



WHAT IS SCI-FI ?

Science fiction, often abbreviated as sci-fi, is a genre of speculative fiction that explores **imaginative and futuristic concepts**, often involving **advanced technology, space exploration, and alternative realities**. It delves into the impact of scientific and technological advancements on society, offering creative visions of the future or alternate worlds.

WHAT IS A SCI-FI MUSEUM & ENTERTAINMENT HUB ?

A sci-fi museum and entertainment hub is a facility that **showcases exhibits, artifacts, and interactive displays related to science fiction**. It serves as a space where visitors can explore the genre's **history, iconic works, and futuristic concepts**. Additionally, it may offer **immersive experiences, events, and entertainment activities** to engage and entertain enthusiasts of science fiction and also to **generate the revenue** from various activities.

NEED OF THE PROJECT :

The main need to design a sci-fi museum is to **transform the museum culture in India and to elevate the user experience** from just traditional or historical museums to **tech-savvy or tech based advanced museums**. Here are some potential points that explain the need in brief:

- Promotion of Creativity
- Tourism and Entertainment
- Promotion of STEM Education
- Collaboration and Networking
- Economic Impact
- Community Engagement

VISION BEHIND THE PROJECT :

- To promote **futuristic design approach** in museum infrastructure rather than having only traditional ones.
- To educate people about the **multidisciplinary topics and facts** developing the whole nation.
- To make students curious about the sci-fi concepts like **possibilities of life on exoplanets, Cosmos, AI, Virtual realities etc.**
- To **generate the revenue and make employment opportunities** to contribute to the GDP.
- To promote **community building & local mass** on the themed events like Comic cons & galas.

WHY A SCI-FI MUSEUM IS REQUIRED IN INDIA ?

- As we can see, Countries like UAE, USA etc. focusing more on the **futuristic infrastructure** to attract the tourism and as a developing nation, The Govt. of India is also focusing on the infrastructure by providing **crucial budget allocations** during various budget years.
- Budget allocation for infrastructure in F.Y. 2023-2024 was 2.4 lakh crore and, Budget allocation for infrastructure in F.Y. 2024-2025 is 11.11 lakh crore.** It's a **significant** total over.

- The requirement of a Sci-Fi museum and Entertainment Hub is based on the fact that **IT sector in India is growing rapidly**, which shows the interests of the people towards more **tech-based museums** rather than historical or traditional museum typologies.

"Historical museums or Science museums in India are becoming old-fashioned day by day. The Science museums are more like designed for kids rather than for college groups because of which **schoolies, youngsters don't prefer to go to the museum.**" *Interview of a user during interview.*

EXAMPLES :



ORIGINATIONS :

- Took choice of colors for exhibits, making them look more **funny** rather than something **boring**.
- Everything usually seems like it's for kids because of the graphics and colors **appearing** them in that way.
- No digital displays to explain the concepts of themes. **Everywhere is the written boards** are placed.

WHAT IF ?

- The historical museums or traditional museums has their own **charisma and value**. And as Indians are deep rooted cultural people so, we can't just demolish them or ignore them, **instead**

What if... we revive them by some interactive exhibits, holographic displays etc.

"Just imagine, We're actively **experiencing the human Evolution** through AR/VR rather than just read it from the boards placed near the glass enclosed (non-interactive) exhibits, or able to see and feel the big things from the **Space Stations**, or able to witness the **explosion of dinosaurs** from the walls to feel the **possibilities of human life on exoplanets.**"

WHAT AREAS COULD BE ACCOMMODATED ?

A sci-fi museum and entertainment hub can encompass a variety of areas to offer a comprehensive and engaging experience for visitors. Here are some potential areas that could be accommodated:

Sr. No.	Zones	Spaces
1	Exhibit Galleries	Historical Evolutions Iconic Artifacts Interactive Displays
2	Themed Sections	Space Explorations Time Travel Alternate Realities Artificial Intelligence Extraterrestrial Lives
3	Entertainment Spaces	Live Simulations VR Experiences Theater
4	Interactive Installations	Holographic Displays Robotics Augmented Reality
5	Community Spaces	Meetups Cafeterias
6	Event Spaces	Conventions Book Signings Themed Galas
7	Shop	Souvenirs shop

List of spaces that could be accommodated in a sci-fi museum & entertainment hub.

VISITORS RATIO STUDY :

Ratio in India (visitors/year)

- National Science Centre, Delhi - 8.5 lakhs
- Nehru Planetarium, Mumbai - 2 lakhs
- Science Center, Surat - 4.5 lakhs
- Science City, Ahmedabad - 3 lakhs
- National Museum, Delhi - 7 lakhs

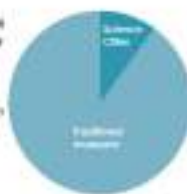
Ratio outside India (visitors/year)

- Museum of the Future, Dubai - 10 lakhs
- Osingdu Science Fiction Museum, China - 10 lakhs
- Science Museum, Mexico - 7 lakhs
- Shanghai Astronomy Museum, Shanghai - 7.5 lakhs
- The Broad Museum, Los Angeles - 6.2 lakhs



RATIO OF HISTORICAL AND SCIENCE MUSEUMS (IN INDIA) :

According to the National Council of Science Museum (NCSM) there are **around 1000 traditional museums in India and only 36 Science Centers or Museums are in India.**



Govt. also planning some **Revivify** tech-based projects and focusing on the development of the same. **Yashwantrao Chavan** convention centre of Pragati Mahal is a best and most recent example in this project category. Govt. also collaborating with many IT firms to develop the project which are futuristic.

VISITORS TYPOLOGY :

Following are the age groups who visit the science or tech based museums more in India :



HOW IS IT DIFFERENT FROM TRADITIONAL OR HISTORICAL MUSEUMS ?

- **Thematic focus:** Sci-fi museums center on the **specific theme of science fiction**, exploring its history, impact, and futuristic concepts.
- **Interactive Entertainment:** Unlike traditional museums, sci-fi hubs emphasize **dynamic, interactive experiences** through virtual reality, live performances, and themed events, in which people can **gather and improve the networking**.
- **Futuristic Concepts:** These hubs delve into **speculative & futuristic ideas**, incorporating cutting-edge technology to showcase creative visions of the future.
- **Community Engagement:** Sci-fi hubs serve as **community spaces**, hosting events, meetups, and activities to engage and connect science fiction enthusiasts.
- **Pop Culture Embrace:** In contrast to traditional museums, sci-fi hubs celebrate the **pop culture aspect** of the genre, highlighting iconic characters, franchises, and their impact on mainstream entertainment.

EXISTING SCENARIO IN INDIA & IN OTHER COUNTRIES :



INTRODUCTION :

The National Science Center in New Delhi stands as a beacon of scientific exploration and education. As a premier institution, it strives to inspire curiosity for science through **engaging exhibits, interactive displays, and innovative programs**, making it a dynamic hub for learning and discovery. Situated in the vicinity of old monuments of Delhi providing a new fabric to the city and of the same time testing of the ancient building.

LOCATION :

The museum is located within the the Pragati Maidan complex, on Bhikai Mohan. The strategic location, coupled with the interesting plot of form fits made the center an important landmark in the city.

"I believed that values and historical influences contributed towards good architecture." **-A.R. Arifuzz Kowide**

GENERAL INFORMATION :

Owned by the National Council of Science Centers

Designed by: **Ar. Arifuzz Kowide**

Plot area: 7000 sq.mt

Total built-up area: 19342 sq.mt

Ground coverage: 49%

Permissible FAR: 2.8

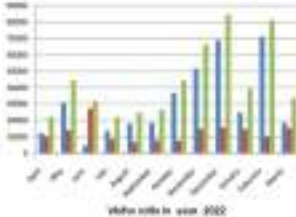
FAR Achieved: 2.76

Nearest Landmarks: Purand qada

Pragati maidan metro station

Delhi high court

National Gallery of Modern Arts etc.

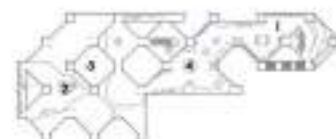


CLIMATIC ANALYSIS :

The climate of Delhi is an overlap between monsoon-influenced humid subtropical and semi-arid, with high variation between summer and winter temperatures and precipitation. In summer temperature ranges from 32°-39°C and in winter temperature ranges from 2°-20°C.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max. Temperature (°C)	24.5	27.5	32.5	37.5	42.5	47.5	47.5	42.5	37.5	32.5	27.5	24.5
Min. Temperature (°C)	7.5	10.5	15.5	20.5	25.5	28.5	28.5	25.5	20.5	15.5	10.5	7.5
Max. Humidity (%)	65	68	72	75	78	82	85	82	78	72	68	65
Min. Humidity (%)	25	28	32	35	38	42	45	42	38	32	28	25
Annual Rainfall (mm)	10	15	25	45	75	125	175	125	75	45	25	15
Annual Sunshine (hrs)	200	220	250	280	300	280	250	220	200	180	150	120

FLOOR PLANS :



1. Cafeteria
2. Auditorium
3. Seminar rooms
4. Exhibition area

GROUND FLOOR



1. Entrance
2. Administration
3. Exhibition area

FIRST FLOOR



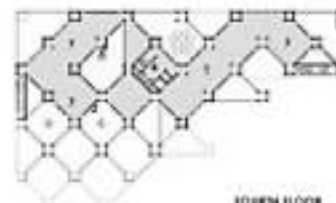
1. Library
2. Post Science Gallery

SECOND FLOOR



1. Indian Heritage Gallery
2. Dinosaur Gallery

THIRD FLOOR



1. Policy Exhibition

FOURTH FLOOR

Inferences:

- A forced movement between various floor don't allow the visitor to enter into the choice of selecting a particular gallery.
- Glass coated exhibits should have diffused or natural lighting or the glass used should be glass free so the user can see it properly.
- No natural light used in exhibition area, inclusion of natural light enhance the overall experience.

INTERIORS & EXHIBITS :



OBSERVATION : Seating was made like for children's age group. However use of yellow colour didn't fit the character of the user, no children in visitors.



OBSERVATION : Current exhibition located near the staircase looks quite messy, less use of natural lighting make some areas much darker. Suggestive use of artificial lighting to outline the need of lighting.

STRUCTURE (Observations) :

The entire structure works on a 5.75 X 5.5 mt. grid. The roof slab use of **precast waller units**. Structural columns are placed in the groups of four, providing larger free spans of 13.75 mt. To provide larger clear span in the auditorium, the columns lying in the middle were removed and the load was **distributed by cross girds to the periphery columns**.

SECURITY (Observations) :

The museum security not a problem of having too many entry/exit points, most of them closed and the centralized common access system is currently used by the staff and the visitors. The security surveillance was manual at the time of the design. Now CCTV camera have been installed.

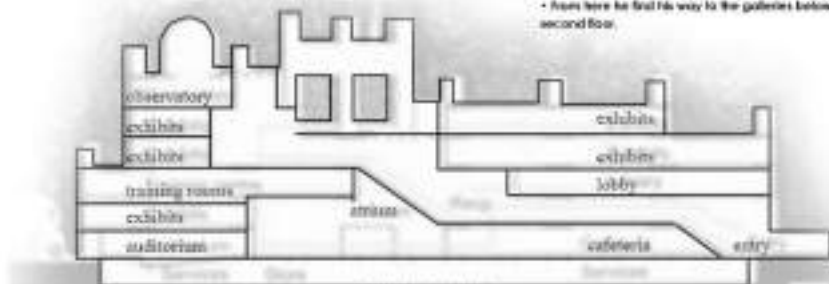
SERVICES (Observations) :

All services are located in the basement.
Electrical : Electricity loads amount **400KVA** and are taken care of by **two 300 KVA** stations.

Water : Water requirements are to the tune of **700 Kilo ltrs./Month** and is fulfilled by D.M. It is mostly required for the lighting, HVAC systems and general consumption. **40,000 ltrs** are kept **exclusively for the lighting purposes** (Sprinklers are installed in the basement and the alarm, smoke detector are present in the entire premises. Hydrant box is in the building yard) The building itself utilizes **hygro-pneumatic systems**. This system is located by roof top storage tank.

Sewer : The waste is sent directly to the main sewer line without any treatment.

Air-Conditioning : Central air conditioning is provided for the **auditorium and the seminar halls** only. Other rooms such as the **computer rooms** utilize room units. **200 tonnes capacity A.C. plant** provide air conditioning for the **auditorium**. Two additional **20 tonnes plants** provide air conditioning for the **seminar halls**.



NOTE : All plans & section are N.T.S.

NATIONAL SCIENCE CENTER, DELHI



Exterior view of National Science Center, Delhi



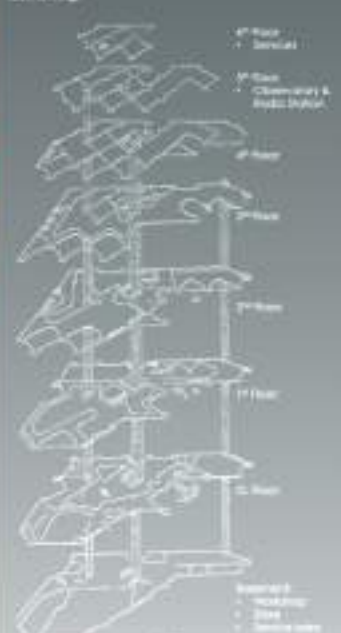
Site plan showing the location of the National Science Center, Delhi

Legend:
 Green: Public
 Red: Semi-Public

KEY FEATURE OF THE DESIGN :

CIRCULATION :

The museum uses a **FORCED SYSTEM OF CIRCULATION**. The channelled route through the exhibition area is recommended in the diagram. However, in the absence of **well defined movement patterns** within the galleries and containing basal of seating points, the circulation is **disorienting**.



CIRCULATION PATTERN :

- Visitor, upon entering on the first floor is taken to the third floor via escalator.
- Then he visits a half circuit of the third floor galleries, take the stairs to the fourth floor to do a complete loop of the galleries.
- Then he come down to the other half of the third floor.
- From here he find his way to the galleries below on the second floor.



INTRODUCTION :

Contemporary museums are forms of open education and they have to meet the growing demand for more information, more communication and thereby more activity. One of the most fascinating contributions to the design of scientific/technological museums is the "workshop centre", rather than an occasional display of exhibits with "do not touch" sign boards, and technical jargon, which offers nothing in visual form besides being a scientific encyclopedia. The workshop concept encourages public participation through visual demonstration. The Nehru Science Centre in Mumbai is one such workshop, which involves the visitor in a scientific experience, giving him participative role in experiments, so that he/she no longer remains a mere spectator.

LOCATION :

The Nehru Science Centre is located off E. Messe road, West, Mumbai. The northern and western sides of the complex are surrounded by busy roads making it impossible to link the structure with the planetarium on the western side. The entire complex spreads across a sloped north-south covering about 8 acres.

GENERAL INFORMATION :

Owned by the National Council of Science Museums (NCSM)

Designed by A. Acharya Kulkarni

Total plot area : 32.374 sq. m.

Total built up area : 5771 sq. m.

Completion year : 1988

DESIGN CONCEPT :

The site is naturally sloping in different directions. The architect deliberately worked to maintain and accommodate to the natural topographic of the site, in the form of split levels of module units. The void spaces of the metal mesh with grooves gives a more definite and dramatic character to the exterior. Also the use of perforated shafts for light is commensurately used to enhance the character of the building.

FLOOR PLANS :



Inferences :

- The split levels help in the visual connectivity of the spaces.
- The sequence of galleries plays an important role in designing a science centre.
- A balance between open and built spaces is achieved by landscaped areas.
- The services are enclosed within a shell which helps in maintaining the services easily.
- The building is climate responsive; the split levels of the building respond to the topography of the site.

CLIMATIC ANALYSIS :

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	October	Nov	Dec
Max Temperature (°C)	28.4	29.5	30.6	31.7	32.8	33.9	34.0	34.1	34.2	34.3	34.4	34.5
Min Temperature (°C)	18.5	19.6	20.7	21.8	22.9	23.0	23.1	23.2	23.3	23.4	23.5	23.6
Max Humidity (%)	65.0	66.0	67.0	68.0	69.0	70.0	71.0	72.0	73.0	74.0	75.0	76.0
Min Humidity (%)	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0
Annual Rainfall (mm)	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	100.0	110.0	120.0
Max Wind Speed (km/h)	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0	21.0
Min Wind Speed (km/h)	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0

Graph showing avg. min. & max. temperature & Precipitation of Mumbai.

- The climatic conditions of Mumbai are characterized by a **tropical climate**. In Mumbai the precipitation during summer is significantly higher in comparison to winter. The average annual temperature is **26.4 °C (79.4 °F)** in Mumbai. In a year, the rainfall is 2121 mm (83.5 inch).
- Due to its proximity to the equator, it is quite challenging to precisely delineate summer in Mumbai. The period of January, February, March, October, November, December is widely regarded as the peak season for visitation.

SITE PLAN :



- Block A :** This is the administrative office that has a total of 2 workshops to make exhibits that go to different science Centre's across India, or shown in the planetarium.
- Block B & C :** These blocks had different thematic galleries on different floors, each following a topic theme and theatre.
- Block D :** This block holds 2 galleries, 2 television hubs, auditoriums, wooden workshops, training halls and conference rooms.



- 2 Vehicles & Bicycles movement
- Service vehicle movement
- Bus movement (uses of Mumbai City, India bus and etc.)



OBSERVATIONS :

- The planning becomes multi directional in the sense that two blocks are placed at the ends with lift and stairs (shown in yellow) in between.
- The number of exhibition halls, of various levels, is connected by staircase balconies, furnished by skylights and other fully glazed passages.
- The restrictions on the number of windows in the exhibition halls has affected cross ventilation. Thus, forced ventilation became necessary and it was preferred because the other alternative of air conditioning the building was very expensive.
- The straight flight staircase and split levels have led to visual connection between the different floor levels. This helps in building the colony to explore among the visitors, especially children.
- Talks (green material) are placed on the balcony so that the maintenance for the same is easily accessed, the piping for the same is done with the help of duct shaft.

LANDSCAPING :



NEHRU SCIENCE CENTRE, MUMBAI



KEY FEATURES OF THE IMAGE



Extensive use of walls and to achieve long lasting heat gain.

S	T
• Balanced bioclimatically preserved. Protecting from ambient around the site.	• Use is clearly accessible from only one side.
• Site is close to Anantaram Mall, making it easily accessible.	• Lack of maintenance in the exterior causes leakage & many other problems.
	• Materials are not accessible.
O	T
• Because a landmark for an urban congregation.	• As building, around it still increasing height, within no time the science centre will lose its a
• It is an excellent architecture solution with respect to the concept. Highly encouraging study of science.	• Lack of modern technology with respect to air conditioning will make it hard to bring pollution to be controlled.

INTRODUCTION :

The Shanghai Astronomy Museum captivates architectural enthusiasts with its cutting-edge design and innovative spatial concepts. A harmonious blend of modern aesthetics and scientific functionality, this iconic structure stands as a testament to the seamless integration of art and astronomy in contemporary architecture. Drawing inspiration from astronomical principles, the design strategy provides a platform for the experience of orbit motion and utilizes light as a metaphorical reference and generator of form.

CONCEPT & ZONING :

Each of the buildings three principle forms - the orbits, the inverted dome, and the sphere acts as an astronomical instrument, tracking the sun, moon and stars and reminding visitors that our conception of time originates in distant astronomical objects.

The building form, program and circulation support the flow of visitors through the galleries and the experience of these three control bodies.



Diagram showing the flow of visitors through the museum.

LOCATION :

The museum is located within the Shanghai's ongoing New City of Pudong New Area district.

GENERAL INFORMATION :

Owned by the Shanghai Science & Technology Museum.

Designed by: **Ennead Architects**

Lead Architect: **Thomas Wong**

Plot area : 20000 m²

Completion year : 2021

FLOOR PLANS :



LEVEL 1



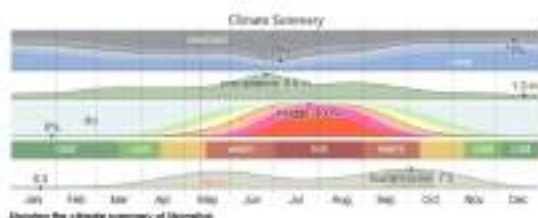
LEVEL 2



LEVEL 3

Inferences:

- Consideration of climatic factor on the built form.
- Use of organic shapes and providing prominent spaces in my design.
- To implement the use of local materials that are available and making the most out of it.
- Giving the spaces into various parts and arranging them, while considering the circulation.



Climatic Analysis :

In Shanghai, the summers are hot, oppressive, and mostly cloudy and the winters are very cold, windy, and partly cloudy. Course of the year, the temperature typically varies from 35F to 95F and rarely is below 27F or above 95F.

SITE PLAN :



1. Preface Hall
2. Lobby Atrium
3. Zooland Constellation
4. Planetarium
5. Auxiliary Sphere
6. Science Mall
7. Universal News Media
8. IMAX Theatre
9. Chinese Ancient Astronomy
10. Slide to Planet Paradise
11. Observatory and Library
12. Planetarium
13. Universal News Broadcasting Hall
14. Ticketing
15. Star Sky
16. Home Zones
17. Welcome Theatre

MATERIALS USED FOR CONSTRUCTION :

- Using cast-in-place concrete, glass, and a combination of perforated metal and some glass fibre reinforced panels.
- The sustainability of the building's meant to be space, minimal, almost plain.
- They architect want the building to feel quite abstract.
- Inside, A lot of white surfaces and a dark control between bright illumination & darker areas to one can sense the effect of sunlight.

EXHIBITS :



Observation : 12000 sq feet Digital Displays change the entire size and landscape of the museum, it also enhance the overall experience of the user by drawing them into the space/department.



Observation : Double heighted perforated metal screen provide lighting introduction & control.



Diagram showing how light enters & control through in project.

SHANGHAI ASTRONOMY MUSEUM



Developing aerial view of Shanghai Astronomy Museum



Location map showing the site and site level zoning.

Public Green Public Home

KEY FEATURES OF THE DESIGN :



Developing aerial view of the Shanghai Astronomy Museum



Developing interior view of the Shanghai Astronomy Museum



Developing interior view of the Shanghai Astronomy Museum



Diagram showing how light enters the space on different linkage of the site



Section through the museum and planetarium.



Diagram showing the flow of light through the museum.

Organic form
Technological
Approach
Spaces

CHENGDU SCIENCE FICTION MUSEUM

INTRODUCTION :

The Chengdu Science Fiction Museum is a milestone that fuses art, architecture and the limitless imagination of science fiction, designed by Zaha Hadid Architects (ZHA). Located in the heart of Chengdu New Science and Innovation City, near to the picturesque Jingsong Lake, the museum integrates seamlessly with the nature surrounding area, creating a harmonious connection between architecture and the natural environment. The Chengdu Science Fiction Museum covers an immense 39,000 square metres and includes various facilities, from exhibition galleries to a multi-purpose hall, a conference center and visitor amenities.

CONCEPT & ZONING :

The design, reminiscent of an expanding nebula, radiates from a central point, resembling a star, and gives it a unique appearance. The museum appears to float on the surface of the lake, fusing architectural beauty with nature, using defined pedestrian routes, guests are invited to visit different activity zones on a journey of discovery that weaves between indoor and outdoor spaces. The park around the museum collects and stores rainwater for natural filtration and reuse, enabling the lake to become an integral part of Chengdu's sustainable drainage system, which will mitigate flooding.

LOCATION :

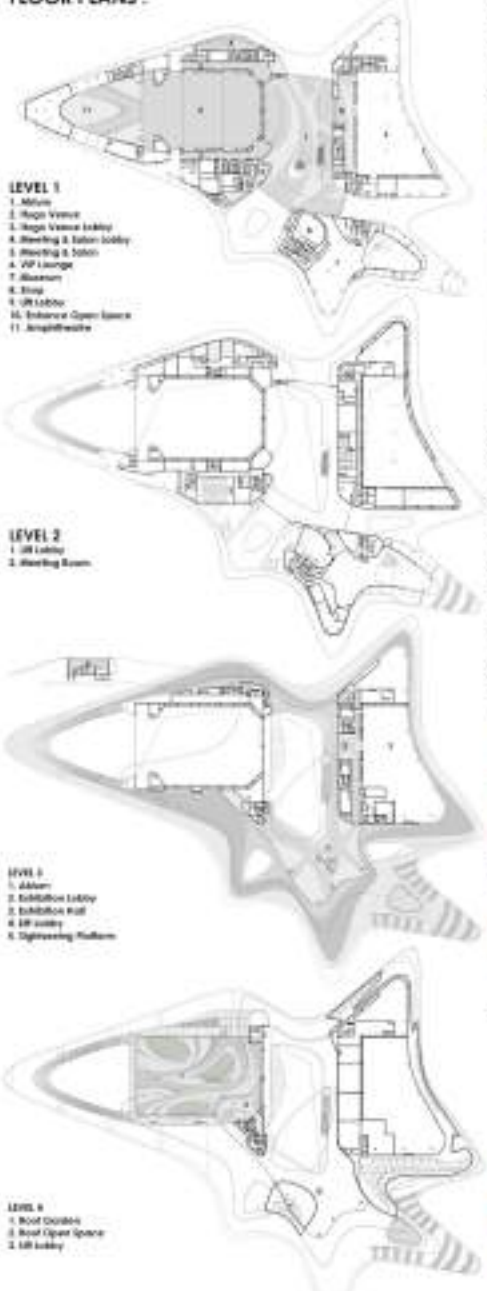
The futuristic museum is located in the heart of the Fubei district in Chengdu, China, near to the picturesque Jingsong Lake.

GENERAL INFORMATION :

Owned by: Municipal Government
Designed by: Zaha Hadid Architects
Design Architect: Patrick Schumacher
Built-up area: 39000 m²
Completion year: 2023

The Museum has opened for hosting the World Science Fiction Convention (WorlSci) and Hugo Awards, the two major sci-fi events, have taken place in China.

FLOOR PLANS :



CLIMATIC ANALYSIS :

Month	January	February	March	April	May	June	July	August	September	October	November	December
High Temperature (°C)	12.1	12.1	13.9	16.1	18.3	20.5	22.7	24.9	27.1	29.3	31.5	33.7
Low Temperature (°C)	-1.1	-0.7	1.1	3.3	5.5	7.7	9.9	12.1	14.3	16.5	18.7	20.9
Air Temperature (°C)	5.5	5.7	7.5	9.7	11.9	14.1	16.3	18.5	20.7	22.9	25.1	27.3
Humidity (%)	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7
Wind Speed (m/s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

Showing the climate summary of Chengdu.
The climate of Chengdu is temperate, with relatively cold winters, and hot, muggy and rainy summers. Chengdu is the capital of the Sichuan Province and is located in southwestern China, shortly distant from the mountains, so it is quite cold in winter, while in summer, it is not as hot as nearby Chongqing (which is famous for being a hot city).

SITE PLAN :



The site-level planning prioritizes accessibility and connectivity, with well-designed pedestrian pathways & transportation infrastructure to facilitate easy access for visitors from various parts of Chengdu. Visitors can access the building from the city and nearby subway stations in its walking through the adjacent park.
Carefully integrated the museum with its surroundings, ensuring that the building complements the natural landscape and enhances the overall urban environment.

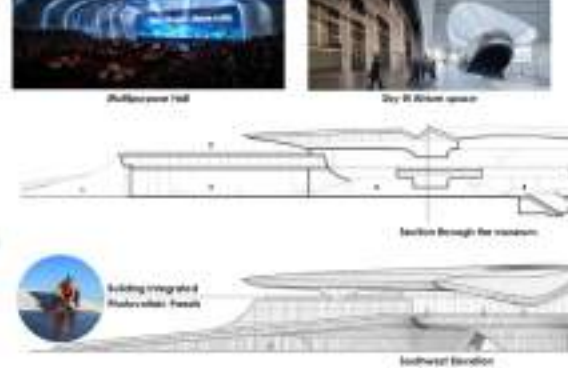
SUSTAINABLE ASPECTS :

For meeting the highest 3-Star standards of China's Green Building program following points were considered:

- The museum's design has been developed through detailed digital modeling analysis to maximize efficiency in composition, site conditions, solar radiation & structure.
- Natural hybrid ventilation optimizes Chengdu's mild subtropical climate to provide comfort for visitors and staff members throughout the year.
- Photovoltaics embedded within the museum's large roof canopy contribute to meeting the building's energy demands.
- The dimensions of the roof have been calculated to shade the glazed facades in summer.
- Integrate with green roofs native to the region, the design collects and stores rainwater for natural filtration and reuse.

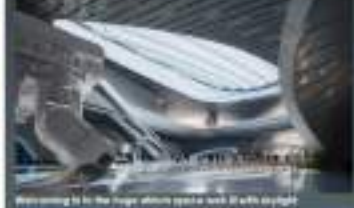
SPATIAL PROVISIONS :

To provide maximum flexibility to host the widest variety of exhibitions, conferences, and events, the 39,000 sq. m Chengdu Science Fiction Museum includes:



Showing aerial view of Chengdu Science Fiction Museum.

KEY FEATURES OF THE DESIGN :



Viewing hall in the future, where guests walk in with delight.



Interior view of the museum.



Interior view of the museum.



Exterior view of the museum at night.



Roof plan diagram.

Inferences:
The design of the museum features fluid forms and dynamic curves embedding a futuristic aesthetic.
The museum seamlessly integrates with its natural surroundings, creating a harmonious relationship between the built environment and the landscape.
Innovative use of Glass, Steel, & Concrete reinforced concrete panels are utilized in the museum's construction, ensuring both structural integrity and visual transparency.
The museum serves as a community hub, fostering engagement through educational programs, workshops, and events centered around science fiction and technology.



Street Lighting on Roof & Facade

01. PROJECT NAME	NATIONAL SCIENCE CENTRE, DELHI (LIVE CASE STUDY)	NEHRU SCIENCE CENTRE, MUMBAI (LIVE CASE STUDY)	SHANGHAI ASTRONOMICAL MUSEUM, SHANGHAI (BOOK CASE STUDY)	CHENGDU SCIENCE FICTION MUSEUM, CHENGDU (BOOK CASE STUDY)
02. ARCHITECTURAL STYLE	 Functionalised approach with remnants of Brutalist	 Brutalist & Regionalism	 Parametricism	 Parametricism
03. DESIGNED BY	Ai. Achyut Kamnitske	Ai. Achyut Kamnitske	Ennead Architects	Daha Hadid Architects
04. LOCATION	Delhi, India	Mumbai, India	Shanghai, China	Chengdu, China
05. CLIMATE TYPE	Humid Sub-tropical & Semi-Arid	Tropical Wet & Dry	Humid Sub-tropical	Temperate
06. PLOT AREA	7,000 Sqm.	32,000 Sqm.	39,000 Sqm.	39,000 Sqm.
07. BUILT-UP AREA	19,542 Sqm.	6,291 Sqm.		
08. COMPLETION YEAR	1992	1982	2021	2023
09. TYPE OF USERS	Govt. Students, Academic.	Govt. Students, Academic.	Tech Enthusiasts, Students etc.	Tech Enthusiasts, Students etc.
10. AVG. FOOTFALL	3 Lakhs (Annually)	7 Lakhs (Annually)	10 Lakhs (Annually)	12 Lakhs (Annually)
11. CONCEPT	To engage, educate and entertain the visitor through thematic exhibitions.	Designed by preserving natural topography via modular units on different levels.	Derives in design such as Astronomical Instruments & Astronomical Objects.	The design reminds of an expanding nebula, radiates from a central point, resembling a star.
12. INTERIOR STYLE	 Traditional style w/ thematic touch for exhibits.	 Traditional style with lots of colors to attract kids.	 Parametric & fluid interior w/ microclimate touch.	 Parametric & fluid interior w/ microclimate touch.
13. SITE CONNECTIVITY	The site is accessed by the Bhamburda main road from the south side.	The site accessed by only one main road which is Dr. B.A. Road on the north-west side.	The site can be accessed by two roads, Dr. Jang Road & Xiangyang Rd.	The site can be accessed only by Jingfeng Rd Road from south-western side.
14. SPATIAL PROVISION	Cafeteria, Auditorium, Exhibition Area, Seminar Room, Thematic Galleries, Library, Admin. Area, Training Rooms, Observatory.	Thematic Galleries, Auditorium, Projection Room, Conference Room, Computer Lab, Video Lab, Cafeteria, Multipurpose Hall.	Science Mall, IMAX Theatre, Planetarium, Universal News Studio, Regular Office Area, Tea Room, meeting Room, At-Ribity Spheres.	Museum, Shop, Amphitheatre, Multipurpose Hall, Lightening Platform, Roof Garden, Meeting Room, Meeting and Salon.
15. PLANNING	Designed the structure with geometric shapes that's why angular walls can be seen. Divided the exhibits across on different floors.	To retain the natural topography of the site planning was carried out by placing modular units on multiple levels.	The structure is Organic in form. It is carried out by dividing the space into Zones - Private, Public, Semi-Public zone.	Conceptual design approach for planning. Designed the structure as multipurpose facility, used for events like Hugo awards, conferences etc.
16. CIRCULATION	Forced circulation system don't allow the visitor to enter into the choice of gallery they want.	Multi-Directional circulation system helps visitor to enter into the choice of space they want.	Optimal flow of the visitor sequence throughout the Museum exhibits.	Free flowing circulation system, Connecting the spaces via escalator & elevator.
17. EXHIBITS STYLE	Traditional glass enclosed exhibits, stands on exhibits, Science experiment exhibits.	Traditional glass enclosed exhibits, Hands on exhibits, Science experiment exhibits.	Interactive and Digital exhibits, Live simulations, Mixed reality exhibits, feeding installations.	Interactive and Digital exhibits, Live simulations, Mixed reality exhibits.
18. LIGHTINGS	Natural - Use of natural lighting. Artificial - Extensive use of artificial lightings.	Natural - Use of natural lighting. Artificial - Extensive use of artificial lightings.	Natural - Lots of natural light via Skylights. Artificial - Dynamic & Smart Lighting systems.	Natural - Lots of natural light via Skylights. Artificial - Dynamic & Smart Lighting systems.
19. MATERIALS USED	Aggregate plaster using local Delhi blue quartz stone chips with bands in Dimpur stone chips.	Finished with local grey stone, gilt plaster with grey cement panels. Iron safe is also used.	GFRP panels, cast-in-place concrete, & faceted anodized aluminum panels.	Glass Fibre reinforced concrete panels, steel, Low-C Glass etc.
20. RELEVANCE	Circulation pattern, Museum design in Indian context, and Spatial provision.	Circulation pattern, museum design in Indian context, and Spatial provision.	Parametric & Organic Form, Technologies, Design features, and Spatial provision.	Parametric & organic Form, Technologies, Design features, and Spatial provision.
21. INFERENCES	<ul style="list-style-type: none"> Glass covered exhibits should have diffused or natural lighting or the glass used should be glare free so the user can see it properly. A forced movement between various floor don't allow the visitor to enter into the choice of selecting a particular gallery. 	<ul style="list-style-type: none"> The split levels help in the visual connectivity of the spaces. A balance between open and built spaces is achieved by landscaped areas. The sequence of galleries are important. 	<ul style="list-style-type: none"> Consideration of climatic factors on the built form. Use of inorganic shapes and providing prominent spaces heights accordingly. Locally available materials are used. 	<ul style="list-style-type: none"> The museum seamlessly integrates with its natural surroundings, creating a harmonious relationship between the built environment and the landscape. Fluid form and dynamic curves, embodying a futuristic aesthetic.
22. FEATURAL TAKEAWAYS	 Entrance from 1st floor (Grand entrance)	 Visual connection between the floors.	 Inverted dome w/ skylight & light trap.	 Double weighted galleries for floating installations.

DESIGN GOALS

DESIGN STRATEGIES

FUTURISTIC INFRASTRUCTURE



Create a design that embodies futuristic elements, reflecting the theme of science fiction. Integrate architectural forms, materials, and technology to create a visually striking facade which plays an important role. Innovative approach involves a dynamic ambience inspired by science fiction imagery and concepts which cut bar the lines between reality and fiction.

COLLABORATIVE SPACES



Requirement of areas for discussion, workshops, and events where visitors can connect with each other and participate in ongoing dialogue about the intersection of science, technology, and society. These spaces provide opportunities for visitors to exchange ideas, and participate in collaborative activities. Collaborative spaces encourage visitors to explore and collaborate content, enhancing their overall museum experience.

INCLUSIVE DESIGN



Inclusive design within the science fiction museum project focuses on creating an environment that accommodates the diverse needs of all visitors, regardless of age, ability, or background. The entails incorporating features to ensure accessibility for individuals with physical disabilities. Additionally, inclusive design considers the needs of neurodiverse individuals by providing quiet spaces, sensory-friendly exhibits, and clear wayfinding signage.

FLEXIBLE SPACES



Flexible spaces in the design of a science fiction museum aim to accommodate diverse activities, exhibits, and events while allowing for easy adaptation and reconfiguration over time. These spaces are designed to facilitate the seamless transformation of the museum environment to suit changing needs and preferences by providing flexibility in spatial arrangements, the museum can host a wide range of gatherings, catering to different audiences and interests.

GREEN BUILDING PRACTICES



Incorporating green building practices into the design of a science fiction museum project involves implementing sustainable construction techniques, materials, and systems to minimize environmental impact and promote energy efficiency. By integrating such practices like the design, the project not only reduces its environmental footprint but also serves as a model for sustainable architecture and promotes awareness of environmental stewardship within the community.

INTERACTIVE EXHIBITS



Interactive exhibits serve as a critical design goal for a science fiction museum project, aiming to engage visitors in immersive and participatory experiences that foster curiosity, exploration, and learning. These exhibits leverage cutting-edge technologies, including virtual reality and interactive interfaces to transport visitors into fantastical worlds, futuristic scenarios, and speculative realms inspired by science fiction literature, film, and art.

MULTIMEDIA PRESENTATIONS



Incorporating multimedia presentations as a design goal for a science fiction museum project involves utilizing a variety of digital media formats to enhance storytelling, engagement, and immersion for visitors. By leveraging multimedia technologies, the museum can bring science fiction narratives to life in dynamic and captivating ways, allowing visitors to explore futuristic worlds, interact with iconic characters, and delve into speculative scenarios.

SENSORY EXPERIENCES



Integrating sensory experiences as a design goal for a science fiction museum project involves engaging visitors through innovative and multisensory stimuli that evoke emotions, spark imagination, and deepen understanding of science fiction themes. By integrating sensory experiences into the museum design, visitors are enveloped in a multisensory journey that stimulates their senses, ignites their imagination, and fosters a deeper appreciation for the wonders of science fiction.

TOURIST ATTRACTION



Making the science fiction museum a tourist attraction involves designing the museum in a way that not only captivates and engages visitors but also appeals to a broad audience, drawing tourists from near and far. Iconic architecture and strategic location play a vital role. By prioritizing the goal of making the science fiction museum a tourist attraction, the design aims to not only attract tourists from Delhi but from all over the world, who are fascinated and future enthusiasts.

REVENUE GENERATION



Revenue generation as a design goal for a science fiction museum project involves implementing strategies to ensure the sustainability and financial viability of the museum. By implementing some revenue generation strategies, the science fiction museum can ensure its financial sustainability and continue to deliver enriching experiences for visitors while contributing to the cultural and economic development of the community.

- **Innovative Form & Volume** : Inclusion of unconventional architectural forms inspired by Sci-Fi themes, Possibilities or concepts.
- **Streamlined Minimalist Design** : Emphasize clean lines, geometric shapes, and smooth surfaces to create a sleek and minimalist exterior.
- **Advanced Building Materials** : Experiment with materials that have reflective or translucent properties to create dynamic visual effects.
- **Transparency and Openness** : Design the museum with large windows, glass facades, and open plans to create a sense of transparency and openness.

- **Multipurpose Halls** : Multipurpose halls can be used to host different community level events like Confs, Confs, HR events etc.
- **Open Spaces** : Inclusion of open spaces so different communities can gather and discuss about their respective interests/games.
- **Workshop Areas** : Workshop areas can be required for people to encourage them towards hands-on workshop events.
- **Auditoriums** : Auditoriums are required for regular seminars, award shows, book conventions, celebrity meetups, related events which also draw additional revenue generation like seating for such events and help museum to become financially self-sustained.

- **Wheelchair Ramps & Elevators** : Inclusion of wheelchair ramps and elevators are must in a public building for ease in circulation for each and every individual who are using the ducts.
- **Special Provisions for Neurodiverse Individuals** : Provide quiet spaces, sensory-friendly exhibits, and clear wayfinding signage etc are good for neurodiverse individuals.
- **Tactile Flooring Or Signages** : facilities can help blind people for easy navigation of the routes or information about the exhibits or the spaces.
- **Language Accessibility** : Language accessibility is also prioritized through multilingual exhibits and audio guides.

- **Convertible Spatial Arrangements** : Provide like movable partitions etc can transform the virtual space into a bigger area so more people can gather together or more exhibits can be placed sometime during special events or occasions.
- **Movable or Non-Fixed Exhibits** : Movable or non-fixed exhibits can take less up large amount of space for other events or meetings.

flexible spaces enhances the museum's capacity to evolve and respond to the existing demands and expectations of its audience while ensuring a welcoming and inclusive environment for all.

- **Renewable Energy Integration** : Incorporating renewable energy sources such as solar panels to generate on-site renewable energy and reduce reliance on fossil fuels.
- **Water Conservation** : Implementing water-efficient fixtures, rainwater harvesting systems, and drought-tolerant landscaping to reduce water usage and minimize drain on local water resources.
- **High-Performance Building Envelope** : Designing a well-insulated building envelope with energy-efficient windows and doors to minimize heat gain or loss, and natural lighting requirements to improve indoor comfort and reducing energy consumption.

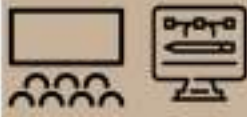
- **Use Simulators** : Allow visitors to experience what it's like to be an astronaut on a space mission, using a simulated spacecraft cockpit and control panel to navigate through space, land on distant planets, and conduct scientific experiments.
- **AR/VR Experiences** : Visitors can immerse themselves in virtual environments inspired by popular science fiction settings, such as exploring alien planets or navigating space stations etc.
- **Projection Mapping Shows** : Utilize projection mapping technology to create immersive visual displays that transform the museum's architecture into dynamic canvases.

- **Digital Art Installations** : Commission digital artists to create interactive digital art installations that explore themes of science fiction, technology, and human, using innovative techniques.
- **Interactive Holographic Displays** : Install interactive holographic displays that allow visitors to interact with holographic projections of characters, objects, and environments from science fiction films etc.
- **Multisensory 4D Cinema** : Offer a multisensory 4D cinema experience where visitors can enjoy science fiction films enhanced with special effects such as motion seats, wind, water sprays, and scents, creating a fully immersive viewing experience.

- **Visual Stimuli** : Utilize dynamic lighting effects, captivating visual displays, and futuristic architectural elements to create visually stunning environments that transport visitors to otherworldly realms.
- **Auditory Elements** : Incorporating ambient soundscapes, sound effects, and narrated storytelling to enhance the atmosphere and evoke the auditory dimension of science fiction narratives.
- **Tactile Interactions** : Offering tactile exhibits, interactive touchscreens, and haptic feedback that allow visitors to physically engage with props, models, and artifacts, fostering a deeper connection to the museum's themes.

- **Iconic Architecture** : Creating a visually striking and iconic architectural design that stands out in the cityscape and becomes a landmark attraction in itself, enticing tourists to visit.
- **Strategic Location** : Choosing a central and accessible location within Delhi that is well-served by public transportation and is situated near other tourist attractions, maximizing its visibility and appeal to tourists.
- **Multilingual Support** : Providing multilingual support, including signage, audio guides, and educational materials, to accommodate international tourists and enhance their understanding and enjoyment of the exhibits.

- **Ticket Sales** : Implementing a ticketing system with various pricing tiers to accommodate different visitor demographics, such as adults, children, seniors, and students.
- **Merchandise Sales** : Establishing a gift shop within the museum that sells science fiction-themed merchandise, memorabilia, books, and so on. Collaborating with local artists and vendors to offer unique and exclusive products that appeal to visitors.
- **Event Hosting** : Renting out museum spaces for private events, book signings, conventions and conferences. Offering customizable event packages with add-on services such as catering, audiovisual equipment rental, and guided tours.



DESIGN PROGRAM :

Sl. No.	Program	Activity	No. of Units	Area (sq. ft.)	Volume (cu. ft.)	No. of Storey	Remarks		
1	Entrance	Plaza	No. design	-	-	-	Case study		
		Plaza	1	100	100	100			
		Reception / Waiting	1	20	20	20			
		Security check	1	20	20	20			
		Travelling shop	1	20	20	20			
		Travel Shop & Museum	4x 1000	400	400	400			
Total				560	560				
2	Museum Block	Director's cabin at 10th	1	20	20	2	Case study		
		Chief Architects cabin	1	20	20	2			
		Customer cabin at 10th	1	20	20	2			
		Chief architect cabin	1	20	20	2			
		Technical officers room	1	20	20	2			
		Manager office room	1	20	20	2			
		Projector cabin	1	20	20	2			
		ITF control	1	20	20	2			
		Meeting room	1	20	20	2			
		Performance space	1	20	20	15.00			
		Plaza	1	20	20	20			
		Director cabin room	1	20	20	20			
		Travel Shop & Museum	4x 1000	400	400	400			
Total				560	560				
3	Entertainment Zone	Entertainment Zone	1	100	100				
		Information	1	100	100				
		Convenience Marketplace	1	20	20				
		Security Shop	1	20	20				
		Water	1	20	20				
		4	Exhibition Gallery	Permanent Themed Exhibition					Case study & Background study
				Exhibition Gallery	1	200	200	200	
				Gift & TV gallery	1	200	200	200	
				Multimedia Gallery	1	200	200	200	
				Interactive gallery	1	20	20	20	
				Open Light Gallery	1	200	200	200	
				Temporary / Special Exhibition Gallery	1	200	200	150.00	
				Interactive Media Gallery	1	200	200	200	
3D Light Gallery	1	200	200	200					
5	Entertainment Zone	Entertainment Zone (1 Floor)	1	20	20		Background study & Analysis		
		Entertainment Zone (2 Floor)	1	20	20				
Total				560	560				
6	Services	Travel Shop & Museum (Area)		4x 1000					
		Marketing Room	1	20	20				
		Reception Room	1	20	20				
		Security Room	1	20	20				
		Locker Room	1	20	20				
		Locker's Changing Room	1	20	20				
		Wife Corridor Room	1	20	20				
		Staff room	No design	-	-	-			
		Total				200	200		
		7	Retail	Retail at 10th	1	100	100		
				Foodcourt	1	20	20	20	Case study
Director's cabin at 10th	1			20	20	2	Case study		
Chief Architects cabin	1			20	20	2			
Customer cabin at 10th	1			20	20	2			
Technical officers room	1			20	20	2			
IT Plaza	1			20	20	2			
Projector Room	1			20	20	2			
Meeting Room	1			20	20	2			
Performance space	1			20	20	15.00			
Plaza	1			20	20	20			
Director cabin room	1			20	20	20			
Total				560	560				
8	Services	Travel Shop & Museum (Area)		4x 1000					
		Marketing Room	1	20	20				
		Reception Room	1	20	20				
		Locker's Room	1	20	20				
		Locker's Changing Room	1	20	20				
		Wife Corridor Room	1	20	20				
		Staff room	4	20	20				
		Total				200	200		
		9	Retail	Retail at 10th	1	100	100		
				Foodcourt	1	20	20	20	Case study
				Director's cabin at 10th	1	20	20	2	Case study
				Chief Architects cabin	1	20	20	2	
				Customer cabin at 10th	1	20	20	2	
Technical officers room	1			20	20	2			
IT Plaza	1			20	20	2			
Projector Room	1			20	20	2			
Meeting Room	1			20	20	2			
Performance space	1			20	20	15.00			
Plaza	1			20	20	20			
Director cabin room	1			20	20	20			
Total				560	560				
10	Retail	Entertainment Zone	1	100	100				
		Information	1	100	100				
		Convenience Marketplace	1	20	20				
		Security Shop	1	20	20				
		Water	1	20	20				
		11	Exhibition Gallery	Permanent Themed Exhibition					Case study & Background study
				Exhibition Gallery	1	200	200	200	
				Gift & TV gallery	1	200	200	200	
				Multimedia Gallery	1	200	200	200	
				Interactive gallery	1	20	20	20	
				Open Light Gallery	1	200	200	200	
				Temporary / Special Exhibition Gallery	1	200	200	150.00	
				Interactive Media Gallery	1	200	200	200	
3D Light Gallery	1	200	200	200					
12	Entertainment Zone	Entertainment Zone (1 Floor)	1	20	20		Background study & Analysis		
		Entertainment Zone (2 Floor)	1	20	20				
Total				560	560				
13	Site Service	Site Plant room	1	20	20		Case study		
		Site Bus stop	1	20	20				
		Site Plant room	1	20	20				
		Site Corporation	1	20	20				
		Site Plant room	1	20	20				
		Site Management	1	20	20				
Total				120	120				
14	Utility System	High Capacity	1	20	20		Background study & Analysis		
		Plaza	1	20	20				
Total				40	40				
15	Parking	1st Floor	1	20	20		Case study		
		2nd Floor	1	20	20				
		Plaza	1	20	20				
Total				60	60				

DESIGN OBJECTIVES :

- To create a Science Fiction Museum in Delhi which will be remembered as an iconic landmark under the Government's central city realignment project.
- To develop the project with a public approach right from the site level spring to the materials used in the project.
- To contribute to the GDP by making the museum a world class landmark and a tourist spot for the revenue generation and attract the tourists.

DESIGN CONSIDERATIONS :

Design considerations play vital role in every project and it helps to finalize the idea & vision behind the project. There are several design considerations which cannot be avoided. Some are listed below:



Futuristic Design : Make future is to make the museum look modern and futuristic rather than traditional.



Circulation Pattern : The circulation pattern of the museum should be user-friendly and not a forced motion.



Unobstructed flow & Wayfinding : Simple flow helps to manage the people and signage would help the user to navigate.



Vibrant Interiors : Dynamic lighting and vibrant interiors will elevate the whole experience for the user.



Material : The finish on interior sections should be thoughtful, it emphasizes the look, the feel and the overall experience.

Design Guidelines :

Futuristic Aesthetics : Incorporate architectural elements and design features that evoke the futuristic ambience of science fiction, while maintaining functionality and practicality.

Thematic Zoning : Organize the museum into distinct thematic zones that explore different facets of science fiction, such as space exploration, dystopian futures, artificial intelligence, and extraterrestrial life.

Interactive Exhibits : Integrate cutting-edge technology and multimedia installations to create interactive exhibits that offer hands-on experiences and encourage visitor engagement.

Flexible Spaces : Design flexible exhibition spaces that can accommodate both permanent and temporary exhibits, allowing for dynamic content updates and thematic curators.

Sustainability : Implement sustainable design principles and environmentally friendly practices throughout the museum, minimizing environmental impact and promoting long-term sustainability.

AUTHORITIES IN DELHI :

FWD : Public Works Department is the premier agency of Govt. of Delhi engaged in planning, designing, construction and maintenance of Government works in the field of both environment and infrastructure development. Areas in built environment include Hospitals, Schools, Colleges, technical institutes, Police Buildings, Plazas, Courts etc. areas in infrastructural development include Roads, Bridges, Flyovers, Footpaths, Subway etc.

DDA : Delhi Development Authority (DDA) was created in 1957 under the provisions of the Delhi Development Act "to promote and secure the development of Delhi".

The DDA is responsible for planning, development and construction of Housing Projects, Commercial Land, Land Management, Land Disposal, Land Pooling, Land Ceiling etc.

NOTE :

Above calculations are tentative and based on the case studies and background analysis.

INTRODUCTION :

The site selected for the proposal of a Sci-Fi Museum & Entertainment Hall in Delhi, situated on the western bank of the Yamuna River near Pragati Maidan, offers a strategic location with easy accessibility & proximity to the city's cultural & entertainment districts. Its scenic waterfront setting provides a unique opportunity to create an iconic architectural landmark that integrates seamlessly with the surrounding urban fabric, while offering visitors an immersive experience of the intersection of science fiction & reality.

LOCATION :

Behind Pragati Gula Ring Road, 1st Floor Ring Road New Delhi, Haryana, INDIA, DGH, Delhi 110002

GENERAL INFORMATION :

Total site area for **Nav Bharat Udyan** : 25 acres.
Total site area for **Iconic Structure** : 8.65 acres ~ 30000 sq ft
Height allowance for **Iconic Structure** : 134 m

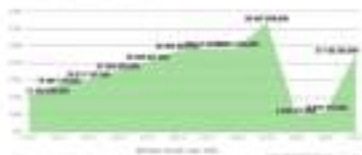
WHY DELHI & NOT OTHER CITIES ?

Delhi serves as an ideal location for a sci-fi museum due to its status as India's capital and cultural hub, with its rich history, burgeoning tech industry, and growing interest in science fiction. Delhi provides a fertile ground for a museum that celebrates the genre's impact on society, technology and imagination.

Moreover, the city's strategic location and excellent transportation infrastructure ensure accessibility to visitors from across the country and around the world, making it a prime destination for such a unique and visionary institution.

TOURISM IN DELHI :

According to the Ministry of Tourism, Approx. 8.56 lakh (8,56,000) **Foreign Tourist Arrivals (FTAs)** were recorded in Delhi as per top 8 International Cities. Forc. during 2021. **Delhi Secured 2nd rank in Total Foreign Tourist Visits in 2021** with total visits of 9.35L.



Graph showing the visitors arrivals in Delhi over the years.

Visitor Arrivals: Local Delhi data was reported of 27,16,20,000 Person in 2022. The records are available from the previous number of 10,64,047,000 Person for 2021.

As of 2017, worldwide **Delhi is ranked 28th** by the number of foreign tourist arrivals, while **Mumbai is ranked 30th**.

CLIMATIC ANALYSIS OF DELHI :

The climate of Delhi is an overlap between monsoon-influenced humid subtropical and semi-arid, with high variation between summer and winter temperatures and precipitation. In summer temperature ranges from 30°-38°C and in winter temperature ranges from 3° - 21°C.



Showing the climate analysis of Delhi.

AUTHORITIES IN DELHI :

PWD : Public Works Department is the premier agency of Govt. of Delhi engaged in planning, designing, construction and maintenance of Government assets in the field of built environment and infrastructure development. Assets in built environment include Hospitals, Schools, Colleges, Technical Institutes, Police Buildings, Prisons, Courts etc. assets in infrastructure development include Roads, Bridges, Flyovers, Footpaths, Subways etc.

DDA : Delhi Development Authority (DDA) was created in 1957 under the provisions of the Delhi Development Act to promote and execute the development of Delhi.

The DDA is responsible for planning, development and construction of Housing Projects, Commercial Lands, Land Management, Land Disposal, Land Paving, Land Clearing etc.



LAWS FOLLOWS IN DELHI :

MRB for Delhi 2016
Building bye-law by DDA
DVCAC for ISD

WHY THIS SITE ?

The site is located on the western bank of Yamuna river and also a part of "Nav Bharat Udyan" or "New India Garden" project. The main intent to take this site for ADP is to work as a live project.

NAV BHARAT UDYAN : AN OVERVIEW

Central Vista Development / Redevelopment Master Plan envisions to redevelop Central Vista as a world class public space, restore its grandeur as an architectural icon, house modern facilities for efficient functioning of administrative, strengthen cultural institutions and commemorate 75 years of India's Independence.

Under the Master Plan, the Central Vista Axis will be virtually extended from present 2.7 km to 4.3 km on eastern part to culminate at western bank of River Yamuna, to restore in pursuance of the original design vision of Central Vista and stretch from "Kirti to River" in order to realize the grand vision of "Akhil Bharat, Nav Bharat Udyan (New India Garden)" planned on the western bank of the river.

Spread over 25 acres, the Udyan will be open to the public and is being designed to have international facilities viz. **Digital Sphere of Unity, Journey of India museum, Tech Dome and Open-Air Theatre**. It showcases India's rich historical and cultural heritage, scientific achievements and symbolize Unity in Diversity and aspirations of a New India.

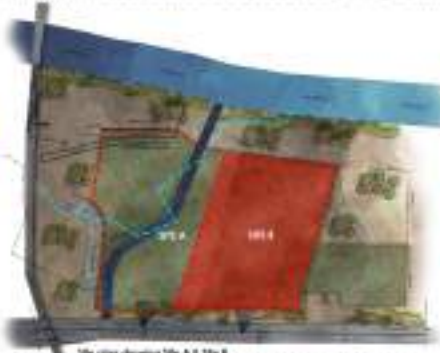


Showing the extension of Central Vista towards western and eastern banks of Yamuna River.

DESIGN COMPETITION FOR ICONIC STRUCTURE IN NAV BHARAT UDYAN (NEW INDIA GARDEN), NEW DELHI

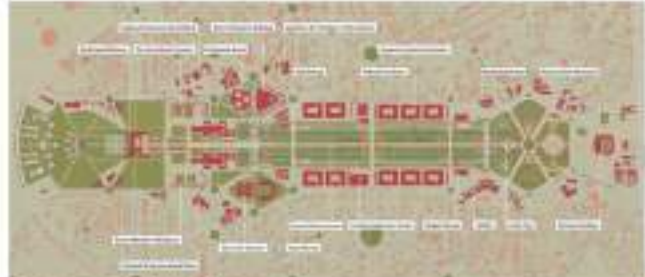
The main intent behind the inclusion of iconic structure was to showcase India's rich historical and cultural heritage, scientific achievements and symbolize Unity in Diversity and the technological advancements of a New India.

- Iconic & Daring :** The structure should be iconic in design & represent the technological advancements.
- Futuristic :** The structure should be designed with futuristic vision.
- Resilient :** The iconic structure should be constructed with materials & technology which would last for ages.
- Appropriate :** The iconic structure should represent values and aspirations of New India.
- Indigenous :** The iconic structure should be constructed with indigenous material.



CENTRAL VISTA REDEVELOPMENT PROJECT :

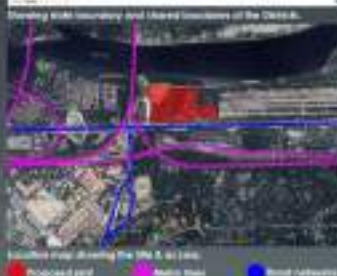
Central Vista Redevelopment Project refers to the ongoing redevelopment to revamp the Central Vista, India's central administrative area located near Raisina Hill, New Delhi. The area was originally designed by Edwin Lutyens and Herbert Baker during British colonial rule and was retained by the Government of India after Independence.



Proposed master plan of Central Vista by MCD. Source: MCD.

The core of the Central Vista Redevelopment project, which also includes a Common Central Secretariat (and the Secret Protection Group (SPG) building, has been estimated to be around ₹13,450 crore (equivalent to ₹140 billion or \$192.0 billion in 2023) spread over four years.

SITE SELECTION BASED ON THE FACTORS



NEWSPAPER ARTICLES

THE TIMING OF INDIA

'Nav Bharat Udyan'- CPWD seeks Fresh Design Entries early from architects & architectural firms

Delhi, 12 Nov 2022

CPWD is seeking fresh design entries for the iconic structure in Nav Bharat Udyan, New Delhi. The entries should be submitted by 15 Nov 2022.

The Indian Express

Trees along Yamuna's west bank to make way for Central Vista garden

Delhi, 12 Nov 2022

The government is planning to clear trees along the Yamuna riverbank to make way for the Central Vista garden.

ARTICLE RELATED TO THE CUTTING OFF TREES AND MAKING THE EXPANSION OF THE CENTRAL VISTA OF DELHI IN THE HINDUSTAN TIMES NEWSPAPER. PUBLISHED ON 13 Nov 2022.

LINK: <https://www.hindustantimes.com/delhi/trees-along-yamuna-to-be-cut-off-to-make-way-for-central-vista-garden-101691191>

Hindustan Times

Government plans Tech Museum in Delhi to showcase emerging, future technologies

Delhi, 12 Nov 2022

The Union Government plans to set up a Tech Museum in Delhi to showcase emerging and future technologies of India.

ARTICLE RELATED TO GOVT PLANNING TECH MUSEUM IN DELHI IN HINDUSTAN TIMES NEWSPAPER. PUBLISHED ON 13 Nov 2022.

LINK: <https://www.hindustantimes.com/delhi/govt-plans-tech-museum-in-delhi-to-showcase-emerging-future-technologies-101691191>

INTRODUCTION :

The site selected for the proposal of a Sci-Fi Museum & Entertainment Park in Delhi, situated on the western bank of the Yamuna River near Pragati Maidan, offers a strategic location with **easy accessibility & proximity to the city's cultural & entertainment districts**. Its **scenic waterfront setting** provides a unique opportunity to create an iconic architectural landmark that integrates seamlessly with the surrounding urban fabric, while offering visitors an immersive experience of the intersection of science fiction & reality.

LOCATION :

Behind Purana Quila Ring Road, I.P. Park Ring Road New Delhi, Haryana
 MAJOR CROSSROADS: JAWAHAR 1 CROSSROAD

GENERAL INFORMATION :

Site area for **Max. Retail display (incl. service structure)** 28 acres.
 Total site area for **Sci-Fi Museum**: 18 acres ~ 40000 m²
 Height allowed for **Residential** : 130 ft

SOIL TYPE & CONDITION :

The soil type found in the Pragati Maidan area of Delhi is primarily classified as **Alluvial soil**. Alluvial soil is formed by the **deposition of silt, sand, and clay** carried by rivers over time.



Images showing the soil found on the site and around nearby areas of the site.

VEGETATION & NATURAL FEATURES :



Along the banks of the Yamuna River, the riparian vegetation (river) is characterized by **wild tall grasses, reeds, and shrubs** adapted to the wetland environment.

SITE PHOTOS :



SITE PLAN :

NEARBY LANDMARKS :

- Pragati Power Station
- Purana Quila
- National Science Centre
- National Zoological Park
- Pragati Thermal Power Plant
- IGI Museum
- IGI CNG Station



CLIMATIC ANALYSIS OF DELHI :

The climate of Delhi is an overlap between monsoon-influenced **humid subtropical and semi-arid**, with high variation between summer and winter temperatures and precipitation. In **summer temperature ranges from 30° - 38°C** and in **winter temperature ranges from 8° - 20°C**.



Showing the climate summary of Delhi. | Source - ClimateData

Showing wind direction. | Source - Windrosy

MICRO-CLIMATE OF THE SITE :

The micro-climate of the site is influenced by its **proximity to the Yamuna river & Drain**. The location may experience **slightly cooler temperatures due to the river's moderating effect, along with increased humidity levels**. However, it may also be susceptible to **occasional fog and mist**, particularly during the winter months, enhancing the atmospheric ambience of the area. The **AGI of the area is 140** which is unhealthy and to improve the AQI good amount of landscape pockets will be required.

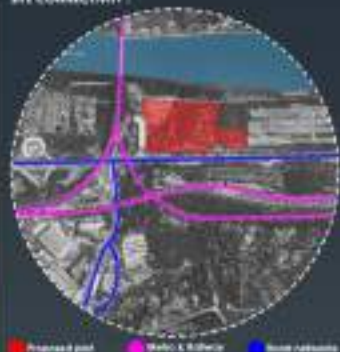
SURROUNDING PHOTOS :



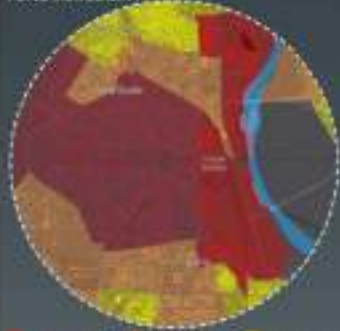
View of the IGI CNG Station.

Overlooking towards Yamuna River.

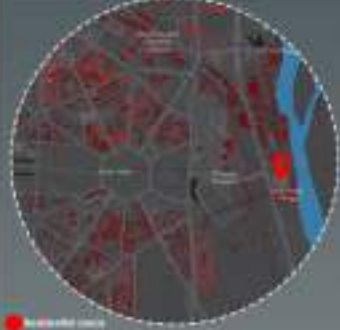
SITE CONNECTIVITY :



POPULATION DENSITY :



HOUSING DENSITY :



COMMERCIAL DENSITY :



GREEN SPACE :

