



Bharati Vidyapeeth (Deemed to be University)

College of Architecture, Pune

2023-2024

Architectural Design Project report titled

Space Time Marvels

A Sci-fi Museum & Entertainment Hub

Submitted by

ALIASGAR MOIZ ASIF

B. Arch, Semester X

Guided by

Ar. MAITHILI GANORKAR



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**Submitted in partial fulfillment of the requirement for the award of a degree in
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CERTIFICATE

This is to certify that the Architectural Design Project Report titled -"**Space Time Marvels : A Sci-fi Museum & Entertainment Hub**", is submitted by ALIASGAR MOIZ ASIF

Exam Seat No. 2415940027 PRN No. 1918110054, in semester X of the Bachelors program of Bharati Vidyapeeth (Deemed to be University) College of Architecture, Pune is a record of bonafide work, to the best of our knowledge.

Architectural Design Project Guide

Ar. Maithili Ganorkar

Principal

Dr. Kavita Murugkar

DECLARATION

I Aliasgar Moiz Asif hereby declare that the Architectural Design Project titled- "**Space Time Marvels, A Sci-fi Museum & Entertainment Hub**" submitted in partial fulfillment of the requirement for the award of degree in Bachelor of Architecture is my original Design / Research work and that the information taken from secondary sources is given due citation and references.

Signature with Date

Name: Aliasgar Moiz Asif

Exam Seat No.: 2415940027

PRN No.: 1918110054

ACKNOWLEDGEMENT

First and foremost I am extremely grateful to my guide, Ar. Maithili Ganorkar Ma'am for their invaluable advice, continuous support, and time during my thesis. Their immense knowledge and plentiful experience have encouraged me in all the time of my design. I would also like to thank Dr. Kavita Murugkar Ma'am, Principal of our college for their support. I would like to thank all the members of BVDU COA, Pune. It is their kind help and support that has made my study a wonderful time.

Finally, I would like to express my gratitude to my parents, and my friends. Without their tremendous understanding and encouragement In the past few months, it would be impossible for me to complete my design.

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1. INTRODUCTION

"**Space Time Marvels, A Sci-fi Museum & Entertainment Hub**" represents an architectural marvel transcending traditional bounds. This visionary project merges futuristic innovation with the allure of sci-fi narratives, creating an immersive edifice at the forefront of exploration.

Within its walls, captivating live simulations, interactive displays, and cutting-edge holographic marvels await visitors. Sectioned exhibits delve into realms of time travel, extraterrestrial life, and cosmic wonders, inviting patrons to ponder the unknown and fueling intellectual curiosity.

However, it's more than a visual spectacle. Engaging workshops harmonize futuristic technology with imaginative inquiry, fostering a dynamic learning environment. The entertainment zone pulses with film screenings, cosplay events, and themed galas, celebrating the very essence of the imaginative universes explored within.

In essence, this nexus is a conduit between imagination and reality, beckoning patrons to embark on journeys of curiosity and unbounded exploration, pushing the boundaries of what's possible within the realms of both architecture and human imagination.

1.1 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.

1.2 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 revenue from various activities.

2. NEED & RELEVANCE OF THE PROJECT

The project addresses a pressing need for architectural innovation that transcends traditional museum concepts. Its relevance lies in several critical aspects:

1. ARCHITECTURAL INNOVATION AND DESIGN EVOLUTION :

From a design standpoint, this project pioneers innovative architectural approaches. Its futuristic elements, such as live simulations and holographic displays, push the boundaries of architectural design, setting new standards for immersive and interactive spaces.

2. CULTIVATING IMAGINATION AND INNOVATION :

This project provides a vital platform for nurturing creativity, imagination, and futuristic thinking. By immersing visitors in the realms of sci-fi exploration, it encourages unconventional thought processes essential for innovation across various disciplines, from technology to the arts.

3. EDUCATIONAL SIGNIFICANCE :

In an era where scientific advancements and technological breakthroughs drive our future, this project serves as an educational hub. It offers interactive workshops, seminars, and exhibits that enlighten visitors about potential future technologies, ethical considerations, and the impact of scientific progress on society.

4. BRIDGING ENTERTAINMENT WITH LEARNING :

By integrating an entertainment zone within the museum, it connects leisure and learning, making educational experiences enjoyable and accessible. Film screenings, cosplay events, and themed galas cater to diverse audiences, fostering engagement with futuristic concepts in a relaxed setting.

5. FOSTERING CURIOSITY AND EXPLORATION :

The project fuels curiosity by exploring speculative concepts such as time travel, alien life, and the vastness of the cosmos. It inspires visitors to question the boundaries of current scientific understanding, fostering a thirst for exploration and discovery.

6. SOCIETAL IMPACT AND CULTURAL RELEVANCE :

As society navigates an era of rapid technological advancement, this project prompts discussions about ethical dilemmas, societal implications, and cultural impacts of future technologies. It encourages dialogue on shaping a collective future that aligns with ethical and moral principles.

In summary, the project's relevance extends beyond its physical structure. It serves as a catalyst for fostering imagination, encouraging learning, and sparking conversations that shape a more informed, innovative, and culturally conscious society.

2.1 WHY A SCI-FI MUSEUM IS REQUIRED IN INDIA ?

- As we can see, Countries like UAE, USA etc. are focusing more on the futuristic infrastructure to attract tourism and as a developing nation, The Govt. of India is also focusing on the infrastructure by providing crores in budget allocations during Annual Budget Meets.

Budget allocation for infrastructure in F.Y. 2023-2024 was 2.4 Lakh crores and,

Budget allocation for infrastructure in F.Y. 2024-2025 is 11.11 Lakh crores. It's a highest total ever.

- The requirement of a Sci-fi museum and Entertainment hub is based on the fact that IT sector in India is growing rapidly, which drives 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 designed for kids rather than for all age groups because of which nowadays, youngsters don't prefer to go to the museums.”

(Review by a user during interview)

2.2 WHAT IF ?

- The historical museums or traditional museums have their own charisma and vibes. 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 actually experiencing Human Evolution through AR/VR rather than just reading it from the boards placed near the glass-encased (non-interactive) exhibits. or able to see and feel the big bang from the Space Stations. or able to witness the extinction of Dinosaurs from the earth to find the possibilities of Human life on exoplanets.”

3. AIM

The aim is to revolutionize architectural design by creating an immersive space that merges futuristic technology with educational exploration and entertainment. This project seeks to redefine the conventional museum experience, fostering imagination, learning, and cultural discourse while pioneering innovative architectural approaches that integrate cutting-edge technology into spatial design.

4. OBJECTIVES

1. To understand the futuristic architectural innovations via parametricism and technological integrations.
2. To redefine museum experiences in India by leveraging interactive exhibits, holographic displays, and live simulations to engage and educate audiences of all ages.
3. To enhance visitor attraction and engagement.
4. To promote revenue generation via tourist destination establishment in India.
5. To stimulate the local economy by creating job opportunities, and supporting and contributing to the region's tourism infrastructure.

5. METHODOLOGY

To understand the topic deeply the following methodologies are used :

- **LITERATURE REVIEW :**

A literature review methodology involves searching and analyzing existing academic and non-academic sources of information relevant to a research topic. This process involves identifying key research questions, selecting appropriate sources, and critically evaluating and synthesizing the findings to form a cohesive understanding of the current state of knowledge on the topic. The methodology may also involve identifying gaps in the literature and providing recommendations for future research.

- **CASE STUDY :**

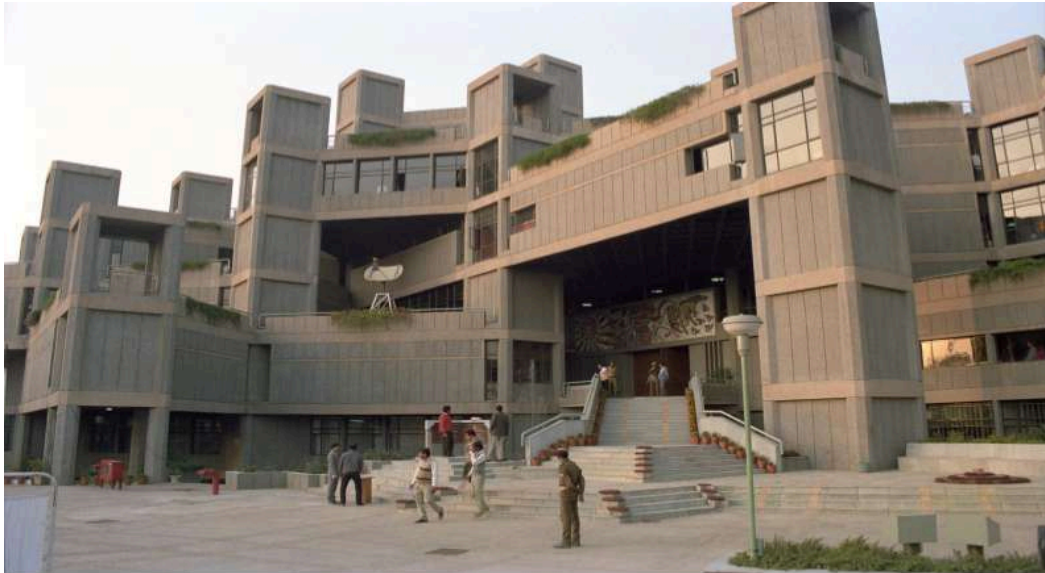
A case study methodology involves conducting an in-depth analysis of one or a few specific cases. The researcher collects data through multiple sources such as books, observations, and documents.

The data is analyzed to identify patterns, themes, and relationships, and the findings are then used to draw conclusions and insights about the case(s) under investigation. The methodology may also involve comparing and contrasting different cases to identify similarities and differences and to generate broader generalizations about the topic.

6 .CASE STUDIES

6.1 LIVE CASE STUDY

6.1.1 National Science Center, New Delhi



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 at the same time feeling of the ancient building.

LOCATION :

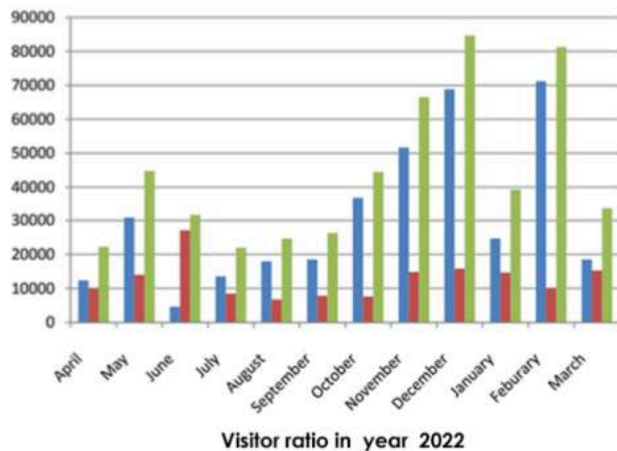
The museum is located within the the pragati maidan complex, on Bhairon Marg. The strategic location, coupled with the interesting play of form has made the center an important landmark in the city.

“I believed that values and historical influences contributed towards good architecture.”

_AR. Achyut Kanvinde

GENERAL INFORMATION :

Owned by the National Council of Science Centers.
 Designed by : Ar. Achyut Kanvinde.
 Plot area: 7000 sq.mt.
 Total Built-up area: 19342 sq.mt
 Ground coverage: 49%
 Permissible FAR: 2.5
 FAR Achieved: 2.76
 Nearby Landmarks : Purana quila
 Pragati maidan metro station
 Delhi high court
 National Gallery of Modern Arts etc.

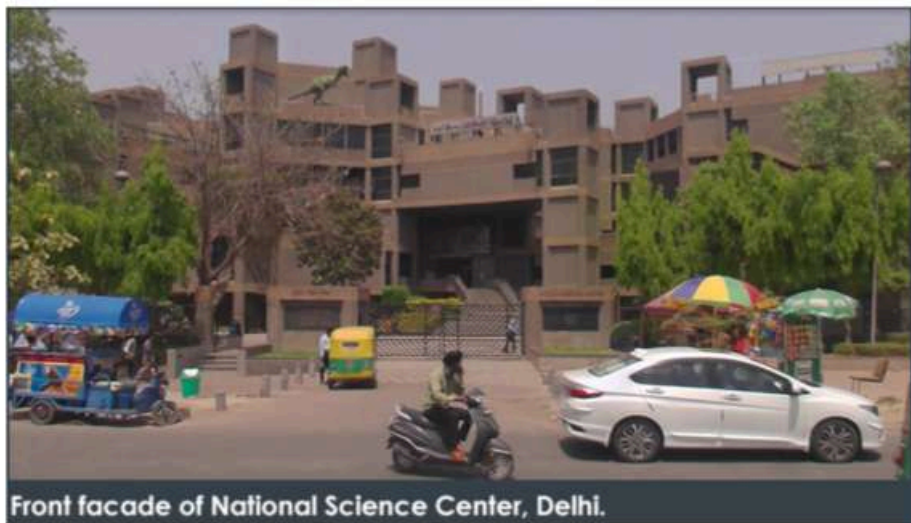


Climatic Analysis :

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 30°-38°C and In winter temperature ranges from 5° - 20°C.

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	13.5 °C (56.3) °F	16.9 °C (62.4) °F	22.5 °C (72.6) °F	29.2 °C (84.5) °F	32.7 °C (90.9) °F	33 °C (91.3) °F	29.9 °C (85.8) °F	28.7 °C (83.7) °F	27.8 °C (82.1) °F	25.4 °C (77.7) °F	20.5 °C (69) °F	15.4 °C (59.7) °F
Min. Temperature °C (°F)	7.7 °C (45.8) °F	10.6 °C (51) °F	15.2 °C (59.4) °F	21 °C (69.8) °F	25.3 °C (77.6) °F	27.6 °C (81.6) °F	26.6 °C (79.9) °F	25.8 °C (78.5) °F	23.9 °C (75.1) °F	19.2 °C (66.5) °F	14.2 °C (57.5) °F	9.3 °C (48.7) °F
Max. Temperature °C (°F)	20 °C (68) °F	23.5 °C (74.4) °F	29.8 °C (85.7) °F	36.7 °C (98.1) °F	39.6 °C (103.3) °F	38.2 °C (100.8) °F	33.7 °C (92.6) °F	32.3 °C (90.1) °F	32.2 °C (90) °F	31.8 °C (89.3) °F	27.4 °C (81.3) °F	22.2 °C (72) °F
Precipitation / Rainfall mm (in)	23 (0)	33 (1)	20 (0)	14 (0)	20 (0)	74 (2)	208 (8)	183 (7)	99 (3)	13 (0)	5 (0)	8 (0)
Humidity(%)	67%	60%	47%	29%	32%	46%	71%	77%	71%	55%	54%	61%
Rainy days (d)	2	3	3	3	4	7	15	15	8	2	1	1

Showing the climate summary of Delhi.



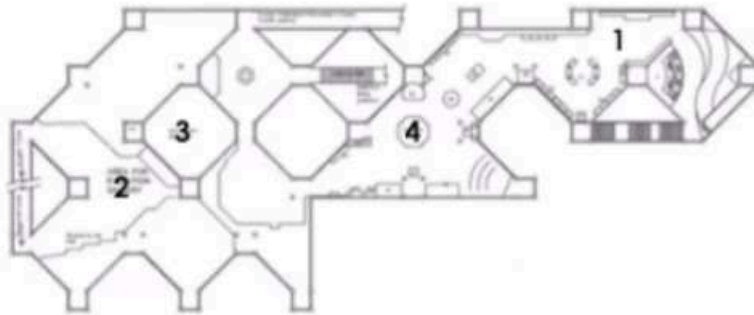
Front facade of National Science Center, Delhi.



Site plan showing the access & site level zoning.

Public Semi-Public

Floor Plans



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

GROUND FLOOR



1. Entrance
2. Administration
3. Exhibition area

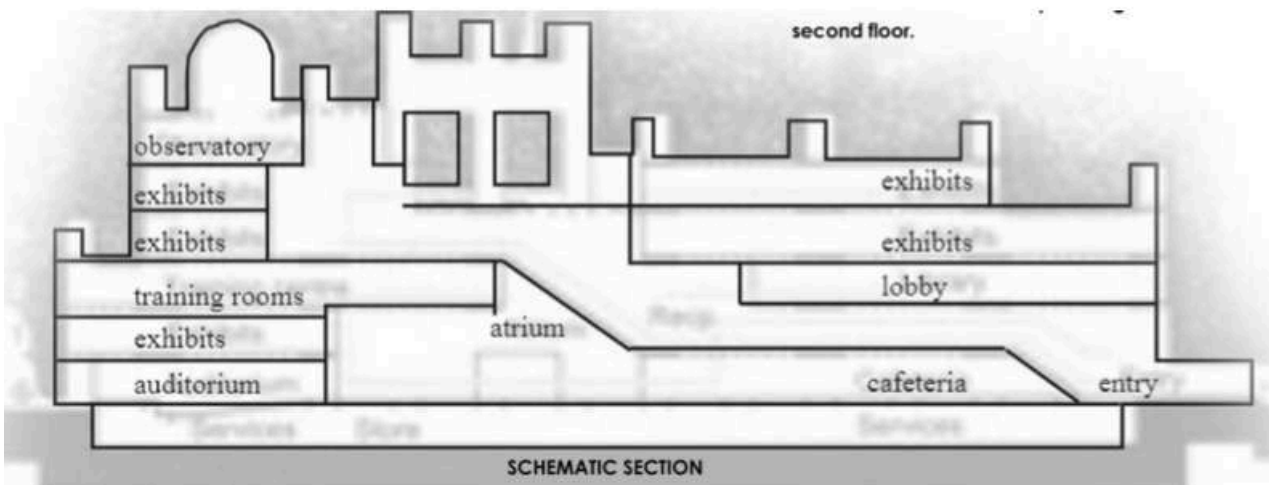
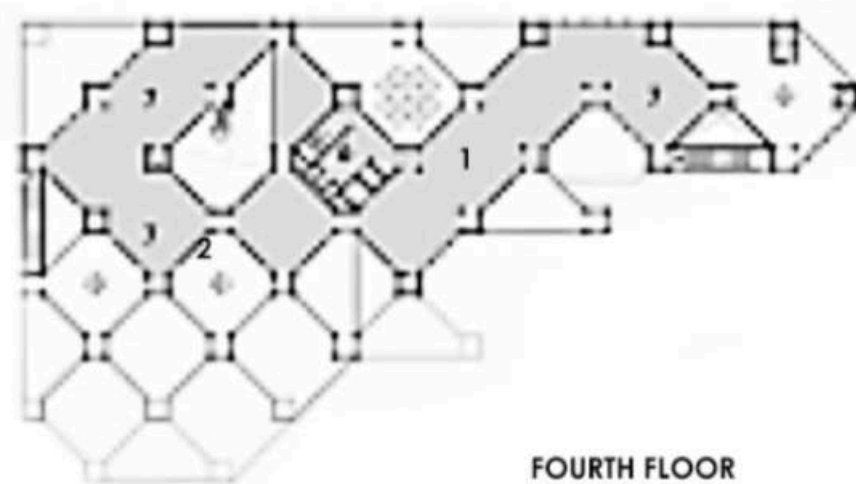
FIRST FLOOR



1. Library
2. Fun Science Gallery

SECOND FLOOR

Floor Plans

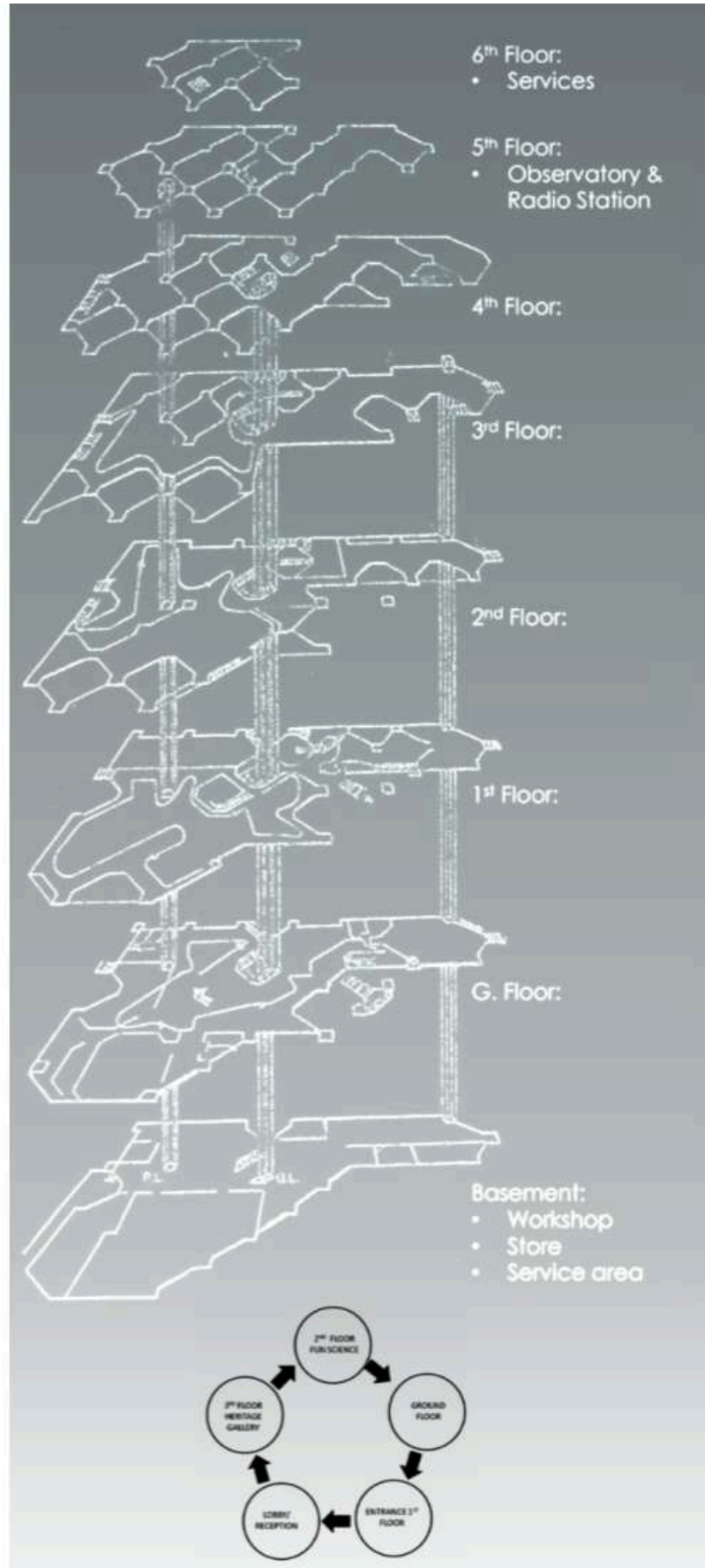


CIRCULATION :

The museum utilizes A FORCED SYSTEM OF CIRCULATION. The channelled route through the exhibition area is represented in the diagram. However, in the absence of well defined movement patterns within the galleries and confusing layout of existing 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.



INTERIORs & EXHIBITS :



OBSERVATION : Exhibits are more like for children's age group. Extensive use of various colours distracts the attention of the user. No uniformity in interiors.



OBSERVATION :

Central installation located near the escalator looks quite messy. Less use of natural lighting make some areas much darker. Extensive use of artificial lighting to suffice the need of lighting.

STRUCTURE (Observations) :

The entire structure works on a 2.75 X 5.5 mt. grid. The roof slabs are of precast waffle units. Structural columns are placed in the groups of four, providing largest free spans of 13.75 mt. To provide larger clear span in the auditorium, the columns falling in the middle were removed and the load walls distributed by cross girders to the peripheral columns.

SECURITY (Observations) :

The museum security has a problem of having too many entry/exit points. Most of them sealed 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 cameras have been installed.

SERVICES (Observations) :

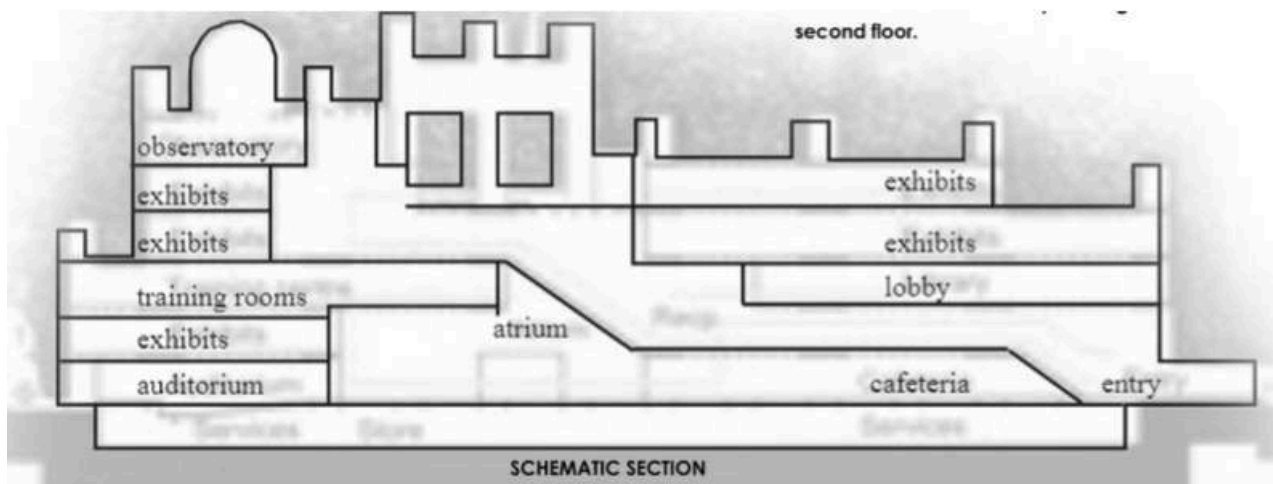
All services are located in the basement.

Electrical : Electricity loads amount 600KVA 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 DJB. It is mainly required for fire fighting, HVAC systems and general consumption. 60,000ltrs are kept exclusively for fire fighting purposes (Sprinklers are installed in the basement and fire alarms, smoke detectors are present in the entire premises. Hydrant box is in the building yard) The building itself utilizes hydro-pneumatic systems. This system is backed by roof top storage also.

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 provides air conditioning for the auditorium. Two additional 25 tonnes plants provide air conditioning for the seminar halls.

**Inferences:**

- A forced movement between various floors don't allow the visitors to enter into the choice of selecting a particular gallery.
- Glass cased exhibits should have diffused or natural lighting or the glass used should be glare free so the users can see it properly.
- No natural light used in exhibition area. Inclusion of natural light enhance the overall experience.

6.1.2 Nehru Science Center, New Delhi



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 designing of scientific/technological museums is the “workshop centre”. Rather than an awesome display of exhibits with “do not touch” sign boards, and technical jargon, which offer nothing in visual terms besides being a scientific encyclopaedia, 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. Moses road, Worli, Mumbai. The northern and western sides of the complex are surrounded by slums making it impossible to link the structure with the planetarium on the western side. The entire complex spreads across a sloped marshy land covering about 8 acres.

GENERAL INFORMATION :

Owned by the National Council of Science Museums (NCSM).

Designed by : Ar. Achyut Kanvinde

Total plot area : 32,376 sq. m.

Total built-up area : 6291 sq. m.



Climatic Analysis :

- The climatic conditions of Mumbai are characterized by a tropical climate. In Mumbai, the precipitation during summers is significantly higher in comparison to winters. The average annual temperature is 26.4 °C | 79.6 °F in Mumbai. In a year, the rainfall is 2012 mm | 79.2 inch.
- Due to its proximity to the equator, it is quite challenging to precisely delineate summers in Mumbai. The period of January, February, March, October, November, December is widely regarded as the peak season for visitation.

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	23.9 °C (75.1) °F	24.7 °C (76.5) °F	26.7 °C (80.1) °F	28.2 °C (82.7) °F	29 °C (84.2) °F	27.4 °C (81.3) °F	25.9 °C (78.6) °F	26.6 °C (79.8) °F	26.1 °C (79) °F	27.3 °C (81.2) °F	27 °C (80.6) °F	25.1 °C (77.2) °F
Min. Temperature °C (°F)	18.8 °C (65.8) °F	19.6 °C (67.2) °F	21.7 °C (71.1) °F	24 °C (75.2) °F	26.2 °C (79.1) °F	25.9 °C (78.6) °F	24.9 °C (76.8) °F	24.5 °C (76.1) °F	24.4 °C (75.9) °F	24 °C (75.1) °F	22.4 °C (72.4) °F	20.1 °C (68.3) °F
Max. Temperature °C (°F)	29.4 °C (84.9) °F	30.2 °C (86.3) °F	32 °C (89.7) °F	32.8 °C (91) °F	32.4 °C (90.4) °F	29.5 °C (85) °F	27.3 °C (81.2) °F	27.2 °C (80.9) °F	26.2 °C (82.8) °F	31 °C (87.8) °F	31.8 °C (89.3) °F	30.5 °C (86.8) °F
Precipitation / Rainfall mm (in)	0 (0)	1 (0)	0 (0)	0 (0)	27 (1)	487 (19)	661 (26)	459 (18)	300 (11)	66 (2)	6 (0)	5 (0)
Humidity(%)	58%	59%	60%	68%	72%	83%	89%	89%	86%	74%	60%	57%
Rainy days (d)	0	0	0	0	3	18	22	22	18	6	1	0

Graph showing avg., min., & max. temperatures & Precipitation of Mumbai.

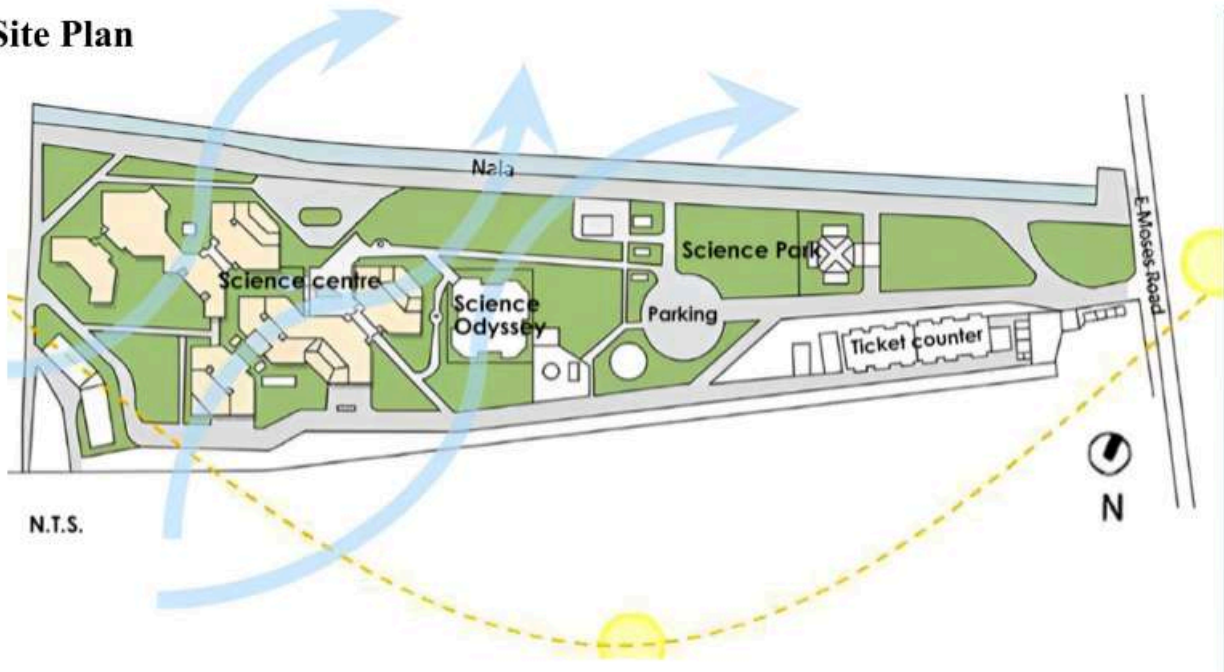
DESIGN CONCEPT :

The site is naturally sloping in different directions. The architect deliberately wanted to maintain and accentuate to this natural topography of the site, in the form of split-levels of modular units. The vast expanse of the metal finish with grooves gives a more definite and dramatic character to the exterior. Also the use of ventilation shafts has been commendably used to enhance the character of the building.



Partial site plan showing the interconnection of the modules.

Site Plan



Site plan showing the interconnection of the modules and other areas.

Block A : This is the administrative office that has a total of 2 workshops to make exhibits that go to different science Center's across India, or shown in the premise itself.

Blocks B & C : These blocks hold different Thematic galleries on different floors, each following a basic theme and timeline.

Block D : This block holds 2 galleries, 2 innovation hubs, auditorium, vacation workshops, training halls and conference rooms.

S	W
<ul style="list-style-type: none"> • Natural biodiversity is preserved. Protecting from pollution around the site. • Site is close to Mahalaxmi station making it easily accessible. 	<ul style="list-style-type: none"> • Site is directly accessible from only one side. • Lack of maintenance in the interiors causes leakage & many other problems. • Wheelchairs are not accessible.
O	T
<ul style="list-style-type: none"> • Becomes a landmark for an up & coming region. • Is an excellent architectural solution with respect to the concept, thereby encouraging study of sciences. 	<ul style="list-style-type: none"> • As buildings around it start increasing in height, within no time the science centre will turn into a forgotten architectural gem. • Lack of modern technology with respect to air conditioning will make it hard for rising pollution to be controlled.

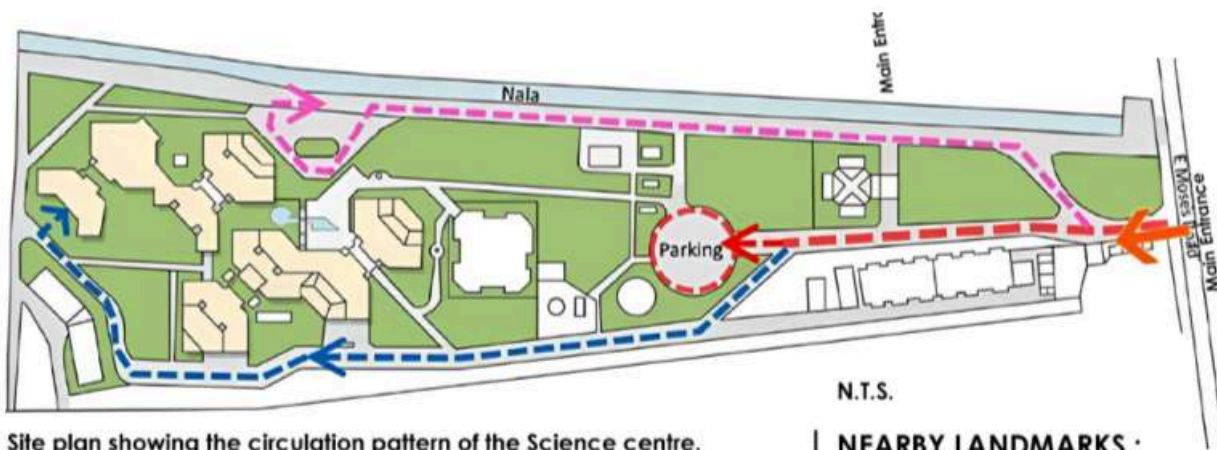
Site Plan

Site plan showing the interconnection of the modules and other areas.

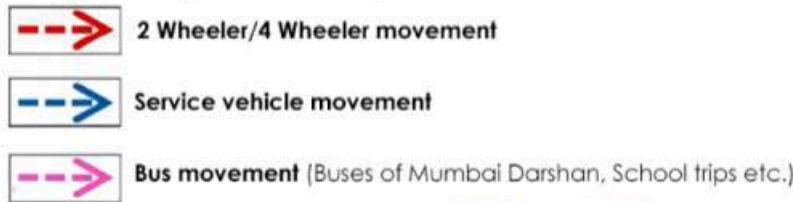
Block A : This is the administrative office that has a total of 2 workshops to make exhibits that go to different science Center's across India, or shown in the premise itself.

Blocks B & C : These blocks hold different Thematic galleries on different floors, each following a basic theme and timeline.

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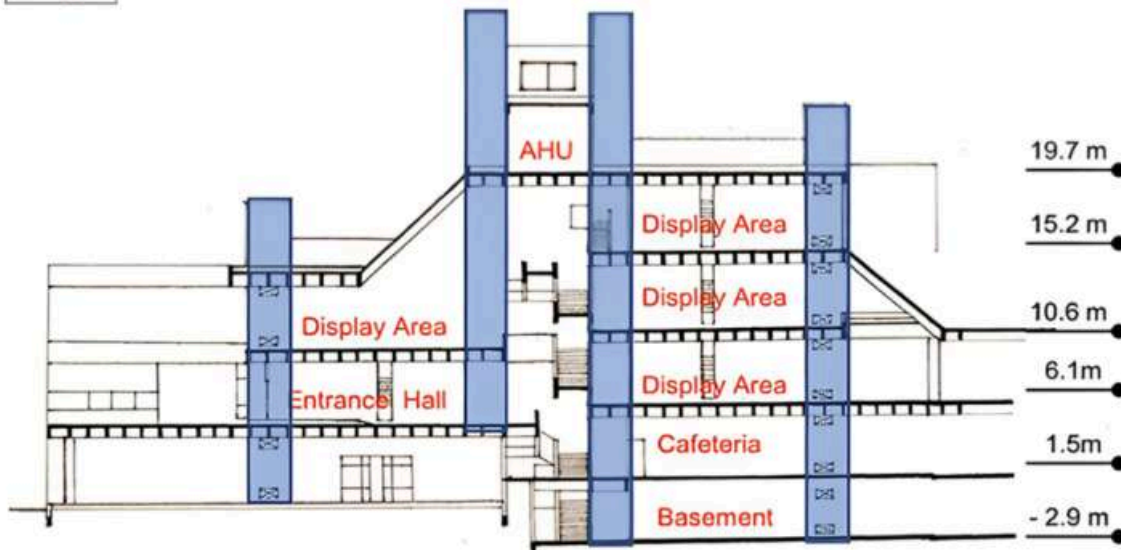
Site plan showing the circulation pattern of the Science centre.



N.T.S.

NEARBY LANDMARKS :

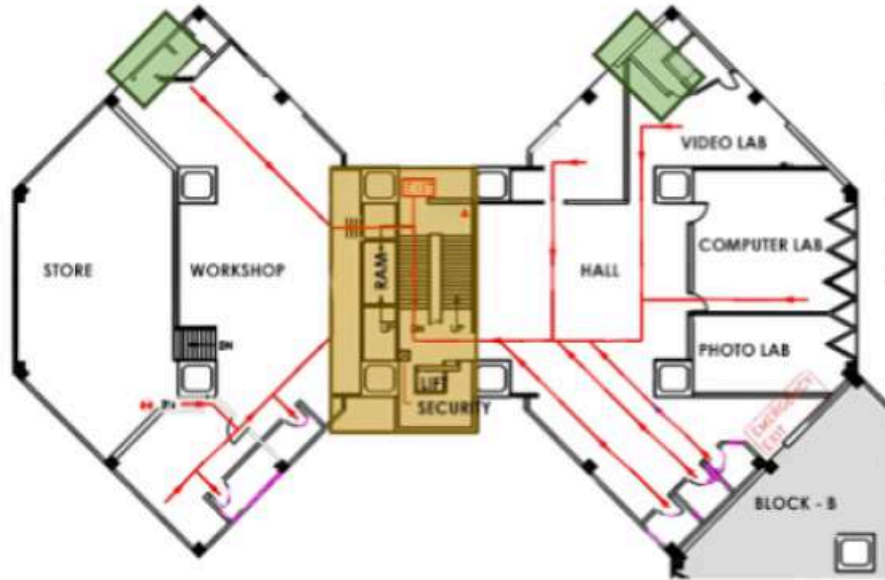
- Mahalaxmi Mandir
- Sardar Vallabhbhai Patel Stadium
- Nehru Planetarium
- Haji Ali Dargah
- Mahalaxmi Race Course



Section to understand vertical mechanical ventilation.

N.T.S.

Floor Plans

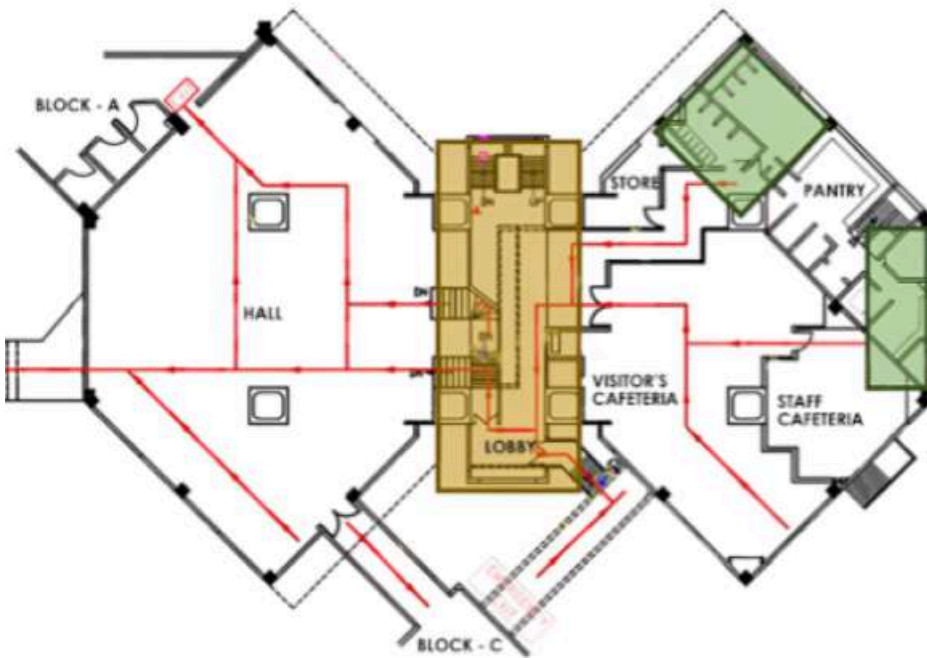


BLOCK - A

This is the administrative block which has total of 2 workshops and other office areas such as Tech room, curator room, etc.

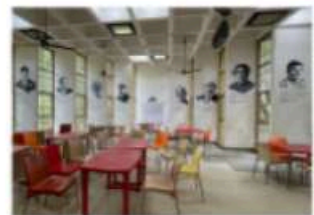
LEGEND

- Circulation ————
- Toilet ●
- Service core ●



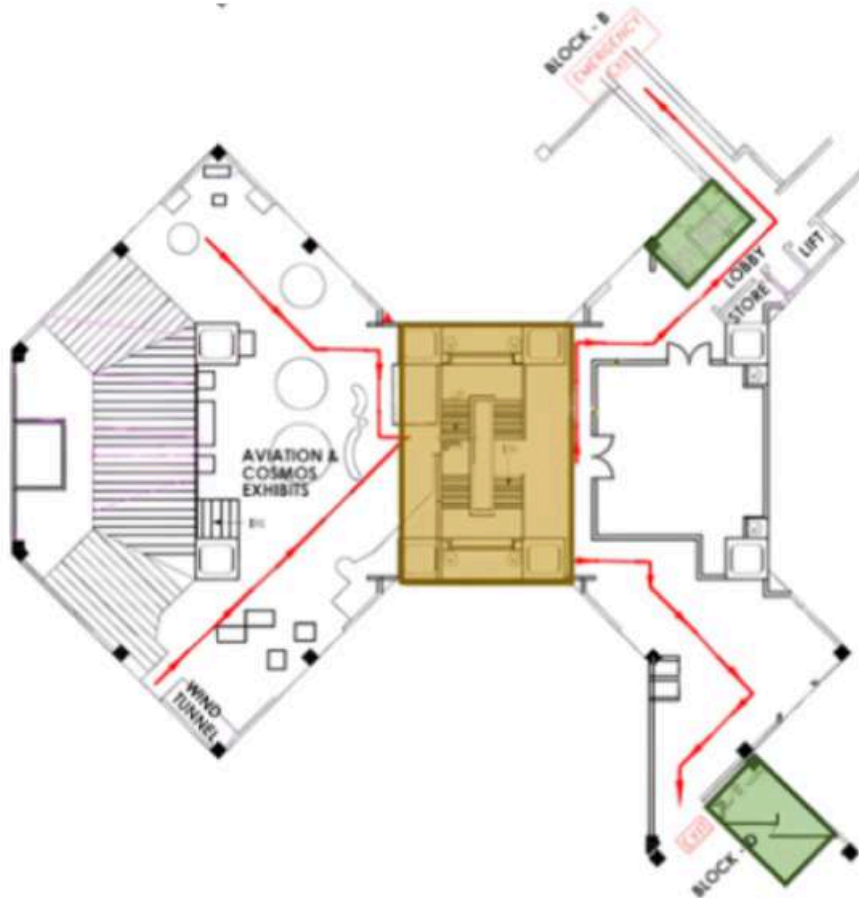
BLOCK - B

The second Block - B is interconnected with Block - A. It has one thematic gallery and two separate cafeterias for visitors and staff with a small pantry at back.



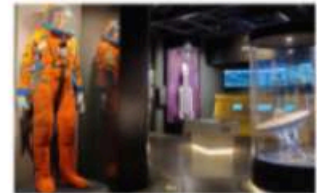
Visitor's Cafeteria

Floor Plans

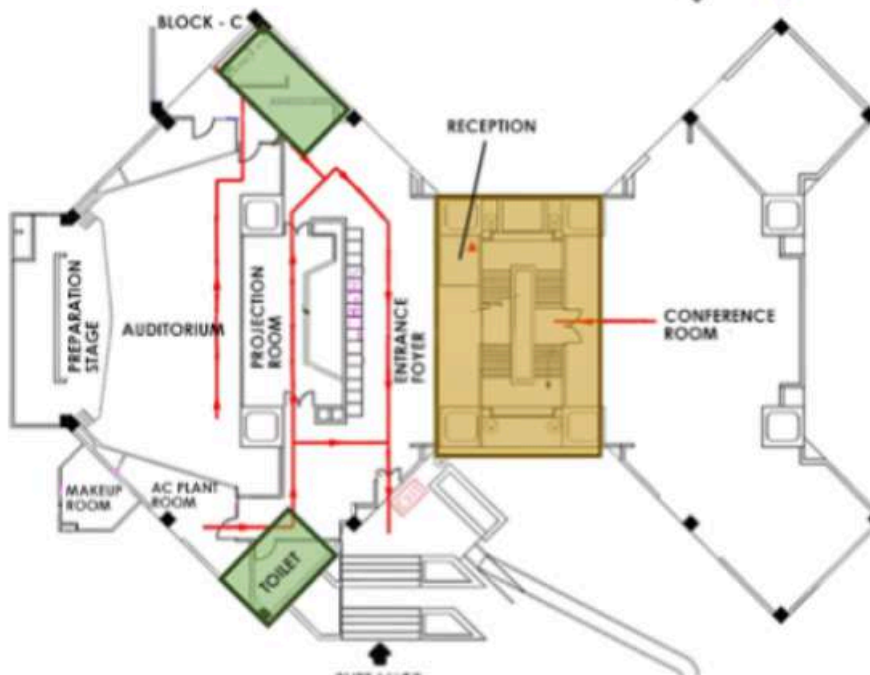


BLOCK - C

The third Block - C is interconnected with Block - B. It has aviation & cosmos themed gallery.



Aviation exhibits



BLOCK - D

This is actually the first and main block which has main entrance to the science centre. It comprises of conference room, reception, AC plant room, Make up room, auditorium, Projection room etc.



KEY FEATURES OF THE DESIGN :



Visual connection between the floors.



Inclusion of Landscaped areas.



Extensive use of waffle slab to achieve long column free span.

Landscaping



Boxwood shrub



Areca palm



Sea mango



Sacred fig



Coconut tree



Gulmohar



Chinese ixora



Peacock flower

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 shaft 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.

6.2 BOOKCASE STUDIES

6.2.1 Shanghai Astronomy Museum, Shanghai.



INTRODUCTION : The Shanghai Astronomical 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 orbital motion and utilizes that as a metaphorical references and generator of form.

Concept & Zoning : Each of the buildings three principle forms - The oculus, 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 central bodies.

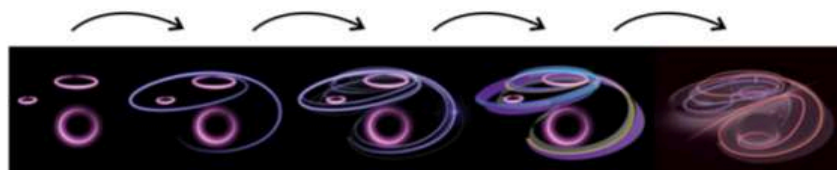
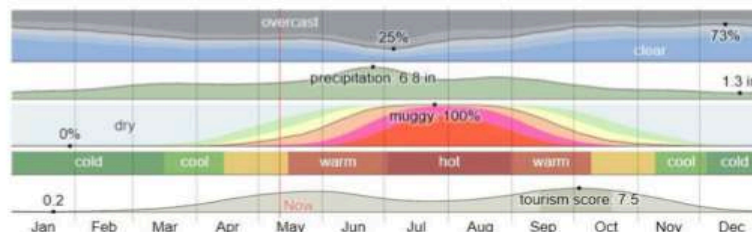


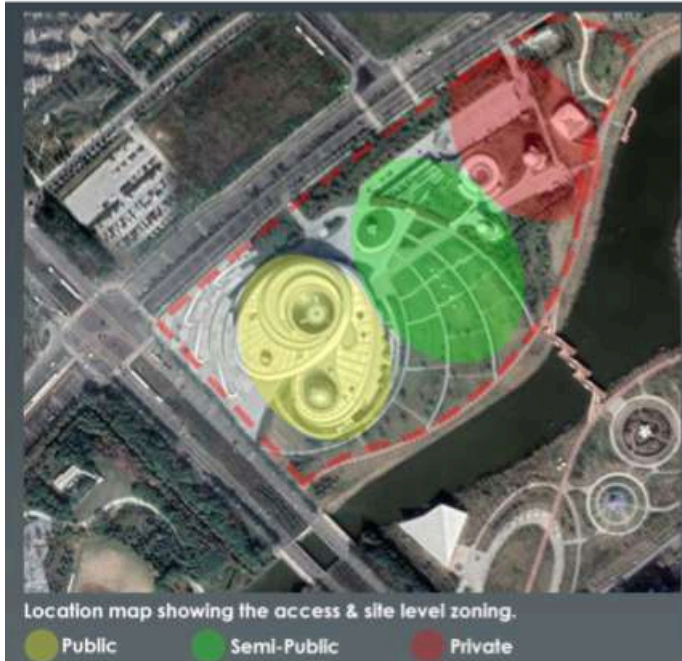
Diagram showing the form evolution of the museum.

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 90F and rarely is below 27F or above 96F.

LOCATION PLAN



LOCATION :

The museum is located within the Shanghai's Lingang 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 : 39000 m²

Completion year : 2021

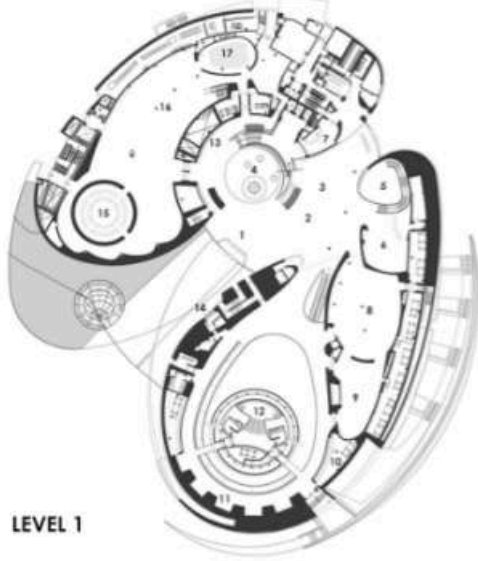
SITE PLAN



Materials Used for construction :

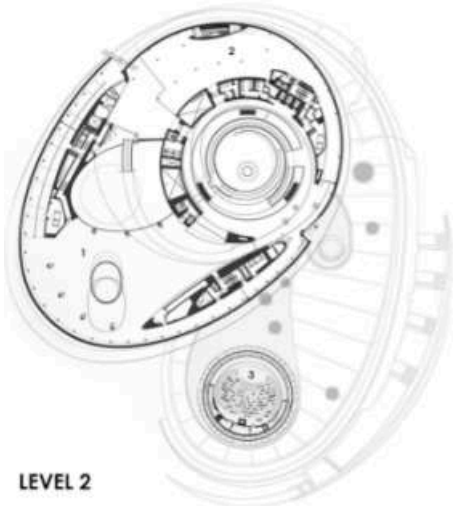
- Using cast-in-place concrete, glass, and a combination of perforated metal and some glass fibre reinforced panels.
- The materiality of the building is meant to be sparse, minimal, almost primal.
- They (architect) want the building to feel quite abstract.
- Inside, A lot of white surfaces and a stark contrast between bright illumination & darker areas so one can sense the effect of sunlight.

FLOOR PLANS :



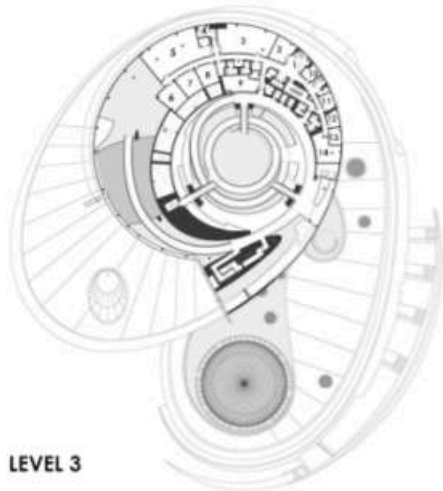
LEVEL 1

1. Preface Hall
2. Large Meteor
3. Zodiacal Constellations
4. Pendulum
5. Armillary Sphere
6. Science Mall
7. Universal News Studio
8. IMAX Theatre
9. Chinese Ancient Astronomy
10. Slide to Planet Paradise
11. Astronomy and Society
12. Planetarium
13. Universal News Broadcasting Wall
14. Ticketing
15. Starry Sky
16. Home Zones
17. Volcano Theatre



LEVEL 2

1. Universe Zone exhibits.
2. Journey Zone exhibits.
3. Planetarium



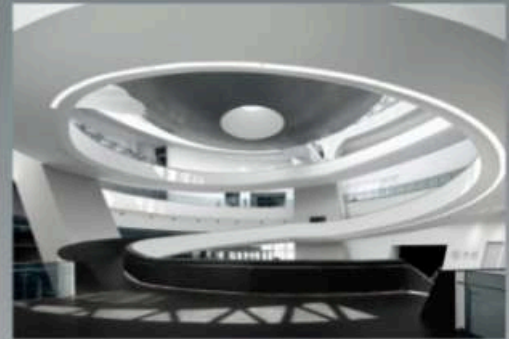
LEVEL 3

1. Reception
2. Executive room
3. Meeting room
4. Executive office
5. Regular office area
6. Meeting room
7. Meeting room
8. Meeting room
9. Meeting room
10. Executive office
11. Tea room
12. Copy room
13. Archive
14. Regular office area

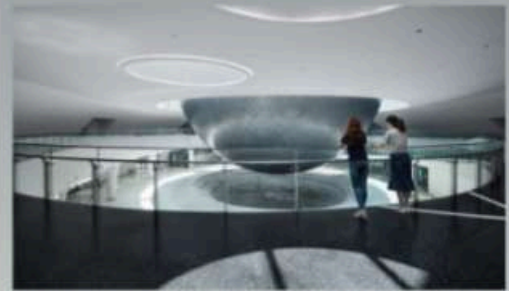
KEY FEATURES OF THE DESIGN :



Specular night view of the Glowing planetarium dome.



Centrally placed skylight & spiral walking ramp.



Inverted dome with skylight around filling the whole area efficiently.



Diagram showing how skylight fill the area on different timings of the day.

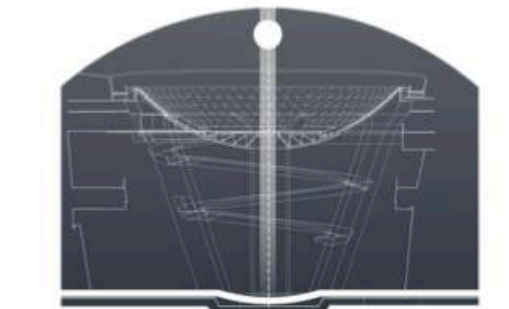
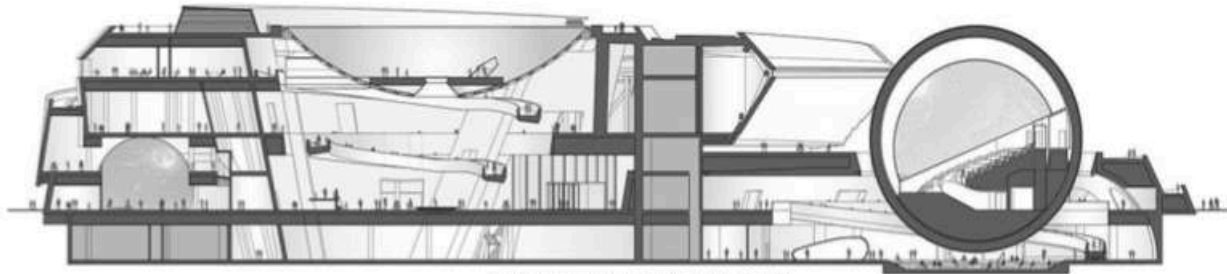


Diagram showing how inverted dome & spiral ramp is placed.

SECTIONS



Section through the museum and planetarium.



Skylight lifting the whole area throughout the daytime.

EXHIBITS



Observation : Large full height **Digital LED displays** change the whole vibe and experience of the museum. It also enhances the overall experience of the users by delving them into the surreal environment.



Observation : Double heighted galleries can accommodate **floating installations & exhibits**.

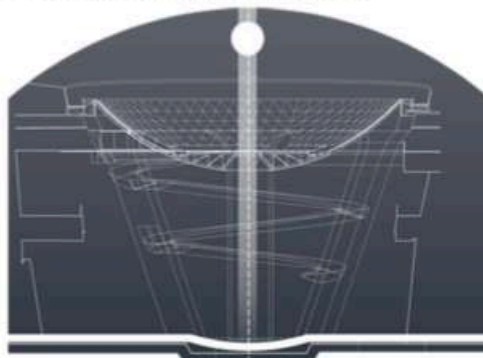


Diagram showing how inverted dome & spiral ramp is placed.

Inferences:

- Consideration of climatic factors 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.
- Diving the spaces into various parts and arranging them, while considering the circulation.

6.2.2 Chengdu Science Fiction Museum, China. (Part Case Study)



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, next to the picturesque Jingrong Lake, the museum integrates amazingly with the nature surrounding area, creating a harmonious connection between architecture and the natural environment. The Chengdu Science Fiction Museum covers an impressive 59,000 square meters 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 plazas. 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 Pidu district in Chengdu, China. Next to the picturesque Jingrong Lake.

GENERAL INFORMATION :

- Owned by :** Municipal Government
- Designed by :** Zaha Hadid Architects
- Design Architect :** Patrick Schumacher
- Built-up area :** 59000 m2
- Completion year :** 2023

CLIMATIC ANALYSIS

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	8.2 °C (46.8 °F)	8.7 °C (47.7 °F)	13.5 °C (56.3 °F)	16.8 °C (62.2 °F)	22.8 °C (73.0 °F)	25 °C (77 °F)	26.3 °C (79.4 °F)	25.8 °C (78.4 °F)	22.2 °C (72 °F)	17.8 °C (64 °F)	12.8 °C (55 °F)	7.6 °C (45.7 °F)
Min. Temperature °C (°F)	2.8 °C (37.0 °F)	4.8 °C (40.6 °F)	8.8 °C (47.8 °F)	14 °C (57.2 °F)	18.2 °C (64.8 °F)	21.2 °C (70.2 °F)	22.9 °C (73.2 °F)	22.4 °C (72.4 °F)	19.5 °C (67.1 °F)	14.9 °C (58.8 °F)	9.5 °C (49.1 °F)	4 °C (39.2 °F)
Max. Temperature °C (°F)	9.8 °C (49.6 °F)	12.5 °C (54.5 °F)	17.9 °C (64.2 °F)	23.9 °C (75.0 °F)	27.3 °C (81.2 °F)	28.1 °C (82.6 °F)	30.3 °C (86.5 °F)	29.9 °C (85.8 °F)	25.9 °C (78.6 °F)	20.9 °C (69.6 °F)	16 °C (60.8 °F)	11.1 °C (52 °F)
Precipitation / Rainfall mm (in)	8 (0.31)	10 (0.39)	23 (0.91)	47 (1.85)	88 (3.47)	136 (5.35)	306 (12.05)	274 (10.75)	149 (5.87)	45 (1.77)	21 (0.83)	7 (0.28)
Humidity(%)	73%	71%	65%	61%	60%	60%	78%	78%	79%	77%	75%	72%
Rainy days (d)	2	2	5	8	7	9	14	14	10	7	4	1

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 ease of access for visitors from various parts of Chengdu.
- Visitors can access the building from the city and nearby subway stations or by walking through the adjacent park.
- Carefully integrated the Museum with its surroundings, ensuring that the building complements the natural landscape and enhances the overall 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 modelling analysis to maximize efficiencies in composition, site conditions, solar irradiation & 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 summers.
- Landscaped with plants native to the region, the design collects and stores rainwater for natural filtration and reuse.

SPATIAL PROVISIONS :



Exhibition Galleries



Ancillary space

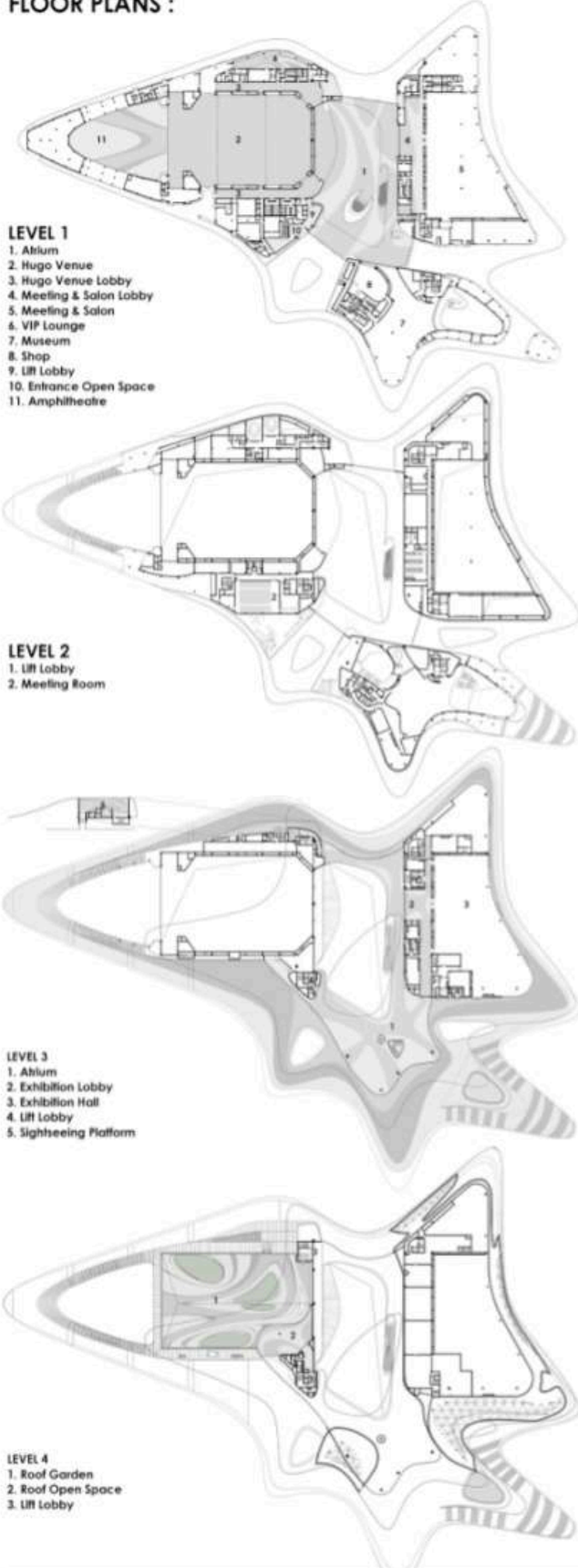


Multipurpose Hall

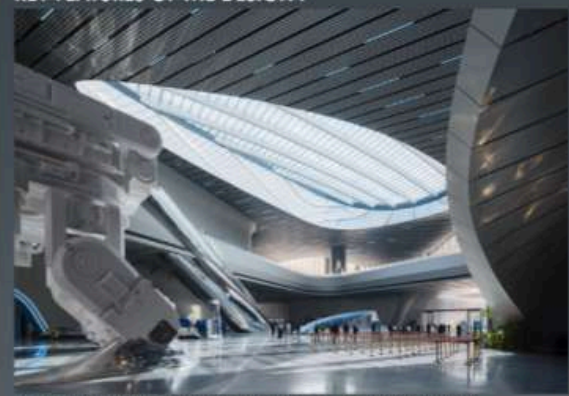


Sky-lit Atrium space

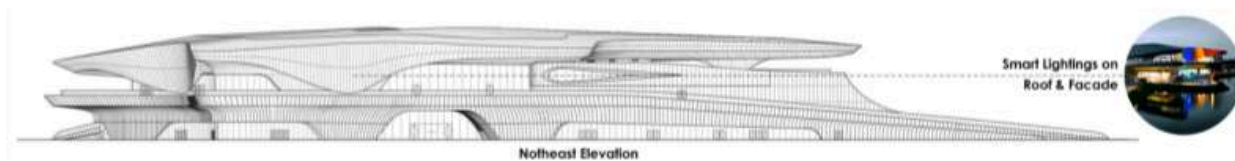
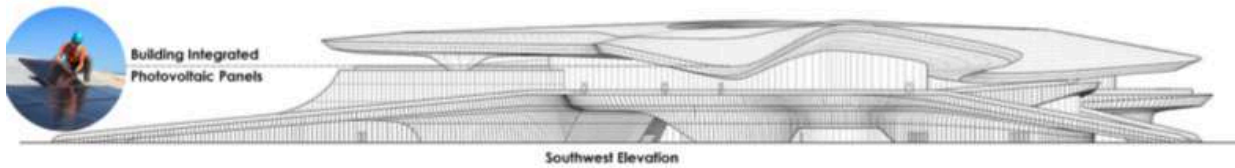
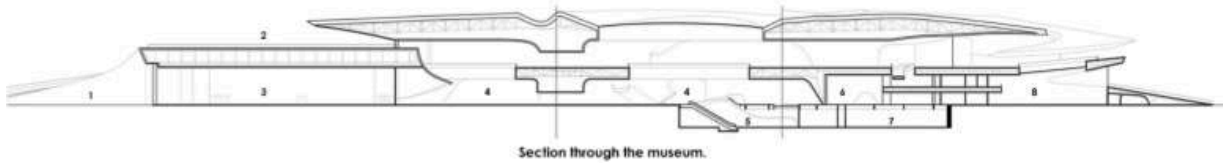
FLOOR PLANS :



KEY FEATURES OF THE DESIGN :

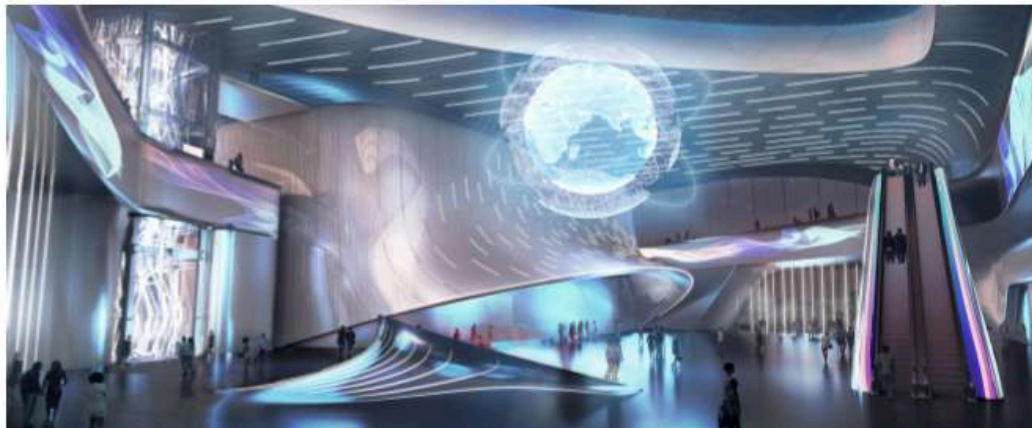


SECTIONS



Inferences:

- The design of the Museum features fluid forms and dynamic curves, embodying a futuristic aesthetic.
- The museum seamlessly integrates with its natural surroundings, creating a harmonious relationship between the built environment and the landscape.
- Materials such as Glass, Steel, & Fibre 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 innovation.



6.3. COMPARATIVE ANALYSIS

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	 Functionalist approach with elements of Brutalism	 Brutalism & Regionalism	 Parametricism	 Parametricism
03. DESIGNED BY	Ax. Achyut Kanvinde	Ax. Achyut Kanvinde	Emreco Architects	Zaha 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 Sq.m.	32,376 Sq.m.	39,000 Sq.m.	59,000 Sq.m.
07. BUILT-UP AREA	19,342 Sq.m.	6,291 Sq.m.		
08. COMPLETION YEAR	1992	1985	2021	2023
09. TYPE OF USERS	Kids, Students, Adults etc.	Kids, Students, Adults etc.	Tech Enthusiasts, Students etc.	Tech Enthusiasts, Students etc.
10. AVG. FOOTFALL	5 Lakhs (Annually)	7 Lakhs (Annually)	10 Lakhs (Annually)	12 Lakhs (Annually)
11. CONCEPT	To engage , educate and entertain the visitors through thematic exhibitions.	Designed by preserving natural topography via modular units on Split-Levels.	Elements in design acts as Astronomical Instruments & distant Astronomical Objects.	The design reminds of an expanding nebula, radiates from a central point, resembling a star.

<p>12. INTERIOR STYLE</p>	 <p>Traditional style w/ Thematic touch by materials.</p>	 <p>Traditional style with lots of colors to attract kids.</p>	 <p>Parametrics styled interior w/ monochrome touch.</p>	 <p>Parametrics styled interior w/ monochrome touch.</p>
<p>13. SITE CONNECTIVITY</p>	<p>The site is accessed by the Bhairon marg main road from the north side.</p>	<p>The site accessed by only one main road which is Dr. E.M. Road on the north-east side.</p>	<p>The site can be accessed only by Jingtuanji Road from south-western side.</p>	<p>The site can be accessed by two roads, Lin gang Blvd & Xueronghua Rd.</p>
<p>14. SPATIAL PROVISION</p>	<p>Cadeteria, Auditorium, Exhibition Area, Seminar Room, Thematic Galleries, Library, Admin. Area, Training Rooms, Observatory.</p>	<p>Thematic Galleries, Auditorium, Projection Room, Conference Room, Computer Lab, Video Lab, Cafeteria, Multipurpose Hall.</p>	<p>Museum, Shop, Amphitheatre, Multipurpose Hall, Sightseeing Platform, Roof Garden, Meeting Room, Meeting and Salon.</p>	<p>Museum, Shop, Amphitheatre, Multipurpose Hall, Sightseeing Platform, Roof Garden, Meeting Room, Meeting and Salon.</p>
<p>15. PLANNING</p>	<p>Designed the structure with geometric shapes that's why angular walls can be seen. Divided the exhibition areas on different floors.</p>	<p>To retain the natural topography of the site, planning was carried out via placing modular units on multi levels.</p>	<p>Computational design approach for planning. Designed the structure as multipurpose facility, used for events like Hugo awards, comiccon etc.</p>	<p>Computational design approach for planning. Designed the structure as multipurpose facility, used for events like Hugo awards, comiccon etc.</p>
<p>16. CIRCULATION</p>	<p>Forced circulation system don't allow the visitors to enter into the choice of gallery they want.</p>	<p>Multi - Directional circulation system helps visitors to enter into the choice of space they want.</p>	<p>Free flowing circulation system. Connecting the spaces via escalators & elevators.</p>	<p>Free flowing circulation system. Connecting the spaces via escalators & elevators.</p>
<p>17. EXHIBITS STYLE</p>	<p>Traditional glass encased exhibits, Hands on exhibits, Science experiments exhibits.</p>	<p>Traditional glass encased exhibits, Hands on exhibits, Science experiments exhibits.</p>	<p>Interactive and Digital exhibits, Live simulations. Mixed reality exhibits, floating installations.</p>	<p>Interactive and Digital exhibits, Live simulations. Mixed reality exhibits.</p>
<p>18. LIGHTINGS</p>	<p>Natural - Loc of natural lighting. Artificial - Extensive use of artificial lightings.</p>	<p>Natural - Loc of natural lighting. Artificial - Extensive use of artificial lightings.</p>	<p>Natural - Lots of natural light via Skylights. Artificial - Dynamic & Smart lighting systems.</p>	<p>Natural - Lots of natural light via Skylights. Artificial - Dynamic & Smart lighting systems.</p>
<p>19. MATERIALS USED</p>	<p>Aggregate plaster using local Dehi blue quartzite stone chips with bands in Dhopur stone chips.</p>	<p>Finished with local grey stone, grill plaster with grey cement panels, photcrete is also used.</p>	<p>GFRP panels, cast-in-place concrete, & faceted anodized aluminium panels.</p>	<p>GFRP panels, cast-in-place concrete, steel, Low-E Glass etc.</p>
<p>20. RELEVANCE</p>	<p>Circulation pattern, Museum designs in Indian context, and Spatial provisions.</p>	<p>Circulation pattern, Museum designs in Indian context, and Spatial provisions.</p>	<p>Parametric & Inorganic Form, Technologies, Design features, and Spatial provisions.</p>	<p>Parametric & Inorganic Form, Technologies, Design features, and Spatial provisions.</p>
<p>21. INFERENCES</p>	<ul style="list-style-type: none"> Glass cased exhibits should have diffused or natural lighting or the glass used should be glare free so the users can see it properly. A forced movement between various floors don't allow the visitors to enter into the choice of selecting a particular gallery. 	<ul style="list-style-type: none"> The spill 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"> 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 aesthetics. 	<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 aesthetics.
<p>22. FEATURAL TAKEAWAYS</p>	 <p>Entrance from first floor (Grand entrance)</p>	 <p>Visual connection between the floors.</p>	 <p>Inverted dome w/ skylight & Spiral ramp.</p>	 <p>Double heighted galleries for floating installations.</p>

7. FOCUS AREA OF THE PROJECT

Here are the focus areas based on specific design aspects for the project:

Function And Circulation-Centered Design Approach:

- **EFFICIENT FLOW**

Design spaces with intuitive circulation paths, ensuring smooth visitor movement while optimizing space utilization.

- **FUNCTIONAL ZONES**

Define distinct zones for exhibitions, workshops, and entertainment, ensuring each area serves its purpose efficiently.

Futuristic Design Approach:

- **TECHNOLOGICAL INTEGRATION**

Incorporate cutting-edge tech like holographic displays, interactive simulations, and AI-driven experiences to create a futuristic ambiance.

- **INNOVATIVE MATERIALS**

Utilize advanced, sustainable materials that complement the futuristic theme while ensuring durability and aesthetic appeal.

Dynamic Lighting:

- **ADAPTIVE ILLUMINATION**

Implement dynamic lighting systems that adjust based on exhibit themes or visitor interactions, enhancing the ambiance and guiding attention.

- **INTERACTIVE LIGHTING**

Introduce interactive lighting elements that respond to user movements or exhibit interactions, creating engaging and immersive experiences.

Futuristic Interiors:

- **SLEEK AESTHETICS**

Embrace minimalist yet visually striking interior designs, echoing futuristic concepts with clean lines and innovative forms.

- **MODULAR SPACES**

Incorporate flexible and adaptable interior layouts to accommodate changing exhibits or events, promoting versatility within the space.

User Experiences:

- **ENGAGEMENT-CENTRIC DESIGN**

Create interactive exhibits that encourage hands-on exploration, promoting active participation and learning.

- **PERSONALIZED EXPERIENCES**

Implement technologies that tailor experiences based on visitor preferences, offering personalized and memorable engagements.

Accessibility And Inclusivity:

- **USER-FRIENDLY DESIGN**

Ensure all spaces are accessible to diverse visitors, incorporating features catering to individuals with varying abilities.

- **MULTISENSORY EXPERIENCES**

Design exhibits that engage multiple senses, ensuring an inclusive and immersive experience for all visitors.

By focusing on these specific design aspects, the project aims to create an immersive, technologically advanced, and user-centric space that aligns with futuristic themes while ensuring functionality, sustainability, and inclusivity.

8. LITERATURE REVIEW OF RESEARCH PAPERS

“Contemporary Approaches in Museum Space Design by Funda Kurak Acici” (2020)

The paper “*Contemporary Approaches in Museum Space Design by Funda Kurak Acici*” discusses how the inclusion of the public/visitors in museum functions has led to the replacement of the concept of the museum by that of a contemporary museum, that is, it has resulted in the emergence of new museology, which has transformed museums into places that promote broad public access to real-life experiences and emotions.

What distinguishes contemporary museology from traditional museology is that museums today engage in interactive communication with the public. Therefore, visitors of museums, that have been designed based on modern functions and new understanding, are more open to different experiences and enjoy them more. Contemporary exhibitions of artworks attract more visitors, and activity areas in museums turn into meeting points where visitors can sip their coffee and enjoy a chat. It is, therefore, clear that contemporary museums are and will be important landmarks that bring together history, art, and culture.

Museums have stopped thinking of their collections as fixed entities and realize that exhibition and presentation are often more important than the collections themselves. The shift from the strict canons of traditional museology to the innovative presentation and exhibition methods of the new museology has manifested itself in contemporary approaches to recent museum designs. In this context, museums aiming to share technological developments and different views with a broader audience incorporate visual educational materials (computer screens, holograms, virtual tours, interactive projection systems, three-dimensional scanning, simulators, three-dimensional modeling and digital applications) into their exhibitions. Developments and contemporary approaches in the field of museology are an inevitable consequence of the era in which we live because we see new developments in every sphere of life every day.

“New Designs In Circulation Areas And Museums The Case Of The Quai Branly Museum by Canbakal Ataoğlu” (2016)

The research paper *“New Designs In Circulation Areas And Museums The Case Of The Quai Branly Museum by Canbakal Ataoğlu”* discusses the museums emerging as dynamic spaces during the 1970s era, serving as catalysts for radical spatial changes. Architects shifted their focus from linear, book-like experiences to designing museums that offered visitors multiple, non-prescriptive circulation routes. The museum experience transformed into a self-guided journey, reminiscent of navigating a labyrinth rather than following predetermined paths.

Contemporary museums, reflecting this departure from traditional approaches, now feature spatial arrangements characterized by irregular gaps in sections, non-geometric floor plans, and a deliberate vagueness in defining borders. The introduction of vibrant elements such as striking colors, patterns, and materials further contributes to the creation of immersive and unconventional spatial experiences.

The paper underscores the broader implications of these spatial configurations, emphasizing their role in a paradigmatic shift in the perception and utilization of museum spaces. Elements such as irregularities in sections and the intentional departure from geometric norms contribute to an experiential richness that goes beyond traditional museum structures. The incorporation of diverse circulation elements, including stairs, moving stairways, elevators, platforms, and bridges, further enhances the immersive quality of these spatial designs.

“Rethinking Art Museum Spaces and Investigating How Auxiliary Paths Work Differently by Jae Hong Lee and Yong Seung Kim”

The paper “*Rethinking Art Museum Spaces and Investigating How Auxiliary Paths Work Differently by Jae Hong Lee and Yong Seung Kim*” explores one of the key issues in designing museums is the interaction between the layout of space and the layout of objects, and spatial configurations are strongly related to didactic narratives, social implications, and curatorial intentions. However, it has not yet been examined thoroughly how museums work from a spatial perspective. Apart from the layout of objects, spatial configurations play an important role in creating various walking sequences, ranging from main routes to auxiliary paths. Art museums in particular can be characterized by such deviations generated by the auxiliary path, but they are hardly understood from this aspect.

By analyzing four art museums in terms of isovist attributes, syntactic measures, spatial sequences, and possible trails, it has been concluded that in the cases of the Uffizi Gallery and the Moderna Museet, spatial sequences work conservatively, so that auxiliary paths are channeled back to the gathering space. This is because the walking experience is strongly correlated with visual syntactic features such as connectivity, integration, and intelligibility. Conversely, walking sequences in the case of the Centre Pompidou and the Alte Pinakothek work generativity, and auxiliary paths are rarely related to the gathering space because the walking experience is strongly concerned with visual geometric properties such as isovist area/perimeter and occlusivity.

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9. PRINCIPAL USERS OF THE PROJECT

The principal users of the project in India encompass diverse demographics and groups:

Demographics :

- **STUDENTS AND EDUCATIONAL GROUPS**

Approximately 320 million students are enrolled in schools and universities across India, representing a significant portion of potential educational visitors.

- **TOURISTS AND TRAVELERS**

India hosts millions of domestic and international tourists annually, with major cities like Delhi, Mumbai, and Bangalore attracting a substantial portion of these visitors.

- **TECH ENTHUSIASTS**

With a burgeoning tech-savvy population, India has over 560 million internet users, indicating a substantial audience interested in futuristic technologies.

Statistics (Approximations) :

These figures are drawn from various sources such as government reports, educational institutions' data, industry publications, and reputable news sources covering demographics, education, technology, and tourism in India.

- **STUDENT DEMOGRAPHIC**

India's student population constitutes around 25% of the total population, implying approximately 320-350 million students seeking educational experiences.

- **TOURISM STATISTICS**

India welcomed around 11 million foreign tourists in 2019, and the domestic tourism market is even more significant, accounting for millions of travelers each year.

- **TECH-ENGAGED AUDIENCE**

India's internet users are estimated at 560-600 million, a substantial demographic interested in technology-driven experiences.

Visitor Projections :

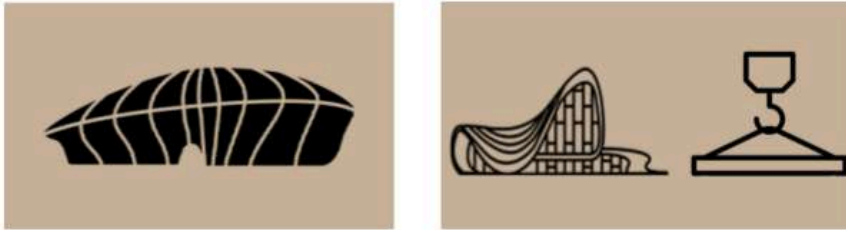
- Anticipate an annual footfall of 1.5-2 million visitors, considering both local and international tourists, students, and tech enthusiasts drawn to futuristic experiences.
- Educational visits from schools and universities could account for 15-20% of the total visitor count, with an expected increase during academic seasons.

These statistics showcase the vast potential user base for the project within India, encompassing students, tourists, tech enthusiasts, and various other demographics interested in futuristic, educational, and entertainment experiences.

10. DESIGN GOALS AND STRATEGIES

GOAL- FUTURISTIC INFRASTRUCTURE

Create a design that embodies futuristic elements, reflecting the theme of science fiction. Innovative architectural forms, materials, and technology to create a visually striking facade which plays an important role. Innovative approaches evokes a dynamic ambiance inspired by science fiction imagery and concepts which can blur the lines between reality and fiction.



STRATEGIES-

- Innovative form & Volume : Inclusion of unconventional architectural forms inspired by Sci-Fi Theories, Paradoxes or concepts.
- Sleek and Minimalist Design : Employ 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 atriums to create a sense of transparency and openness.

GOAL- 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 co-create content, enhancing their overall museum experience.

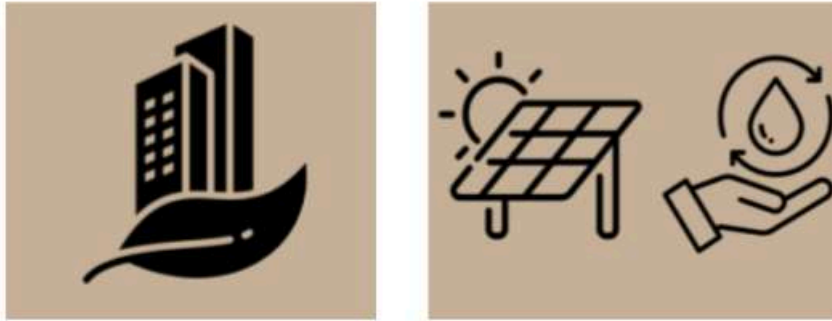


STRATEGIES-

- Multipurpose Halls : Multipurpose halls can be used to host different community level events like Comic-Cons, NFT events etc.
- Open Spaces : Inclusion of open spaces so different communities can gather and discuss about their respective interested genres.
- Workshop Areas : Workshop areas are required for people to encourage them towards hands-on workshop events.
- Auditoriums : Auditoriums are required to organise seminars, award shows, book conventions, celebrity meetups related events which also draws additional revenue generation via renting for such events and helps museum to become financially self sustained.

GOAL -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 into 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.

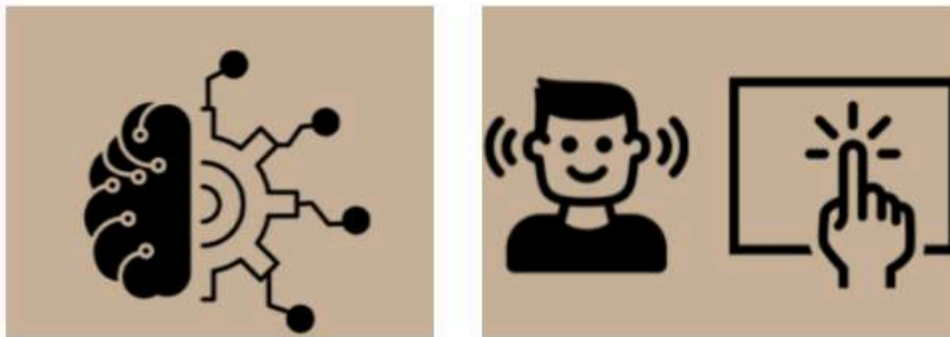


STRATEGIES

- **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 strain on local water resources.

GOAL- SENSORY EXPERIENCES

Integrating sensory experiences as a design goal for a science fiction museum project involves engaging visitors through immersive 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.

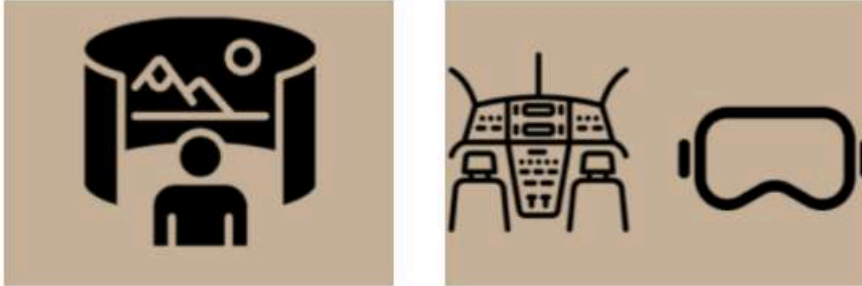


STRATEGIES

- **Visual Stimuli** : Utilizing 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 dimensions of science fiction narratives.
- **Tactile Interactions** : Offering tactile exhibits, interactive touchscreens, and hands-on activities that allow visitors to physically engage with props, models, and artifacts, fostering a deeper connection to the museum's themes.

GOAL- INTERACTIVE EXHIBITS

Interactive exhibits serve as a pivotal 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, multimedia elements, and interactive interfaces to transport visitors into fantastical worlds, futuristic scenarios, and speculative realms inspired by science fiction literature, film, and art.

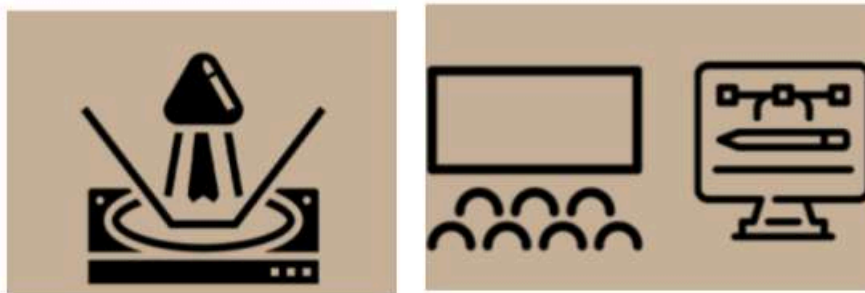


STRATEGIES-

- **Live 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 canvas.

GOAL- 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.



STRATEGIES-

- **Digital Art Installations** : Commission digital artists to create interactive digital art installations that explore themes of science fiction, technology, and futurism, 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 stories etc.
- **Multisensory 4D Cinema** : Offer a multisensory 4D cinema experience where visitors can watch science fiction films enhanced with special effects such as motion seats, wind, water sprays, and scents, creating a fully immersive viewing experience.

GOAL- 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 plays 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 all are tech savvys and fiction enthusiasts.

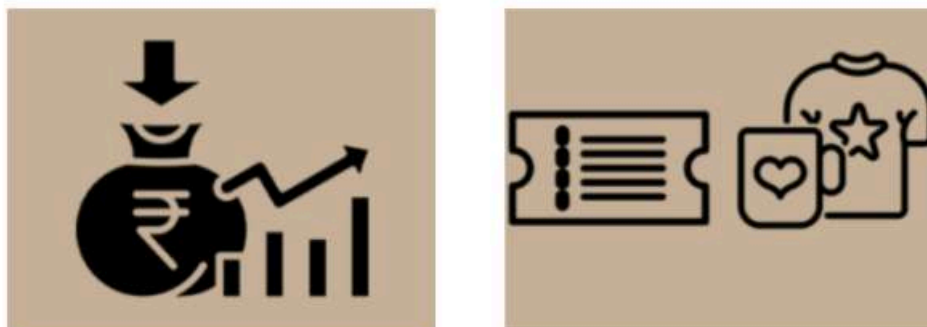


STRATEGIES

- **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 easily reachable 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 informational materials, to accommodate international tourists and enhance their understanding and enjoyment of the exhibits.

GOAL- 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.



STRATEGIES-

- **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 souvenirs. Collaborating with local artists and vendors to offer unique and exclusive products that appeal to visitors.

GOAL -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. This 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.

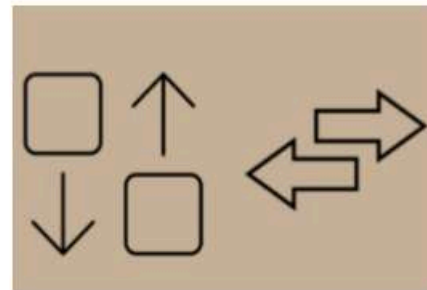
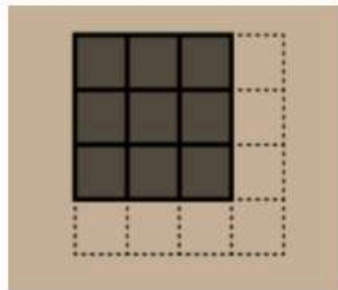


STRATEGIES-

- **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 visiting the structure.
- **Special Provisions For Neurodiverse Individuals** : Provisions like quiet spaces, sensory-friendly exhibits, and clear wayfinding signage etc are good for neurodiverse individuals.
- **Tactile Floorings Or Signages** : Tactiles 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.

GOAL- 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.



STRATEGIES-

- **Convertible Spatial Arrangements** : Provisions like movable partitions etc can transform the whole 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 also free up large amount of space for other events or meetups.
- flexible spaces enhances the museum's capacity to evolve and respond to the evolving demands and expectations of its audience while ensuring a welcoming and inclusive environment for all.

11. DESIGN CONSIDERATIONS :

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



Futuristic Design : Main intent 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 in a forced manner.



Unobstructed Flow & Wayfinding : Barrier free flow helps to manage the people and signages would help the users to navigate.



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



Materials : The focus on material selection should be thoughtful. It enhances the look, the feel and the overall experience.

12. DESIGN GUIDELINES:

- **Futuristic Aesthetics:** Incorporate architectural elements and design features that evoke the futuristic ambiance 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 rotation and thematic curation.
- **Sustainability:** Implement sustainable design principles and environmentally friendly practices throughout the museum, minimizing environmental impact and promoting long-term sustainability.

13. 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 secure the development of Delhi".

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

14. DESIGN BRIEF

SR.	ZONES	Spaces	No. of Units	Area (Sq.m.)	Total area (Sq.m.)	No. of Users	Reference
1	Entrance	Atrium	As / design				Case study
		Foyer	1	150	150	120	
		Reception + Waiting	1	80	80	50	
		Ticket counter	1	20	20	3	
		Souvenir shop	1	100	100	80	
		Toilets (Men & Women)	As / NBC				
				Total	350		
2	Admin. Block	Director's cabin w/ Toilet	1	30	30	4	Case study
		Asst. Director's cabin	1	20	20	4	
		Curator's cabin w/ Toilet	1	30	30	4	
		Asst. curator's cabin	1	20	20	4	
		Technical officer's room	1	15	15	3	
		Regular office area	1	80	80	15	
		Executive's room	2	30	60		
		VIP Lounge	1	60	60		
		Meeting room	2	40	80	8-10	
		Conference room	1	80	80	15-20	
		Pantry	1	20	20		
		Support staff room	1	25	25	10	
		Toilets (Men & Women)	As / NBC				
Store rooms	As / design						
				Total	520		
3	Exhibition Galleries	Permanent Themed Galleries					Case study & Background study
		Space explorations	1	200	200	100	
		Extraterrestrial lives & Possibilities	1	200	200	100	
		Time travel	1	200	200	100	
		Alternate realities	1	200	200	100	
		Artificial Intelligence	1	200	200	100	
		Temporary exhibition space	1	300	300	150-200	
		Toilets (Men & Women)	As / NBC				
Store rooms	As / design						
				Total	1300		
4	Entertainment zone	Live simulations	3	50	150		Background study & Analysis
		AR/VR Experiences	3	40	120		
		Theatre (200 Capacity)	1	300	300	200	
		Toilets (Men & Women)	As / NBC				
		Store rooms	As / design				
				Total	570		
5	Community & Event space	Multipurpose hall 1 for meetups, conventions etc. w/ pantry	1	200	200	150	Case study & Background study
		Multipurpose hall 2 for themed galas etc	1	200	200	150	
		Toilets (Men & Women)	As / NBC				
		Store rooms	As / design				
				Total	400		

6	Auditorium	Entrance foyer	1	100	100		Case study
		Seating area (200 Capacity)	1	300	300	200	
		Projection room	1	20	20		
		Green room	1	30	30		
		Stage	As / design				
		Toilets (Men & Women)	As / NBC				
		Store room	As / design				
				Total	450		
7	Cafeteria	Kitchen	1	15	15		Case study
		Seating space (50 People)	1	70	70		
		Utility area	1	15	15		
		Toilets (Men & Women)	As / NBC				
		Store room	As / design				
				Total	100		
8	Depository	Loading Unloading area	1	80	80		Case study
		Repair work area	1	40	40		
		Archives	1	30	30		
		Prop room	1	30	30		
		Store room	As / design				
				Total	180		
9	Observatory	Observation deck	1	80	80	50	Case study
				Total	80		
10	Services	AC Plant room	1	150	150		Case study
		DG Set room	1	50	50		
		LT Panel room	1	30	30		
		Fire control room	1	20	20		
		Server room	1	20	20		
		Waste management	1	30	30		
				Total	300		
				Grand Total	4250		
11	Unbuilt Spaces	Amphitheatre					Background study & Analysis
		Plaza					
		Park					
12	Parking	2 Wheelers					Case study
		4 Wheelers					
		Buses					

15. SITE SELECTION

INTRODUCTION :

The site selected for the proposal of a Sci-fi Museum & Entertainment Hub 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 at the intersection of science fiction & reality.

LOCATION :

Behind Purana Quila Ring Road, I.P. Park Ring Road New Delhi, Nagla Machi, CENTRAL DELHI, Delhi 110002

GENERAL INFORMATION :

Total site area for Nav Bharat Udyan : 25 acres.

Total site area for Iconic Structure : 8.65 acres ~ 35000 m²

Height allowance for Iconic Structure : 134 m

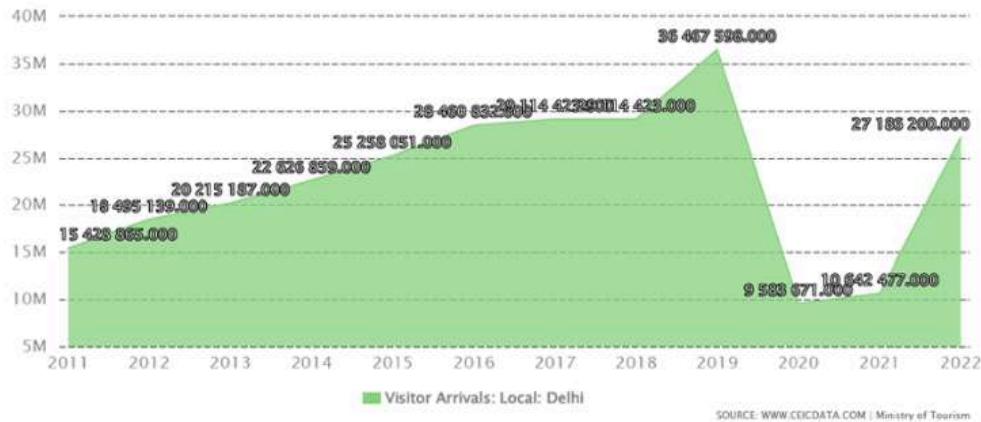
WHY DELHI & NOT OTHER CITIES ?

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. 6.06 lakh (39.70%) Foreign Tourist Arrivals (FTAs) were recorded in Delhi as per top 8 International Check Posts during 2021. Delhi Secured 3rd rank in Total Foreign Tourist Visits in 2021 with total share of 9.5%.



Graph showing the visitors arrivals in Delhi over the years.

Visitor Arrivals: Local: Delhi data was reported at 27,186,200.000 Person in 2022. This records an increase from the previous number of 10,642,477.000 Person for 2021.

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

WHY THIS SITE?

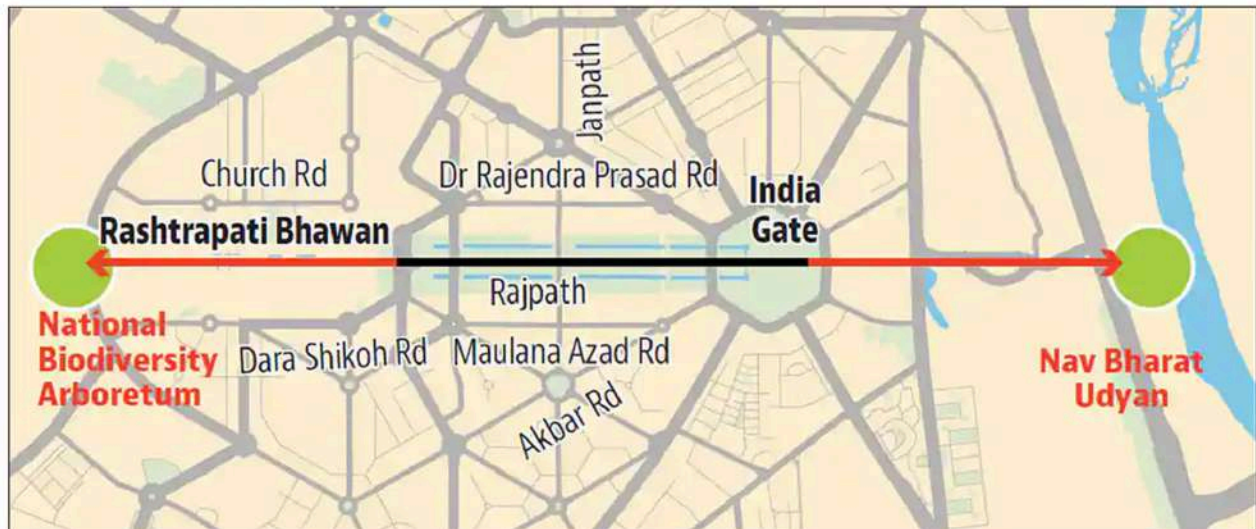
The site is located on the western banks of Yamuna river and also a part of “Nav Bharat Udyann” or “New India Garden” project. The main intent to take this site for ADP is to work on a live project.

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 administration, 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 2.9 km to 6.3 km on eastern point to culminate at western bank of River Yamuna, to restore in pursuance of the original design vision of Central Vista and stretch from ‘Ridge to River’. In order to realize the grand vision of ‘AatmaNirbhar Bharat’, Nav Bharat Udyan (New India Garden) is 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 infotainment facilities viz. Digital Sphere of Unity, Journey of India museum, Tech Dome and Open-Air Theatre, to showcase India’s rich historical and cultural heritage, scientific achievements and symbolize Unity in Diversity and aspirations of rising New India.



Showing the extension of Central Vista towards eastern and western 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 to showcase India’s rich historical and cultural heritage, scientific achievements and symbolize Unity in Diversity and the technological advancements of rising New India.

Some salient features of the Iconic structure should be :

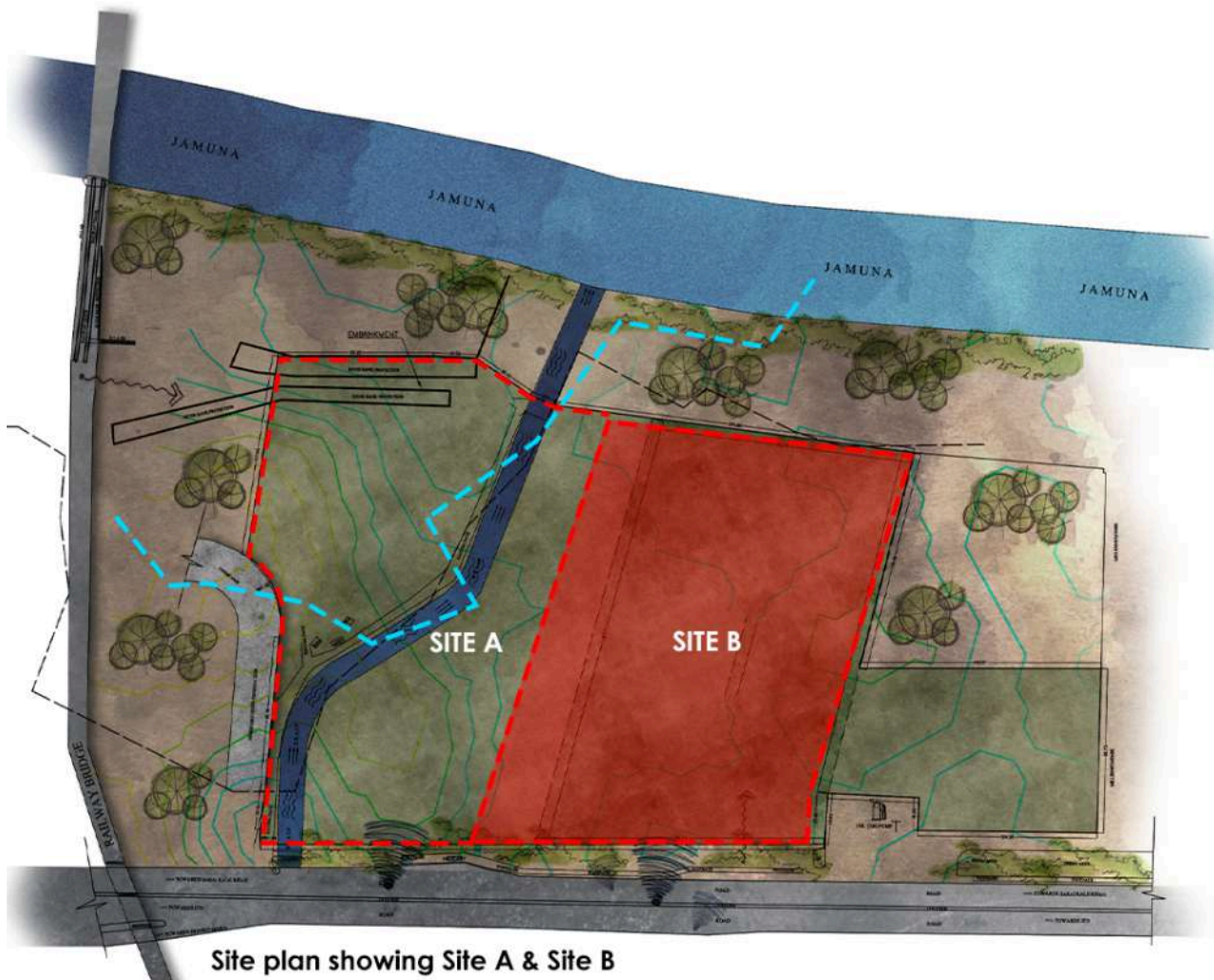
Iconic & Defining : The structure should be iconic in design & represent the technological advancements.

Futuristic : The structure should be designed with futuristic vision.

Timeless : The iconic structure should be constructed with materials & technology which would last for eras.

Aspirational : The iconic structure should represent values and aspirations of New India.

Indigenous : The iconic structure should be constructed with indigenous materials.



ANALYSIS OF SITE A :

Pros : Site A has a good plot area of around 15 acres.

Cons : Comes under the flood line and because of that it’s not a preferable option.

ANALYSIS OF SITE B : (FINALISED SITE)

Pros : Not comes under the floodline & has low vegetation cover as compared to site A.

Cons : Site size compromised as compared to Site A.

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 5° - 20°C.

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	13.5 °C (56.3) °F	16.9 °C (62.4) °F	22.5 °C (72.6) °F	29.2 °C (84.5) °F	32.7 °C (90.9) °F	33 °C (91.3) °F	29.9 °C (85.8) °F	28.7 °C (83.7) °F	27.8 °C (82.1) °F	25.4 °C (77.7) °F	20.5 °C (69) °F	15.4 °C (59.7) °F
Min. Temperature °C (°F)	7.7 °C (45.8) °F	10.6 °C (51) °F	15.2 °C (59.4) °F	21 °C (69.8) °F	25.3 °C (77.6) °F	27.6 °C (81.6) °F	26.6 °C (79.9) °F	25.8 °C (78.5) °F	23.9 °C (75.1) °F	19.2 °C (66.5) °F	14.2 °C (57.5) °F	9.3 °C (48.7) °F
Max. Temperature °C (°F)	20 °C (68) °F	23.5 °C (74.4) °F	29.8 °C (85.7) °F	36.7 °C (98.1) °F	39.6 °C (103.3) °F	38.2 °C (100.8) °F	33.7 °C (92.6) °F	32.3 °C (90.1) °F	32.2 °C (90) °F	31.8 °C (89.3) °F	27.4 °C (81.3) °F	22.2 °C (72) °F
Precipitation / Rainfall mm (in)	23 (0)	33 (1)	20 (0)	14 (0)	20 (0)	74 (2)	208 (8)	183 (7)	99 (3)	13 (0)	5 (0)	8 (0)
Humidity(%)	67%	60%	47%	29%	32%	46%	71%	77%	71%	55%	54%	61%
Rainy days (d)	2	3	3	3	4	7	15	15	8	2	1	1

Showing the climate summary 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;

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



LAWS FOLLOWS IN DELHI :

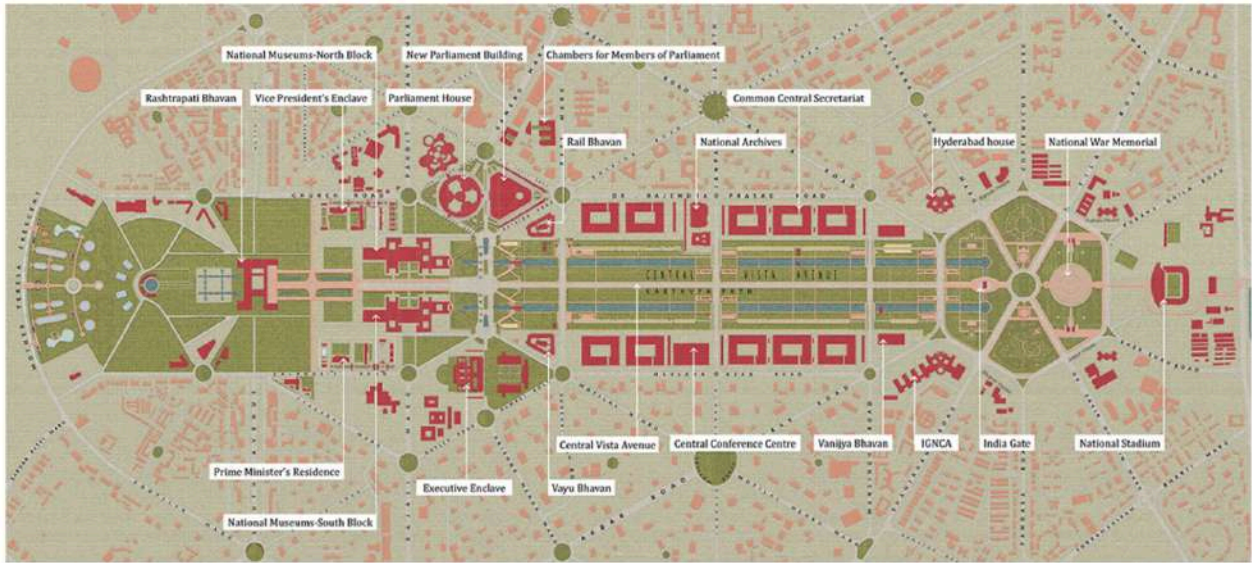
UBBL for Delhi 2016

Building bye laws by DDA

DUAC for LBZ

CENTRAL VISTA REDEVELOPMENT PROJECT :

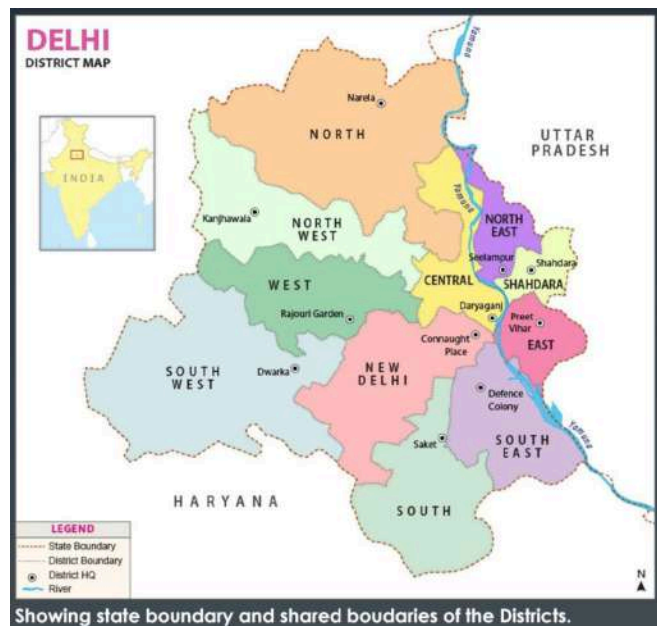
Central Vista Redevelopment Project refers to the ongoing redevelopment to revamp the Central Vista, India's central administrative area located near Raisina Hill, New Delhi. The area was originally designed by Edwin Lutyens and Herbert Baker during British colonial rule and was retained by the Government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



Proposed master plan of Central vista by HCP. (Source : HCP)

The cost of the Central Vista Redevelopment project, which also includes a Common Central Secretariat and the Special Protection Group (SPG) building, has been estimated to be around ₹13,450 crore (equivalent to ₹160 billion or US\$2.0 billion in 2023) spread over four years.

SITE SELECTION BASED ON THE FACTORS



Showing state boundary and shared boundaries of the Districts.

Location map showing the Site & access.

- Proposed plot
- Metro lines
- Road networks

NEWSPAPER ARTICLES :

THE TIMES OF INDIA

Delhi | Analysis | News | Sports | Living | Car | World | Travel | India | International | Health | Education | Entertainment | Business | Technology | Environment | Lifestyle | Opinion | Columns | Cartoons | Comics | Children's | Specials

10:45 AM | 14 Dec 2022

'Nav Bharat Udyan': CPWD Seeks Fresh Design Entries only from architects & architectural firms

Delhi | 14 Dec 2022, 10:18 IST

Article related to Nav Bharat Udyan iconic structure design competition in THE TIMES OF INDIA newspaper. Published on 14 Dec. 2022. Source Link : <https://timesofindia.indiatimes.com/india/nav-bharat-udyan-cpwd-seeks-fresh-design-entries-only-from-architects-architectural-firms/articleshow/96230671.cms?from-mdr>

The Indian EXPRESS
GOVERNMENT OF INDIA

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Home > India > Delhi > Trees along Yamuna to make way for Central Vista garden

The area cuts off from the Ring Road into an area with dense vegetation — mostly trees and shrubs, lacking human habitation.

Article related to the cutting off trees and weeds for the extension of the central axis of central vista in THE INDIAN EXPRESS newspaper. Published on 23 Nov. 2020. Source Link : <https://indianexpress.com/article/cities/delhi/trees-along-yamunas-west-bank-to-make-way-for-central-vista-garden-7061791/>

Hindustan Times
Friday, Feb 09, 2024 | New Delhi: 10°C

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News / Lifestyle / Art Culture / Government plans Tech Museum in Delhi to show...

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

PTI | Posted by Krishna Priya Pallavi, New Delhi

Sep 16, 2023 01:07 PM IST

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 16 Sep. 2023. Source Link : <https://www.hindustantimes.com/lifestyle/art-culture/government-plans-tech-museum-in-delhi-to-showcase-emerging-future-technologies>

16. SITE ANALYSIS

INTRODUCTION :

The site selected for the proposal of a Sci-fi Museum & Entertainment Hub 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 at the intersection of science fiction & reality.

LOCATION :

Behind Purana Quila Ring Road, I.P. Park Ring Road New Delhi, Nagla Machi, CENTRAL DELHI, Delhi 110002

GENERAL INFORMATION :

Total site area for Nav Bharat Udyan (Incl. Iconic structure): 25 acres.

Total site area for Sci-Fi Museum : 10 acres ~ 40000 m²

Height allowance for Iconic Structure : 134 m

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.



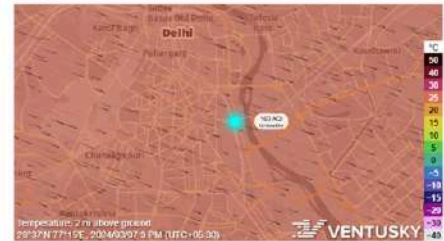
Images showing the soil found on the site and around nearby areas of the site.

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 5° - 20°C.

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	13.5 °C (56.3) °F	16.9 °C (62.4) °F	22.5 °C (72.6) °F	26.2 °C (79.2) °F	32.7 °C (90.9) °F	33 °C (91.4) °F	29.9 °C (85.8) °F	28.7 °C (83.7) °F	27.8 °C (82.1) °F	25.4 °C (77.7) °F	20.5 °C (69) °F	15.4 °C (59.7) °F
Min. Temperature °C (°F)	7.7 °C (45.8) °F	10.6 °C (51) °F	15.2 °C (59.4) °F	21 °C (69.8) °F	25.3 °C (77.6) °F	27.6 °C (81.6) °F	26.6 °C (79.9) °F	25.8 °C (78.5) °F	23.9 °C (75.1) °F	19.2 °C (66.5) °F	14.2 °C (57.5) °F	9.3 °C (48.7) °F
Max. Temperature °C (°F)	20 °C (68) °F	23.5 °C (74.4) °F	26.8 °C (80.2) °F	31.7 °C (89.1) °F	36.6 °C (98) °F	38.2 °C (100.8) °F	33.7 °C (92.7) °F	32.3 °C (90.1) °F	32.2 °C (90) °F	31.8 °C (89.3) °F	27.4 °C (81.3) °F	22.2 °C (72) °F
Precipitation / Rainfall mm (in)	23 (0.9)	33 (1.3)	20 (0.8)	14 (0.6)	20 (0.8)	74 (2.9)	208 (8.2)	183 (7.2)	95 (3.7)	13 (0.5)	5 (0.2)	8 (0.3)
Humidity (%)	67%	60%	47%	29%	32%	48%	71%	77%	71%	55%	54%	61%
Rainy days (d)	2	3	3	3	4	7	15	15	8	2	1	1

Showing the climate summary of Delhi. | Source : ClimateData



Showing wind direction. | Source : Ventusky

MICRO-ClimatE OF THE SITE :

The micro-climate of the site is influenced by its proximity to the Yamuna river & Drain. This 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 ambiance of the area.

The AQI of the area is 160 which is unhealthy and to improve the AQI good amount of landscape pockets will be required.

VEGETATION & NATURAL FEATURES :



Reeds



Canopy Trees




Weeds


Along the banks of the Yamuna River, lush riparian vegetation thrives, characterized by wild tall grasses, reeds, and shrubs adapted to the wetland environment.

SURROUNDING PHOTOS



 View of the IGL CNG Pump.



 Overlooking towards railway track flyover.




 View of Srinagar Kanyakumari Highway.



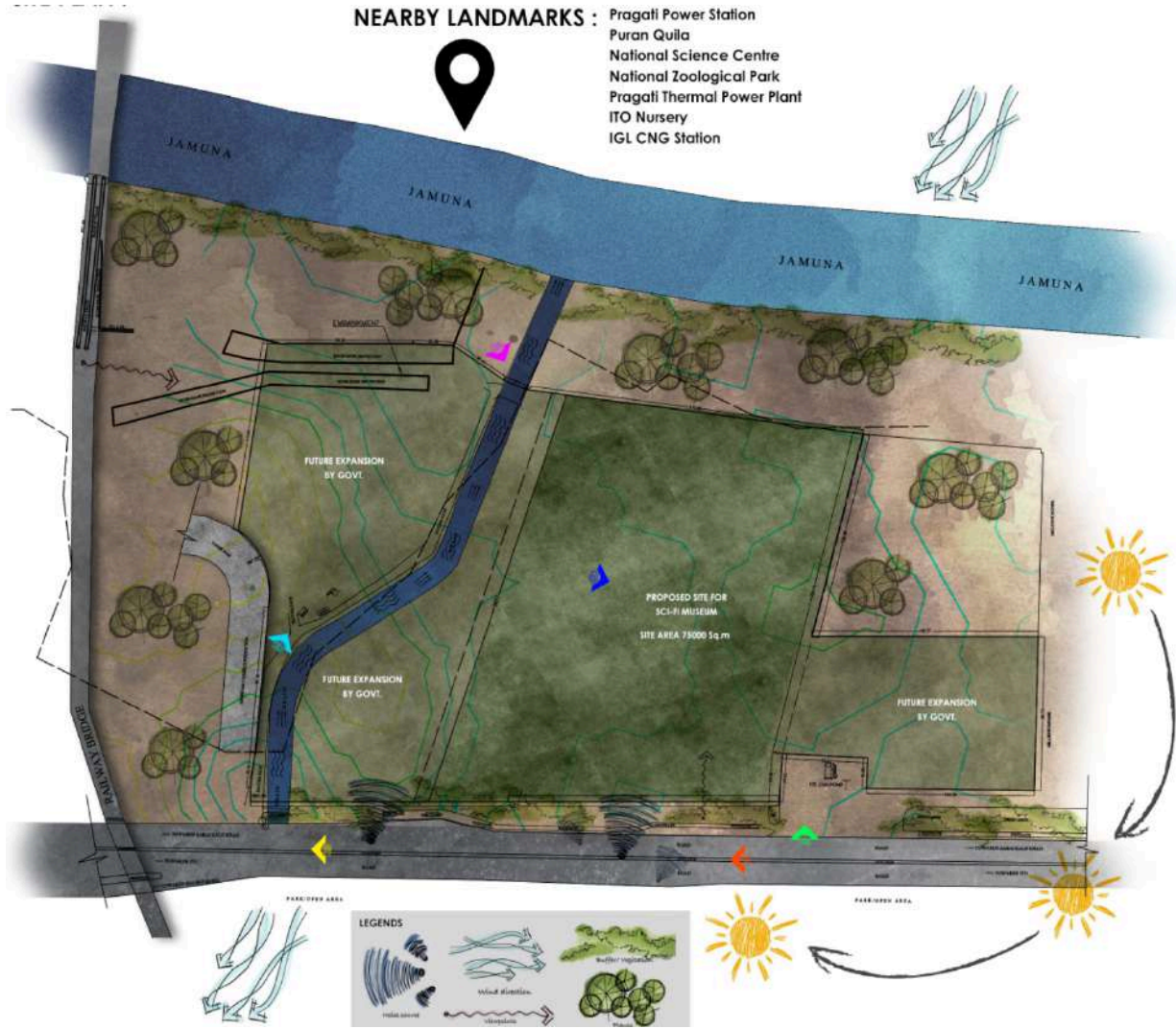
 Kaccha road & encroachments on site.

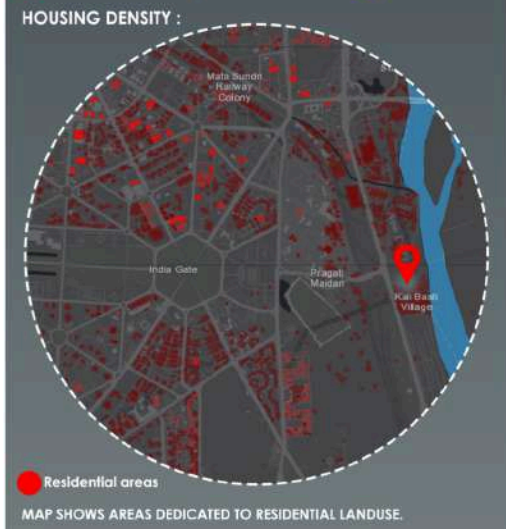
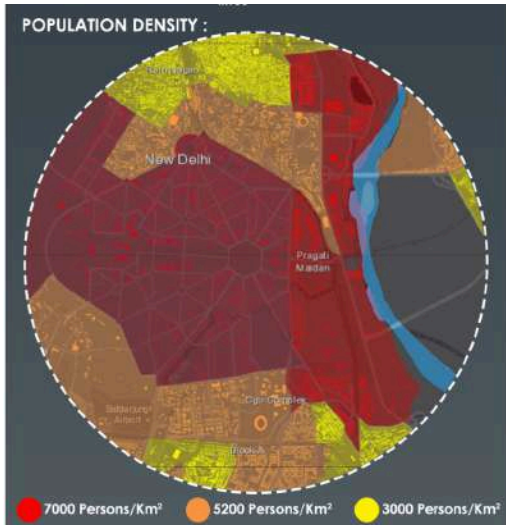
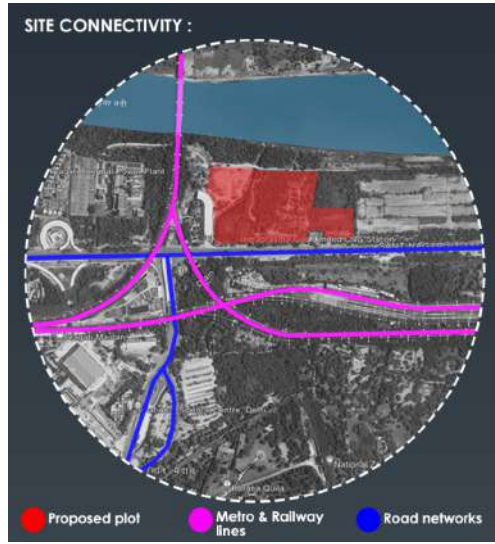


 View of the Yamuna river drain.



 Overlooking towards the site.





17. CONCEPT

INSPIRATION #1 (Zoning) :

TIME, SPACE, REALITY.... It's more than a linear path. It's a prison of endless possibilities, Where single choice can branch out into infinite realities, creating alternate worlds from the one you know.

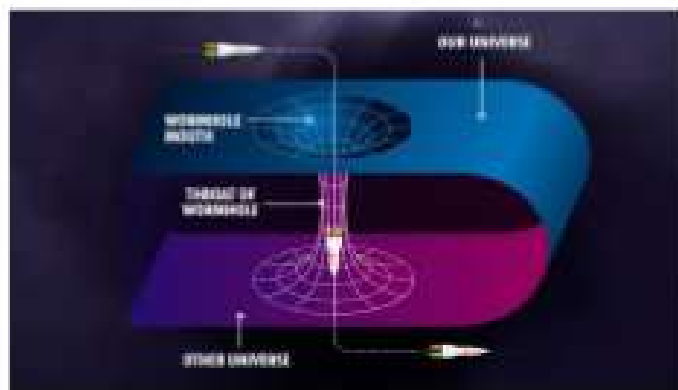
- The Watcher (What If...?)



INSPIRATION #2 (Circulation) :

Wormholes or Whiteholes theory.... Physics is often stranger than science fiction, and I think science fiction takes its cues from physics : higher dimensions, wormholes, the warping of space & time, stuff like that.

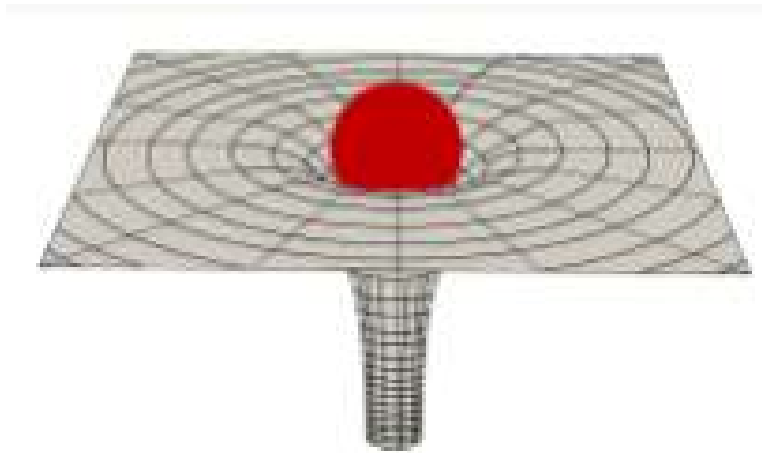
- Michio Kaku (Sci-fi writer)



INSPIRATION #3 (Planetarium) :

Blackholes... A black hole is so dense that gravity just beneath its surface, the event horizon, is strong enough that nothing – not even light – can escape. The event horizon isn't a surface like Earth's or even the Sun's. It's a boundary that contains all the matter that makes up the black hole.

- NASA

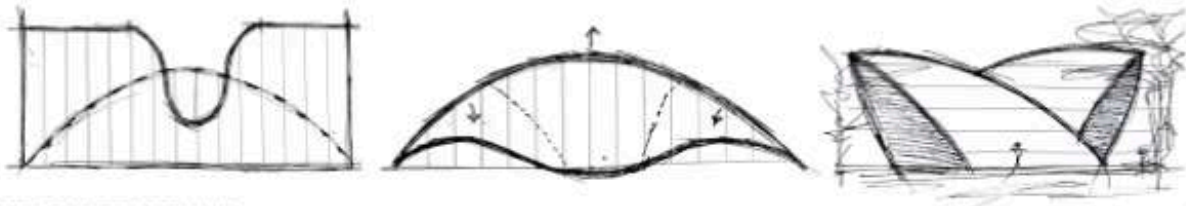


TIME : Time zone will have all the exhibits, literature and experiences related to the time travel theories, paradoxes, official findings, and the history or scientific achievements.

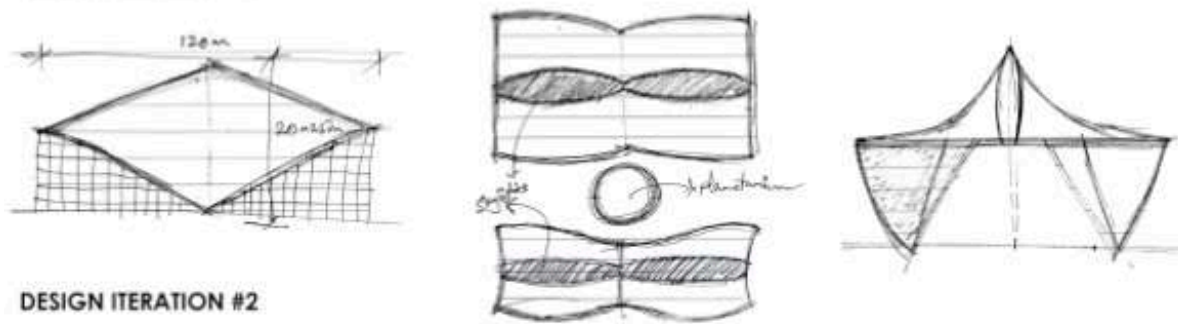
SPACE : Space zone will cater the planetarium which will have projection mapping shows outside the sphere and simulations or 4k theatre experience inside along with Space related exhibits and findings.

REALITY : Reality zone will accommodate all the technological advancements to showcase the current level of achievements in today's world.

FORM FINDING :

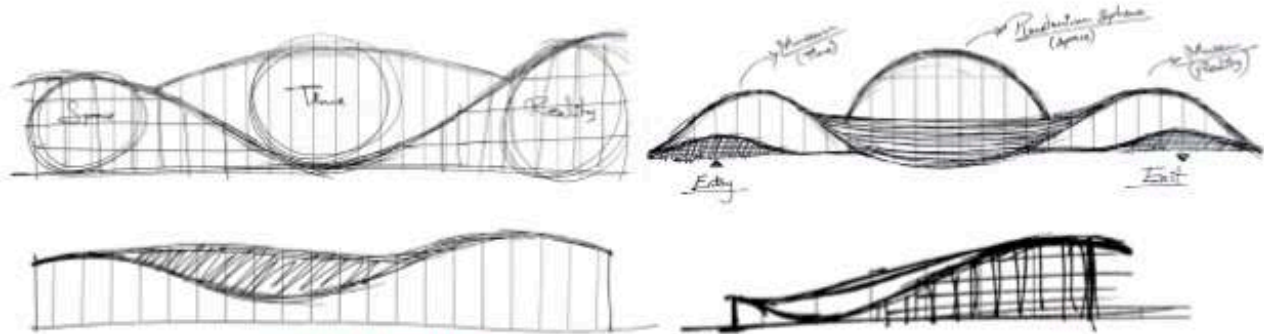


DESIGN ITERATION #1



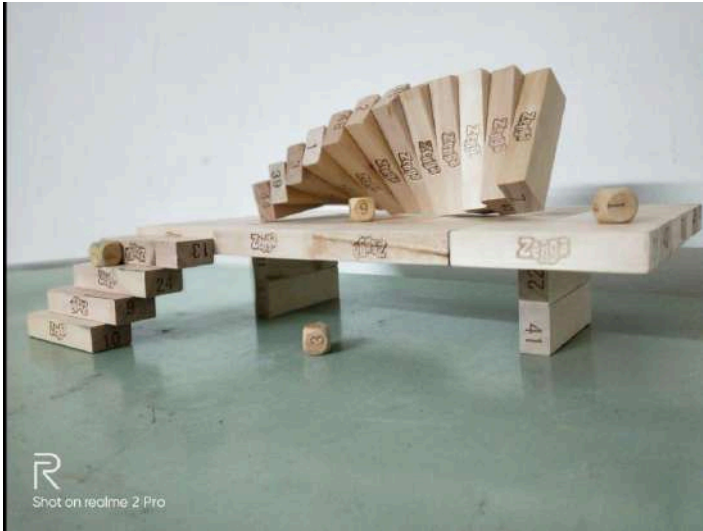
DESIGN ITERATION #2

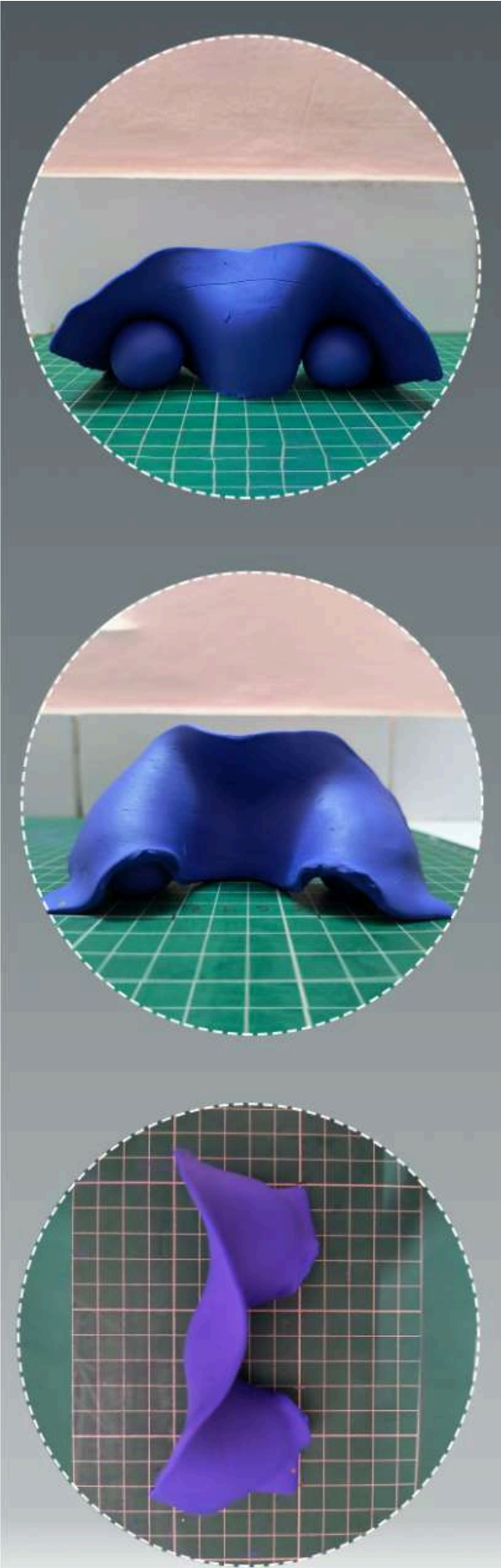
DESIGN ITERATION #2



DESIGN ITERATION #3 (FINALISED FORM)

STUDY MODEL PHOTOS-





18. DESIGN

18.1 SITE PLAN

18.2 LANDSCAPE DETAILS

18.3 FLOOR PLANS

18.4 ELEVATION

18.5 SECTION

18.6 STRUCTURAL DETAILS

18.7 SITE SERVICES