



Magical Museums



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In this incredibly well-researched and beautifully summarized Cover Story on Museums, Bansri has listed out the design considerations, and picked up five brilliant international museums that have changed museum architectural history.

MUSEUM MECHANICS

Paul Getty - who was one of the richest living Americans of 1957 and whose collection formed the basis for the J. Paul Getty Museum in Los Angeles; once raised a question:

“How does one measure the success of a museum?”

Conditions and contexts of every museum are unique. Thus, factors affecting museum's success are as varied as factors affecting an individual's success. But some of the aspects such as programming of spaces, quality of exhibits, architectural design considerations, operation & maintenance, strength of its management and cost of construction are the key issues considered to measure a museum's success.

Turning towards the design considerations, aspects such as Lighting, Environmental systems, Air quality, Security and Fire protection are the base of a museum's life-cycle.

Apart from the above mentioned key

factors, some of the other design considerations are listed below which can also be used as a ready reference of questions before designing a museum.

Design Considerations

- **Programming Requirements**
What are the principal programming requirements (space type/areas)? How do you organize the client?
- **Circulation**
What are the desirable primary and secondary spatial relationships?
- **Unique design**
What special design determinants must be considered?
- **Site planning / parking / access**
What considerations determine external access and parking?
- **Building and Safety Codes**
Which building codes and regulations apply, and what are the main applicable provisions?
- **Security Systems and Fire Protection** are critical factors.
- **Energy / environmental challenges**
What are the techniques to use in obtaining appropriate energy conservation and environmental sustainability?
- **Structure system**
What are the appropriate structural systems to consider?
- **Mechanical systems**
What are the appropriate systems for heating, ventilating, air-conditioning and plumbing? Vertical transportation? What factors affect preliminary selection? What are the space requirements?
- **Electric / Communications**
What are the appropriate systems for electrical, voice, and data communications? What considerations affect preliminary selection? What the space requirements?



Tarbe Art Centre - a museum designed by Verner Johnson Inc.



Rainforest exhibit in a controlled environment at California Academy of Science
- a museum designed by Renzo Piano

- **Special equipment**
What special equipment is required and what are its space requirements?
- **Materials**
What materials need to be uniquely considered or rejected?
- **Acoustic control**
What special acoustic and other sound control considerations affect the design?
- **Lighting design**
What special lighting considerations affect the design?
- **Interior issues**
What special considerations determine the planning of interiors - scale, color, texture, finishes, furnishings, special features?
- **Way-finding**
What special factors determine graphics, signing and way-finding?
- **Additions / renovations / restoration / adaptive reuse**
What are the special concerns when renovating a facility?
- **International challenges**
On international work in this building type, what challenges arise to influence marketing, design, presentations, document production, correspondence, field presence, billing?



The famous structure of the Guggenheim Museum designed by Frank Lloyd Wright

- **Operation and maintenance**
What are the special procedures for operating and maintaining the completed facility?
- **Key cost factors**
What are the typical costs for construction, including furnishings, fixtures, and equipment? Because of variability in program, there are no reliable guidelines for the costs of museum construction. Many institutions include very expensive

exhibit installations in the cost of construction, for example to the point where the cost of installation may exceed that of the building.

- **Finances, fees , feasibility**
What are the typical techniques for financing this facility?

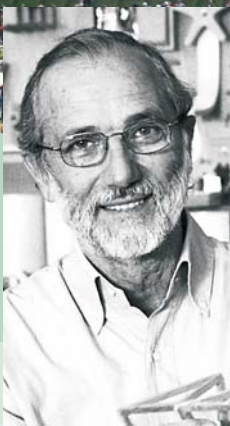
“Museum has a very broad definition. There are various types of museums - discovery, history, art, science, etc. I think what binds them are the aspects

of collection, exhibit display, awareness & education, visitor’s experience and the vision of the management.” says Louis Sirianni, Principal of Verner Johnson Inc.

In conclusion, a museum’s functionality is as important as its experience. Thus, out of all the factors that contribute in a museum’s success, the most important one is about how integrated is the approach of architects, consultants, exhibit designers and curators from the beginning of the project. ■

MASTER MUSEUMS

MASTER MUSEUMS



CALIFORNIA ACADEMY OF SCIENCE

San Francisco

Master Designer: Renzo Piano

About the master designer: RENZO PIANO

Genoa-born architect Renzo Piano is a world-renowned Italian architect and recipient of the Pritzker Architecture prize, AIA Gold medal, Kyoto Prize and the RIBA Gold medal for architecture. He graduated in 1964 from the school of architecture of the Milan Polytechnic. In 1971, he founded the 'Piano & Rogers' agency with Richard Rogers, his partner on the Centre Pompidou project in Paris. In 1977, he founded 'l'Atelier Piano & Rice' with the Engineer, Peter Rice, who had worked with him on many projects, until his death in 1992. He then founded Renzo Piano Building Workshop (RPBW), with offices in Paris and Genoa. His team at RPBW is almost about 100 people working in close collaboration.

Like most works designed by members of the 'high-tech' movement, Piano established 'technology' as a starting

point for his designs. One of his admirers said that "*serenity of his best buildings can almost make you believe that we live in a civilized world.*"

Begun in 1853, the California Academy of Science is among the largest museums of natural history. Unfortunately, the original buildings were damaged significantly in the 1989 Loma Prieta earthquake. Subsequently, plans were made to repair the damage and make the buildings seismically stable. But it was realized that a considerable amount of work would be needed to bring the buildings up to modern standards. This led to the idea of giving the academy a complete makeover.

'Renzo Piano Building Workshop' was chosen as the architectural firm for the museum replacement project. This project required the demolition of most of the 11 existing buildings, built between 1916 and 1976. After moving

the existing exhibits to a temporary museum, construction began in 2005. Renzo Piano's design for the museum is the recipient of the 'Urban Land Institute award for excellence: The Americas in 2008'. It also won the 'Holcim Award for sustainable construction projects for the region North America in 2005'.

To keep up with the academy's focus on ecological concerns and environmental sustainability, the new building is at the forefront of environment-friendly design. Due to its sustainable initiatives, the building has received Platinum certification under the LEED program.

The museum exhibits primarily focuses about the natural history. But the public areas are divided into three general areas:

- **Steinhart Aquarium:** which takes up most of the basement area, as

well as a four-story dome that emulates a rainforest.

- **Morrison Planetarium:** which is devoted to astronomical things.
- **Kimball Natural History Museum:** which, in addition to its African Hall and a Foucault pendulum, includes a variety of changing displays covering many subjects.

The 4,10,000 sq ft building retains the former location and orientation at the Golden Gate Park. Like the original academy, all functions are organized around a central courtyard. Two spherical exhibits, the Planetarium Dome and the Rainforest Biosphere, are located adjacent to the Piazza. Together with the reconstructed entrance of the Steinhart Aquarium, these elements represent the Academy: Space, Earth and Ocean. These 3 icons 'push' the roof up creating an undulating roof-scape.

The academy is sheltered by the 2.5 acre expanse of living roof consisting of seven dramatic hills covered by nine species of native California plants. The green roof extends beyond the perimeter walls and becomes a glass canopy providing shade, protection from the rain and generating energy through more than 55,000 photovoltaic cells in the glass. In the center of the Living Roof is a glazed skylight covering the piazza.

There are many other benefits of this green living roof. The undulating hills of the roof that features slopes in excess of 60 degrees, will draw cool air into the open piazza at the center of the building, naturally ventilating the surrounding exhibit spaces. Padded with 6" of soil, the roof will provide excellent insulation, keeping the interior temperatures about 10 degrees cooler than a standard roof as well as reducing low-frequency noise by 40 decibels. It will also decrease the urban heat island effect, staying about 40 degrees cooler than a standard roof. Moreover, it will absorb about 98% of all storm water, preventing up to 3.6 million gallons of runoff from carrying pollutants into the ecosystem each year.

Strategically placed skylights in the roof will automatically open and close to allow heat to escape through the tops of the domes. These skylights will also allow sunlight to reach the living rainforest and coral reef exhibits

below, reducing the energy requirements for the artificial lighting.

To emphasize the roof and the building as a whole, the materials used for the new Academy are minimal. Spaces are left neutral in color intentionally. Light gray architectural concrete is the main material for the walls and facades, apart from the restored African Hall, which features the original limestone. The floors are polished concrete. The exhibit hall soffit consists of a series of individual white acoustic panels, mounted horizontal under the undulated roof. The glazed facades are executed with extra-white glass, to enhance their transparency and to improve the visual transition of the interior into the Golden Gate Park. The roof is a hybrid concrete-and-steel structure, with vegetation on top, including a water "storage" layer. The roof transforms towards the exterior into a light steel structure supporting glass panels with photovoltaic cells.

A more holistic approach was considered which involved a serious effort in the choice of materials, recycling of the materials from the old academy buildings and the way in which they are put together. Sustainability is also part of the exhibition design, the exhibition philosophy, and its day-to-day operation. The mission statement of the academy, "to Explore, Explain and Protect the Natural World," made this project ideal to incorporate sustainable design strategies.

"With the new Academy, we are creating a museum that is visually and functionally linked to its natural surroundings, metaphorically lifting up a piece of the park and putting a building underneath," says Architect Renzo Piano.

"Through sustainable architecture and innovative design we are adding a vital new element to Golden Gate Park and expressing the Academy's dedication to environmental responsibility."





NATIONAL INFANTRY MUSEUM

Georgia

Master Designer: Verner Johnson Inc.

About the master designer: Verner Johnson Inc.

A graduate of MIT, Ar. Verner Johnson began his museum planning, research and design work in 1961. In 1965, he established 'E. Verner Johnson, Inc.' in Boston. He has also co-authored with Joanne Horgan, 'A Handbook for Museum Collection Storage' which has been published in several languages by UNESCO.

Since joining the firm in 1978, Mr. Louis Sirianni has worked exclusively as architect on major museums of the firm's portfolio. He has completed Advanced LEED training and has been certified as a LID-accredited professional. Mr. Bradley Nederhoff has worked in key management since 1983 and has been in the design position for a broad variety of museum types.

Verner Johnson, Inc. has specialized exclusively in museum planning and design for 30 years. With over 200 museum projects in their portfolio, they have worked with all types of museums.

"We not only communicate with clients but also closely collaborate with exhibitors, workers and users because they are the ones who know what's happening everyday in the museums and are able to tell us where and how to improve," says Nederhoff in an interview with Ar. Bansri Pandey.

The projects in their portfolio ranging from expansion projects for regional museums to a complete reorganization plan for the Louvre museum in Paris, their museum expertise is recognized around the world. Each year, more than 15 million people visit museums designed by the firm.

Having more than 200 museums in their portfolio, Boston-based Verner Johnson Inc. has planned and designed more museums than any other firm. Thus, while selecting an architectural firm with its unsurpassed museum expertise, Major General White knew he could trust the decisions Verner Johnson Inc. would make in designing an appropriate museum for the Infantry on a grand civic scale.

"The National Infantry Museum is one of those life-time projects that showcase our firm's museum planning and architectural design process. Finding an appropriate way, through architecture, to adequately honor the hundreds of thousands of "ordinary soldiers" who have sacrificed so much for their country was a very humbling endeavour." says Bradley Nederhoff, Managing Principal of Verner Johnson Inc.

The national infantry foundation had set high goals for the new facility that would replace Ft. Benning's aging museum. The new museum was envisioned as a place to educate the American public on the role of a military branch through interactive and entertaining dynamic galleries, high - tech classrooms, experiential theaters and ceremonial venues.

As for the design of the building and development of the 200-acre site, the Foundation sought a world-class facility that would link Ft. Benning with Columbus.

Thus, Verner Johnson Inc. designed this 180,000 sq ft state-of-the-art museum which is as much monumental as it is welcoming. The rotunda at the building's entrance steals all the attention at first sight. Its soaring height and design carve out the building, giving the museum a monumental quality, while its openness welcomes visitors and conveys a sense of arrival.

Construction of the National Infantry Museum was completed in Spring 2009. From the beginning of the project, National infantry foundation, Verner Johnson Inc and exhibit designer Christopher Chadbourne and Associates have been working with shared vision to achieve full

integration in the project. As a result, the space, exhibits and content achieve a cohesive visitor experience in which all components reflect the museum's central story of infantrymen.

The museum is divided into two floors mainly consisting of an IMAX theatre, a classroom, a museum store, exhibits and a dining area. The most challenging area to design was the exhibit named 'The last 100 yards' that stretches out like a bayonet through the central gallery space, ascending from the first to the second floor of the museum. As the museum's signature exhibit, this powerful, interactive and multidimensional cinematic experience was designed to involve visitors into the life of infantrymen in their 200 years of American history.

Educational, experiential and entertaining, the National Infantry Museum is an ideal place for freedom-loving people around the world. The museum is a tribute to infantrymen in a true sense. Proudly standing beneath the monumental rotunda, the "Follow Me" statue brings alive the military life creating a lasting appreciation for those who have put themselves in harm's way for the nation.

"Museums are landmark spaces and their design should retain this quality. People shall be impressed with the design space. The building shall be welcoming, exciting and complementing with exhibits. A unified visitor experience is the key to the project's success." says Louis Sirianni, Principal of Verner Johnson Inc.





MICHAEL LEE-CHIN CRYSTAL

Toronto

Master Designer: Daniel Libeskind

About the master designer: Daniel Libeskind

Born in postwar Poland in 1946, Daniel Libeskind chose to become an American citizen in 1965. He studied music in Israel and in New York. He left music to study architecture, receiving his professional architectural degree in 1970 from the Cooper Union for the Advancement of Science and Art in New York city. He received a postgraduate degree in History and Theory of Architecture at the School of Comparative Studies at Essex University in 1972. He founded 'Studio Daniel Libeskind' in 1989 with his wife Nina.

"Ever since I began architecture, I had abhorrence to conventional architecture offices. There was something about the atmosphere of redundancy, routine and production that made me allergic to all forms of specialization and so-called

professionalism. Few years ago we founded our office in Berlin as a result of a decision, an accident, a rumor on the street and began an unimaginable journey down a path on which we are still traveling," says Daniel Libeskind.

Though he had been an architectural theorist and professor for many years, he completed his first building at the age of 52, with the opening of the Felix Nussbaum Haus in 1998. He is a recipient of many prestigious awards such as the Hiroshima Art Prize, Deutsche Architekturpreis, Goethe medallion, American Academy of Arts and Letters Award for Architecture, and many more. Libeskind is most famous for being selected by the Lower Manhattan Development Corporation to oversee the rebuilding of the World Trade Centre, which was destroyed in the 9/11 attack. Studio Daniel Libeskind's headquarters is two blocks south to the World Trade Centre site in

New York, which is currently handling over 40 projects across the world.

The Royal Ontario Museum (ROM) of Toronto is Canada's largest museum of world culture and natural history. After two major expansions in 1933 and 1984, the museum set out to renovate ten new galleries in the existing historical building by creating an extension to the museum which is now called 'Michael Lee-Chin Crystal'.

After an international search that attracted more than 50 firms, the Berlin-based 'Studio Daniel Libeskind' was chosen in 2002 to lead the extension project. Winner of the design competition for the 'World Trade Centre in New York', Daniel Libeskind is known for his innovations in architecture. Situated at one of the most prominent intersections in downtown Toronto, ROM's new extension building has

proven to be a grand public attraction due to its dramatically fresh architecture.

The book 'Off the Tourist Trail: 1000 Unexpected Travel Alternatives', names Michael Lee-Chin Crystal as one of the world's architectural marvels and one of six modern buildings to rival Australia's Sydney Opera House. It also further states, "By stepping into the 21st-century with such a wonderful renovation, the museum is a shining example of how modern architecture can reinterpret and reinvigorate even the oldest of buildings."

Design of the extension building was inspired by gem-and-mineral collection of ROM. Architect Daniel Libeskind sketched the initial concept on paper napkin while attending a family wedding at the ROM. The design was quickly named 'crystal' because of its crystalline shape.

This name is also a representation of the building's five interlocking, self-supporting prismatic structures that co-exist but are not attached to the original ROM building, except for the bridges that link them.

The intersection of two of the crystals, each of which is dedicated to new galleries, creates a void, known as the Spirit House. It is a large atrium rising from below ground level to the fourth floor, and containing a number of crisscrossing bridges at various levels. The Spirit House is intended to be a place for visitors to reflect and experience the galleries they have visited.

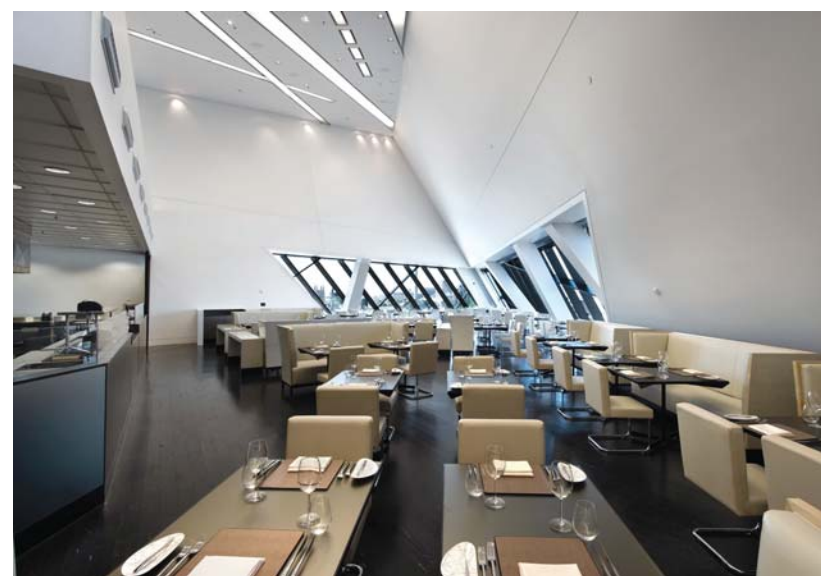
In addition to that, Daniel Libeskind has even designed a chair for the Spirit House spaces to enhance the experience of crystal-shaped environment. The chair, which is constructed from 14 gauge stainless steel, takes approximately 40 hours to complete. To date, a total of 21 chairs have been made; all having an engraved signature from Daniel Libeskind on the top.

A fourth crystal is known as the Stair of Wonders. It is dedicated to vertical circulation while featuring exhibits at the landings. A fifth crystal houses the major new restaurant which cantilevers over the existing West Wing galleries and provides panoramic views of downtown.

These intersecting spaces create a variety of atriums at different levels, showcasing views into galleries and other spaces within the Museum. One large atrium, known as the Gloria Hyacinth court separates the new construction from the ROM's existing heritage building providing almost a complete view of the restored heritage facade. This 186,000 sq ft new building consists of total 7 floors, 7 new galleries, 8 renovated galleries, 3 new restaurants, 1 retail space and supporting offices.

The building envelope consists of two layers - a water-shedding skin covered by champagne-colored anodized aluminum extrusions that shine in the sunlight and at night, pick up the glow of the city. The facade is pierced by windows that provide views out of the building as well as into the galleries, thereby making the passers-by curious to go inside.

As one of the most important architectural projects and a distinctive new symbol of Toronto, the Michael Lee-Chin Crystal marks the beginning of a new age for the ROM, popularly known as 'The Crystal Age'. The building is like a unique story that transforms the fortress-like character of ROM into an inspiring and dynamic centre of Toronto.



"The program of the Royal Ontario Museum provided a wonderful opportunity for dramatic new architecture and the creation of a great public attraction. The centrality of the site intensifies the profound relationship between history and the new, between tradition and innovation. The Crystal is an interlocking form which turns this important corner of Toronto into a luminous beacon - a veritable showcase of people, events and objects, transforming the entire museum complex into a world-class destination," says Daniel Libeskind.



ARKEN MUSEUM OF MODERN ART

Copenhagen

Master Designer: Søren Robert Lund

About the master designer: Søren Robert Lund

Born in 1962, the Danish architect established his studio in 1991 at Copenhagen after he won the competition of Arken museum of modern art. The museum, still his most recognizable building, established him in the international market as an architect.

From hotels, housing, master plan preparations, theme areas, interior design, printing factory to the restoration works, Lund has a wide portfolio of work with national and international recognition. Affiliated with many prestigious institutions, extensively exhibited and widely published, he has proven his ability to handle a relatively large commission with a small practice while achieving a high level of design.

Lund, a graduate of the Royal Academy

of Fine Arts in Copenhagen, is also a recipient of many awards. He has also been nominated twice for "Mies van der Rohe" prize.

"The change of my life from being an architecture student and then winning this competition was huge. I think that I learned the way of architecture like a masterclass with what I call "learning by doing!"" expresses Lund while discussing about Arken museum with Ar. Bansri Pandey.

As a part of Danish cultural politics, the demand sprang up for establishing a cultural institution to give the increasing new immigrant population of the western suburbs an opportunity to experience the greatest national and international art in their own region. This ambition gradually laid the foundation for 'Arken Museum of Modern Art' in the suburb city of Ishøj, close to the bay of Køge, 20 kilometers south of Copenhagen.

In 1988, 25-year-old young architecture student, 'Søren Robert Lund' surprisingly won the national competition and its commission for the design of the museum. And then, on 15 March, 1996, Søren Lund gave the people of Denmark a fresh 10,000 sq m of bold and striking building that has become an important destination of Copenhagen.

Like a long and diagonal slice slowly coming out of the sea, the museum's shape and its architectural design is like a beautiful sculpture overlooking Køge Bay. Inspired by the surroundings of the sea and its landscape, the architect began to develop the design as a ship with a stem and sails, locating it at the edge of the sea. This concept is simulated by using the scale and the character of the landscape, resulting in a horizontal building with long arms anchoring the museum to the site and inviting the guests inside. The concept of a ship was very significant in

relating the design to the character and history of the landscape. It is a creative, story-telling element in the experience of the building. The overall character of the museum is expressed through proportion, shape, light, acoustics and the connection between different spaces.

The design is centered along a long curved axis known as 'Art Axis' - the museum's backbone. Because of the variations in height, the room appears much longer than it really is, giving a sense of optical illusion. One of the walls of the room arches like a crescent while the other remains straight. Moreover, the Art Axis is a room with only two corners. In addition to being an exhibition space, it also acts as a large concourse connecting exhibit galleries and the Detlefs hall, which is used for lectures, conferences or changing exhibitions.

The galleries to the north are defined by two skylights that underline the modular character of the spaces. Both

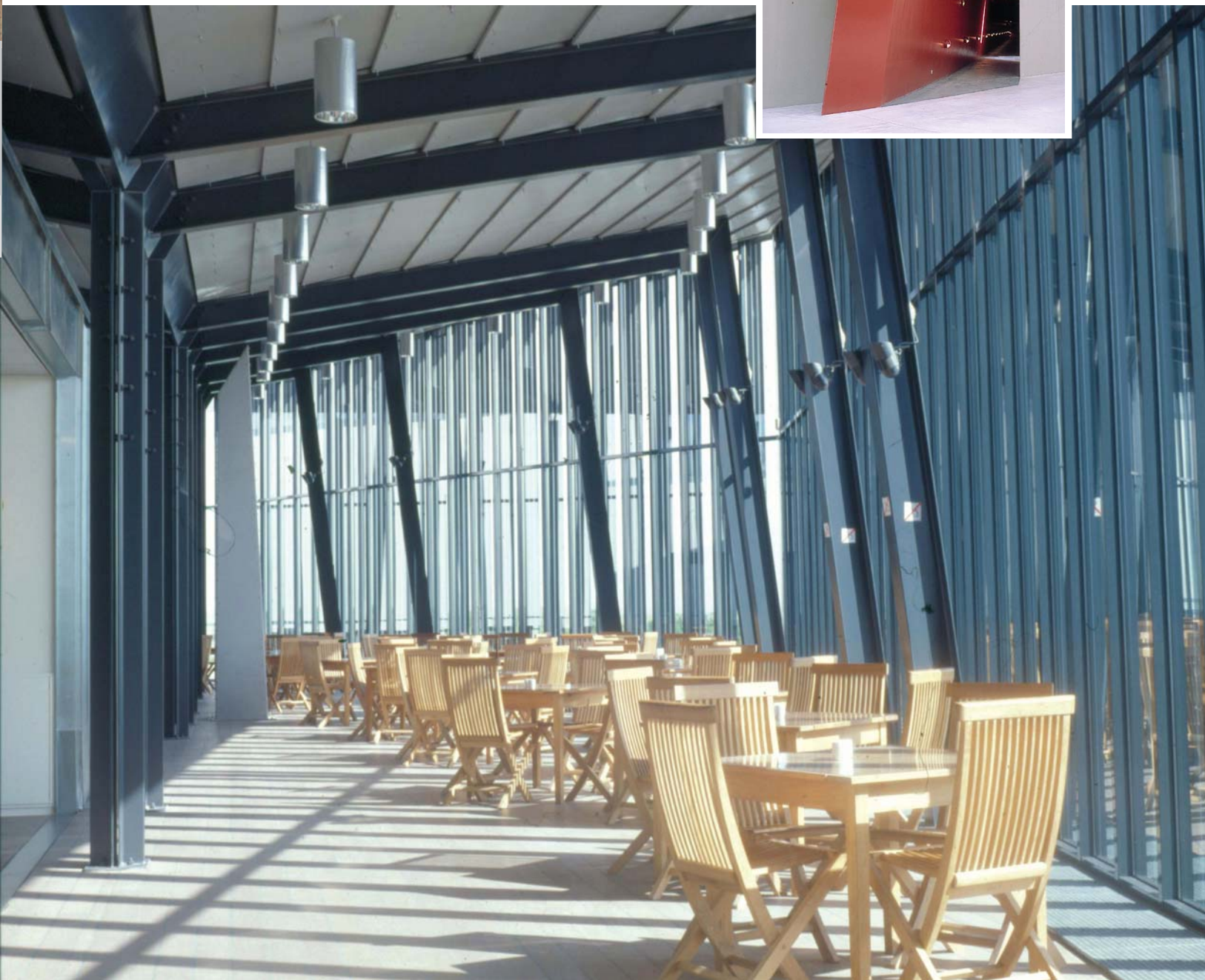
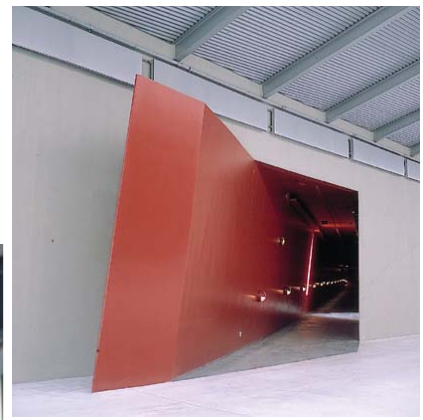
skylights are designed to the proportion of 1:3 (height:width). This module is reflected throughout the rest of the building, from the steel work to the bay windows situated beside each skylight.

Connecting the Art Axis and the foyer, lies a passageway named as 'The Red Axis'. The tilting red walls and black floor emphasize yet another illusion of walls pressurizing on the visitor walking by. Everywhere in the museum, there are references to ship architecture and in the Red Axis, they are particularly obvious. The restaurant on the second floor is the climax of the journey through the building, with an almost theatrical interplay between the structural elements and the dramatic view to the sea.

Throughout the design of the museum, the choices of the materials have been carefully chosen for them to merge with the concept of a shipwreck. The main material is cast in place, with concrete and zinc-coated steelwork

for the roof canopy. These materials are carried through to the interior with white concrete floors, steel beams and steel doors. The marine theme has been given an abstract form by using teak restaurant floor, porthole window openings, metal gangways and steel railings that feature along the corridor and gallery spaces.

"Since the inauguration of the studio, the designs have taken starting point in the vision of creating sculptural and artistic architectural expressions. The design of the museum creates a sculptural exterior that also reflects in the inner spatiality; thus, making an image where all parts of architecture are woven together," explains the architect.





SOLOMON R. GUGGENHEIM MUSEUM

New York

Master Designer: Frank Lloyd Wright

About the master designer: Frank Lloyd Wright

Recognized as “the greatest American architect of all time” by the American Institute of Architects in 1991, Frank Lloyd Wright, is a mentor for almost every architect today. He was an architect, interior designer, educator and a writer. Out of his more than 1000 master designs, about 500 have been completed and executed. Wright has authored more than 20 books and many articles, and was a famous lecturer in the United States and Europe.

He began his studies at the University of Wisconsin as a special student in 1886. But he left the school without taking a degree and went to Chicago in search of work. Later in his life, due to his contribution in architecture, he received honorary degrees from several universities including the University of Wisconsin and several nations named him as honorary board member to their national academies of art and architecture.

He is widely known for the house he designed near Pittsburgh during 1934-37, named ‘Falling waters’. He is a founder of Prairie style of architecture, a creator for many timeless buildings like Imperial Hotel, Unity temple and Solomon R. Guggenheim museum and a visionary of many unbuilt projects like his design for a mile high tower which was used as an inspiration for the design of Burj Khalifa, Dubai - the tallest building of the world today. He strongly used to believe and express, *“the architect must be a prophet, a prophet in the true sense of the term. If he can’t see at least ten years ahead, don’t call him an architect.”*

Wright, a prophet of his belief died in 1959, leaving behind the legacy of architecture that still continues.

Hilla Rebay, the curator of Guggenheim foundation and Solomon R. Guggenheim wrote a letter to Frank Lloyd Wright in 1943, pleading him to design a permanent structure for the collection of the foundation. In the

letter, Rebay instructed Wright, *“I want a temple of spirit, a monument!”*

It took 15 years, 749 sketches and 6 working drawing sets for Wright to create what we know as the legendary “Solomon R. Guggenheim Museum” of New York. It was the last major work of Wright that left a new benchmark for all the museums to be ever designed. Six months after Wright’s death, the museum opened its doors to the general public for the first time in 1959.

In Paul Goldberg’s words, *“Wright’s building made it socially and culturally acceptable for an architect to design a highly expressive, intensely personal museum. In this sense, almost every museum of our time now, is a child of the Guggenheim Museum.”*

Like a white ribbon that curls up into a cylindrical stack growing wider towards the top; the building stands as a sharp contrast to the box-like

Manhattan buildings that surround it. Unlike most museums that are designed as a series of interlocking volumes, Guggenheim Museum's design is an inverted spiral, making visitors start their journey from the top and winding down a ramp, experiencing the paintings and modern sculpture on the way. In this way, no precise distinction exists between different floors, making it possible to have different perceptions of the surrounding space at all levels. This also enhances the appreciation of displayed artwork from different angles.

Wright was highly criticized for creating a design that would overpower the artwork on display. But at the same time, majority of opinions supported Wright and claimed "to have made the building and the painting an uninterrupted, beautiful symphony such as never existed in the world of art before."

When asked why he chose the ramp, instead of level floors in the conventional stack, Wright explained that he felt a visitor to the museum would find it far more convenient to enter the building, take the elevator

to the top ramp, then gradually descend around an open court. The visitor always has the option, as the ramp touches the elevator stack at each level, to either go back or skip down to further levels, and finally, at the end of the exhibition, find himself on the ground floor, near the exit.

The design of the museum is home to many different types of exhibits. The museum houses some fine collections of world famous painters such as Picasso, Chagall, Kandinsky, and many other modern artists. The major part of the collection contains paintings, but sculptures and photos are also on display in the museum. The collection was started by Solomon R. Guggenheim in the late 1920s. In 1937, he founded the Museum of Non-objective painting, which later moved to its present location. In 1976, an important collection of paintings from Gauguin, Picasso, van Gogh and many others were donated. In 1990, more than 200 works of American Minimalist artists were added to the collection.

Since its opening, the building with spiral interior rising 96 feet height has

been the primary reason for many people to visit the museum. Museum surveys show that for the 900,000 to 1,000,000 people who visit every year, the building consistently ranked over the art as the reason for visiting. Apart from the exhibits, visitors can experience special exhibition galleries of modern and contemporary art, lectures by artists and critics, performances and film screenings, classes for teens and adults, etc.

A monument of modernism, the museum which was founded on a collection of early modern masterpieces, the Guggenheim Museum today is an ever-growing institution devoted to the art of the 20th century and beyond.

"Guggenheim Museum is one great space on a single continuous floor. The eye encounters no abrupt change, but is gently led and treated as if at the edge of a shore watching an unbreaking wave, one floor flowing into another instead of the usual superimposition of stratified layers." says Frank Lloyd Wright, explaining his design, "Here is the ideal I propose for the architecture of the machine age."

