new plans, and coordinating the scale and the classification of the practical areas) and the functional form (including the flexibility for managing and controlling the spaces, predicting several suitable entrances and exits, having a central space for installing the symbol of the museum, convertibility, and dividing the spaces into some small and some large spaces).
- e) The construct and external shells have to be flexible for further developments. This flexibility has to be matched both with the external development of the fields of activity and the internal development of the activities.
- f) To find a proper and suitable model for the construct, architecture, and installation, and to make them coordinated with the concepts of the spatial flexibility and operational strength.
- g) To pay enough attention to the size of the columns, bridges and craters with regard to the module of the construct, type of the construct, and to solve the probable problem of the mismatch between the construct and the architecture of the building.

- h) To care about the installations channels as the crucial veins of the complex and the ease of the implementation of the installations and preliminary divisions and providing cooling and warming services and to watering the whole building with regard to the functional role of the monument.
- i) To pay attention to the plan of the servicing spaces of the architecture such as the entrances, stairs, restrooms, loading and discharging services, warehouses, etc. so that they are coordinated with the installations and the construct without being visible. They have to be easy for use, well-suited, independent from the organizational system of the plan with the capability of managing, changing and repairing.
- j) Paying attention to the accesses, distances, traffic load in of the cars and finding suitable place for the parking lots.
- k) Predicting the possibility of the physical development of the project and the scale of the available land uses in the project plan.
- l) Paying attention to the installations of the parking, restaurants, corridors and the management space of the whole complex.

## 5. Determining the spaces of the project

Considering the objectives of the project, the following activities and spaces are as follow:

- a) Exhibition spaces including the general land uses and professional land uses of the works of art.
- b) Research spaces including the library and archives.
- c) Educational spaces including the practical and theoretical classes of art.
- d) Needed spaces for maintaining the works of art including the restoration workshops, laboratories, and warehouse.
- e) Administrative spaces for management department, etc.
- f) Supplementary spaces including the active urban spaces relating to the urban furniture, gatherings, shops, etc.

**Table 2. Subspaces**

Main space	Subspace	Capacity	Number	Area	Total area
Hall	Security	-	1	9	9
	Waiting room	-	2	185	370
	Administrative	-	1	-	14
	Conference room	340	1.5	-	510
	Scene	-	1	-	40
	Backstage room and storage	-	5	-	110
	Backstage service	-	2	2.5	5



	Warehouse	-	2	5	10
	Buffet	-	1	-	35
	Lighting and sound adjustment room	-	1	-	6
	Restrooms	-	11	-	45
Exhibition	Gallery	-	6	-	1300
	Shop	-	1	-	32
	Public relations	-	1	-	16
	Administrative	-	1	-	25
	Management	-	1	-	25
	Cafeteria	-	1	-	140
Accommodation	Reception	-	1	-	13
	Laundry room	-	1	-	18
	Warehouse	-	1	-	8
	Restrooms	-	3	-	25
	Living and breakfast room	-	1	-	110
	Suite	-	4	-	500
Library	Librarianship	-	3	-	40
	Control room	-	1	-	41
	Trust room	-	1	-	6
	Registration unit	-	1	-	6
	Typing and copying room	-	1	-	34
	Press	-	1	-	34
	Stacks	-	2	-	70
	Dormitory	-	1	-	353
	Management	-	1	-	51
	Restrooms	-	6	-	27
	Warehouse	-	2	9	18
	Study	-	2	185	370
	Audio-video room	-	1	-	220
	Binding room	-	1	-	45
	Researcher hall	-	1	-	350
Educational	Security	-	1	15	30
	Temporary exhibition	-	1	-	200
	Living room	-	4	36	144
	Relaxation room	-	2	-32	64
	Registration office	-	1	-	25
	Clay workshop	-	1	-	141
	Ceramics workshop	-	1	-	146
	Sculpture workshop	-	2	141	282
	Designing workshop	-	3	-	340
	Painting workshop	-	1	-	141
	Calligraphy workshop	-	2	95	190
	Free studio	-	1	-	85
	Studio of the specific arts	-	1	-	141
	Photography studio	-	1	-	145

	Shop of the art accessories	-	1	-	70
	Archive of the works of art	-	1	-	70
	Relaxation and restaurant	-	1	-	145
	Audio and video dept.	-	1	-	125
	Theoretical classroom	-	4	60	240
	Art criticism classroom	-	1	-	60
	Philosophy of art classroom	-	1	-	45
	History of art classroom	-	1	-	45
	Seminar hall	-	1	-	55
	Warehouse	-	2	15	30
	Terrace	-	3	-	120
	Art communities	-	2	100	200
	Administrative	-	1	-	20
	Restrooms	-	16	-	120
Art communication center	Lobby and living room	-	1	-	150
	Amphitheatre	-	1	-	95
	Painting garden	-	1	-	50
	Public relations	-	1	-	45
	Artists' visits	-	1	-	90
	Movie hall	-	1	-	90
	Chairman of the exhibition	-	1	-	45
	Staff dormitory	-	2	-	82
	Art consultancy center	-	1	-	45
	Artists' session hall	-	1	-	135
	Seminar hall	-	1	-	90
	Video-conference room	-	1	-	45
	Coffee shop	-	1	-	77
	Sculpture garden	-	1	-	170
	Secretariat	-	1	-	45
	Research and translation office	-	1	-	135
	Internet coffee	-	1	-	90
	Financial affairs	-	1	-	45
	Conference room	-	1	-	45
	Secretary	-	1	-	8
Management	-	1	-	30	
Publication	-	1	-	45	
Restrooms	-	1	-	78	

## 6. Conclusion

Science and art are considered as the main and most fundamental structures of the cultural growth and human development, while the art is critically important for its effectiveness on the people. Development is primarily a social, human and cultural issue rather than the (DOI: [dx.doi.org/14.9831/1444-8939.2014/2-7/MAGNT.78](https://doi.org/14.9831/1444-8939.2014/2-7/MAGNT.78))

economic, technical or even political affair. Human resources, cultural growth, spiritual improvement and scientific and social progress are the best capital of the society and the most important and trustful ways of the development. Accordingly, since the activation of other factors of development depend on the growth of the personal, mental and behavioral

transcendence of the people, thus the art and its promotion play very important role in the societies because the art is more promotable, pervasive and common than the science and philosophy. We have to note that the theory of “art for development” is a type of targeting and imperative approach. The art has several social functions and can totally or partially serve for the ethical, environmental, educational and psychological goals and even facilitates the social policy makings. But we must not restrict the art merely to the mentioned areas or reduce the totality of the art to its functions. Art is beyond the sociable behaviors and norms. Moreover, the development and growth of the spiritual rationality is the result of the promotion of art for establishing and reinforcing the civil society. It seems that in societies where the individualism and the lack of collective and social participation exists and the development of the society is blocked, the art is the most effective and sustainable factor of reopening the path of the development. The art can play a role beyond the economic, technical, scientific and legal institutions. If we recognize the culture as the structure of life, the art stands on the top of this structure. The audiences of the art are all people at large. Artistic activity is a human activity, and the art exists in all activities of the human lives.

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