

**MINISTRY OF URBAN DEVELOPMENT
REPUBLIC OF INDIA**

**DATA COLLECTION SURVEY
FOR
VARANASI CONVENTION CENTER
IN
INDIA**

FINAL REPORT

MAY 2017

JAPAN INTERNATIONAL COOPERATION AGENCY

ORIENTAL CONSULTANTS GLOBAL CO., LTD.

NIKKEN SEKKEI LTD.

NOMURA RESEARCH INSTITUTE, LTD.

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ABBREVIATIONS & TERMINOLOGY

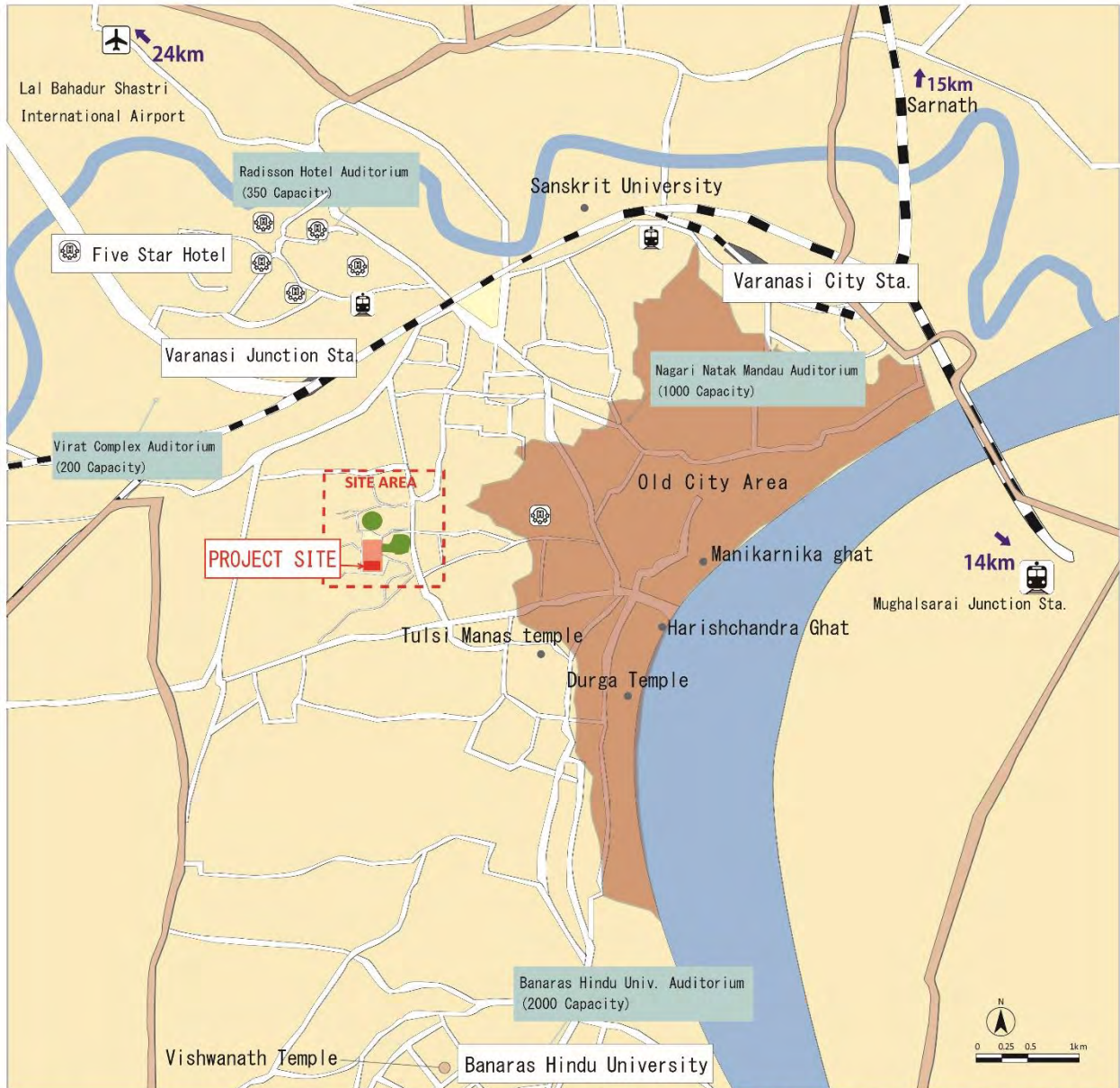
AAI	Airport Authority of India
AC	Air Conditioning
AMASR	Ancient Monument and Archaeological Sites and Remains
AMC	Annual Maintenance Contract
A/P	Authorization to Pay
APIIC	Andhra Pradesh Industrial Infrastructure Corporation
ASHRAE	American Standard Heating Refrigerating and Air conditioning Engineers
ASI	Archaeological Survey of India
ASPE	American Society of Plumbing Engineers
ASTM	American Society for Testing and Materials
AV Hall	Audio Visual Hall
AVR	Automatic Voltage Regulator
BA	Bachelor of Arts
BC	Before Christ
BCC	Brilliant Convention Centre
BHEL	Bharat Heavy Electricals Ltd
BHU	Banaras Hindu University
BIEC	Bangalore International Exhibition Centre
BMTPC	Building Materials and Technology Promotion Council
BS	British Standard
BSNL	Bharat Sanchar Nigam Limited
Ca.	Circa
CAGR	Compound Average Growth Rate
CAPEX	Capital Expenditure
CAR	Contractor's All Risks
CBUD	Capacity Building for Urban Development
CDP	City Development Plan
CE	Chief Engineer

CFO	Chief Fire Officer
CGWA	Central Ground Water Authority
CIBSE	Chartered Institution of Building Service Engineers
CM	Chief Minister
CPCB	Central Pollution Control Boards
CPHEEO	Central Public Health and Environmental Engineering Organization
CPWD	Central Public Works Department
CRPF	The Central Reserve Police Force
CSR	Corporate Social Responsibility
Delhi NCR	Delhi National Capital Region
DLP	Defect Liability Period
DPR	Detailed Project Reports
DTV	Domestic Tourist Visits
EAC	Expert Appraisal Committee
ECBC	Energy Conservation Building Code
EIA	Environmental Impact Assessment
E/N	Exchange of Note
EPA	Environment Protection Act
ESR	Elevated Service Reservoir
EU	European Union
FAR	Floor Area Ratio
FTA	Foreign Tourist Arrivals
FY	Fiscal Year
GA	Grant Aid
G/A	Grant Agreement
GDP	Gross Domestic Product
GOI	Government of India
GOJ	Government of Japan
GRIHA	Green Rating for Integrated Habitat Assessment
H.E.	His Excellency

HCVB	Hyderabad Convention Visiting Bureau
HICC	Hyderabad International Convention Centre
HITEX	The Hyderabad Information Technology and Engineering Consultancy City
HRD	Human Resource Development
ICCA	International Congress and Convention Association
ICPB	India Convention Promotion Bureau
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineer
IGBC	Indian Green Building Council
IMF	International Monetary Fund
iNDEXTb	Industrial Extension Bureau
INR	Indian Rupee
IPC	International Plumbing Code
IS	Indian Standard
ISCCM	Indian Society of Clinical Care Medicine
ISHRAE	Indian Standard Heating Refrigerating and Air conditioning Engineers
JICA	Japan International Cooperation Agency
JPNIC	Jai Prakash Narayan International Centre
JPY	Japanese Yen
JST	JICA Study Team
L/A	Loan Agreement
LAN/WAN	Local Area Network/Wide Area Network
LDA	Lucknow Development Authority
LEED	Leadership in Energy and Environmental Design
LPG	Liquefied Petroleum Gas
MA	Master of Arts
MATV System	Master Antenna Television
MDA	Market Development Assistance
MEA	Ministry of External Affairs
MEP	Mechanical, Electrical and Plumbing

MICE	Meetings, Incentives, Conference, Exhibitions
MNRE	Ministry of New and Renewable Energy
MOC	Ministry of Culture
MOEF	Ministry of Environment and Forests
MOT	Ministry of Tourism
MOUD	Ministry of Urban Development
NASC	National Agricultural Science Complex
NBC	National Building Code
NEP	National Environment Policy
NFPA	National Fire Protection Association
NGO	Non-Governmental Organization
NHAI	National Highways Authority of India
NMA	National Monument Authority
NMCG	National Mission for Clean Ganga
NOC	No Objection Certificate
NOIDA	New Okhla Industrial Development Authority
ODA	Official Development Assistance
OM	Operation Manager
O&M	Operation & Management
OPEX	Operational Expenditure
PA System	Public Address System
PCO	Professional Convention Organizer
PD	Project Director
PhD	Doctor of Philosophy
PJSC	Public Joint Stock Company
PM	Prime Minister
PMC	Project Management Consultant
PMU	Project Management Unit
PO	Preparatory Office
PPP	Public Private Partnership

ROW	Right of Way
SEAC	State Level Expert Appraisal Committee
SPV	Special Purpose Vehicle
SWM	Storage Waste Management
TBD	To Be Discussed/ Decided
TERI	The Energy and Resources Institute
TIF	Tokyo International Forum
TOR	Terms Of Reference
UAE	United Arab Emirates
UK	United Kingdom
UN	United Nations
UNCRPD	UN Convention for Rights of Persons with Disabilities
UNESCO	United Nations Educational, Scientific and Cultural Organization
U.P.	Uttar Pradesh
UPC	Uniform Plumbing Code
UPPCB	Uttar Pradesh Pollution Control Boards
UPPCL	Uttar Pradesh Power Corporation Limited
US	United States
USD	US Dollar
VCC	Varanasi Convention Centre
VDA	Varanasi Development Authority
VDR	Varanasi Development Region
VGf	Viability Gap Funding
VIP	Very Important Person
VMC	Varanasi Municipal Corporation
VUA	Varanasi Urban Agglomeration



LOCATION MAP OF THE PROJECT SITE



Perspective View **Option 1**



Perspective View **Option 2**



Perspective View **Option 3**

CHAPTER 1. BACKGROUND OF THE SURVEY

1.1. Background of the Survey

The city of Varanasi, also known as Benares and Kashi, which is located on the banks of Ganga river in the state of Uttar Pradesh (hereinafter referred to as “UP”), is said to be around 3,000 years old which makes it one of the oldest continuously inhabited cities in the world.

Varanasi has been a centre of culture in North India for thousands of years and is considered as one of the holiest city in Hinduism and Jainism that played an important role in the development of Buddhism as well, and is part of a pilgrimage route where religious and spiritual activities are conducted.

Moreover, Varanasi was famous for protecting and promoting its Music and awarded as UNESCO’s ‘Cities of Music’ category under the Creative Cities Network in December 2015. In addition, Varanasi has also been a centre of educational activity, and home to several universities. It has been the Capital of all knowledge and has produced numerous famous scholars and intellectuals.

Furthermore, household industry and horticulture were developed in Varanasi. Some special products unique to Varanasi are Banaras Brocades and Saree, Gulabi Meenakari Craft, Wooden Lacquerware & Toys, Metal Repousee Craft, Banaras Paan, and Banaras Langda Aam, etc.

As one of the most visited cities in UP, Varanasi attracts both domestic and foreign tourists. According to the Department of Tourism, UP State, the number of tourist inflow in 2015 was over 7.0 million with domestic tourist visitors’ inflow being 90% of the total.

For the promotion of the tangible and intangible culture and heritage of Varanasi, multiple festivals and trade fairs have been conducted in various parts of the city. However, currently the city lacks a centre which can help to promote and consolidate such cultural and industrial activities/ events, and there is a need to fulfil the gap in the tourist infrastructure.

Under these circumstances, in a bilateral meeting between the Indian Prime Minister, H.E. Shri Narendra Modi and the Japanese Prime Minister, H.E. Shinzo Abe in September 2014, it was agreed to sign a document to promote partnership city arrangement between Varanasi and Kyoto.

In the “Japan and India Vision 2025 Special Strategic and Global Partnership” which was announced in another meeting between the Prime Ministers of India and Japan, both expressed the satisfaction at the strengthened ties between the City of Kyoto and Varanasi, two ancient and historic cities integral to their respective cultural heritage. Prime Minister Modi also expressed his expectation regarding the exploration of developing a convention centre in Varanasi.

Following the announcement, Detailed Project Reports (DPR) for VCC were prepared by the India side and submitted to the Japan side. In the beginning, it was planned to implement this project as a part of the on going Ganga Rejuvenation Project, under a Yen Loan scheme, with the National Mission for Clean Ganga (NMCG) as the executive agency, and decided to dispatch a Data Collection Survey team to conduct a feasibility study of the VCC project and to study the appropriate project design for Japan’s

ODA. Later, the plan for implementing the VCC project was changed to utilize Japan’s Grant scheme as an independent project. Accordingly, the responsible agency of the Government of India (hereinafter referred to as “GOI”) has been changed from NMCG to the Ministry of Urban Development (hereinafter referred to as “MOUD”) and this survey was conducted.

In the India-Japan Joint Statement in November 2016, Prime Minister Modi expressed appreciation for Japan’s efforts to support the construction of a convention centre in Varanasi and recognised its symbolic importance as a sign of strengthening bilateral ties.

1.2. Objective of the Survey

The objectives of this survey are as follows;

- Collect and analyse data / information related to the development of Convention Centres in India.
- Review the DPRs prepared by the Indian side, and study the appropriate framework, including development concept, function, facility components, and O&M for the Varanasi Convention Centre (hereinafter referred to as “VCC”).
- Study possible implementation programmes for the VCC Project (implementation body, operation body, funding source for operation and management, etc.)

1.3. Survey Schedule

The overall schedule of the Survey is shown in the figure below.

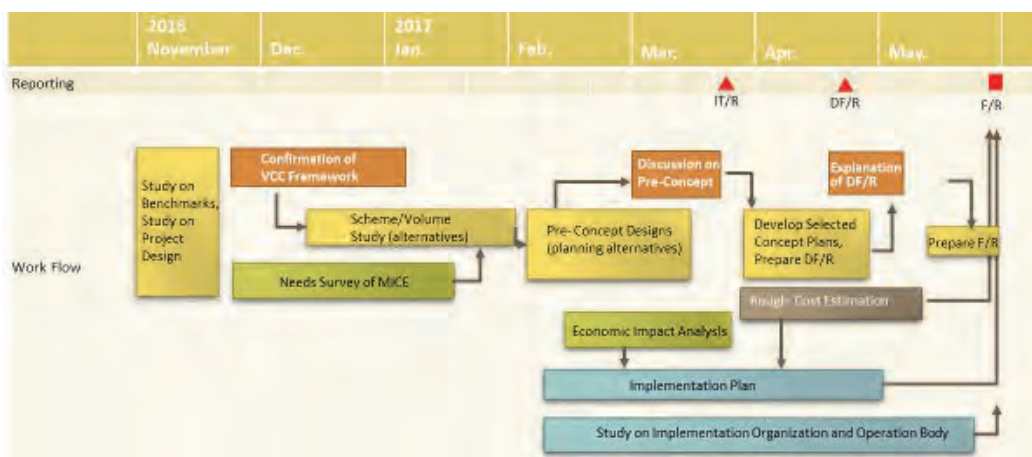
Table 1.3.1 Survey Schedule

Works	2016		2017						
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Preparation of the survey in Japan									
Field Survey in India									
Study on Planning Framework									
Confirmation of Planning Framework/Field Survey in India									
Concept Design, Preparation of DFR									
Explanation of DFR									
Preparation of FR									
Submission of FR									△

Source: Prepared by JST

1.4. Survey Methodology

The Survey implementation is proposed to be through the steps listed below. Relations of these steps are shown in Table 1.4.1.

Table 1.4.1 Survey Methodology

Source: Prepared by JST

(1) Preparation Work

- As preparation work, DPRs for VCC were reviewed and data/ information related to VCC were collected and analysed.
- A benchmark study of convention centres in Japan was conducted.

(2) Confirmation of VCC Framework

As a base for studying the framework of VCC, the following points were confirmed by the central level as well as Varanasi level.

- Expected function/ role of VCC
- Key facilities required for VCC
- Target capacity and use of the hall

(3) Collection and analysis of basic data and information

The following data and information were collected:

- Confirmation of the site conditions through site visit, topographic survey and soil investigation.
- Confirmation of the available land and site boundary at VCC through discussions with Varanasi Municipality.
- Needs survey on VCC through interviews with relevant authorities and business operators in MICE business.
- Benchmark study of convention centres in India

(4) Study on Building Volume(Alternatives)

- Study of building volume of VCC was made based on the grant aid scheme, budget and demands studies.

(5) Pre-Conceptual Design and Study on Facility Contents

- Alternative Study on the Conceptual Design of VCC building
- Study on Construction Cost and Construction Planning

(6) Discussion on the Pre-concept Design

- Discussion on the facility contents and pre-concept design

(7) Conceptual Design

- Develop Conceptual Design (alternatives) and comparison of alternatives
- Study on implementation organization, operation & management plan of VCC

(8) Preparation of Draft Final Report and Final Report

CHAPTER 2. FRAMEWORK OF THE PROJECT

This chapter summarizes the history of project proposals, basic concept and request for VCC as the base of this survey.

2.1. Detailed Project Report

The idea to develop VCC has been studied in the past few years in Varanasi, and four versions of the Detailed Project Report (hereinafter referred to as “DPR”) were prepared. In order to understand the concept from the India side, DPRs for VCC are summarised in the table below.

Version	Year	Concept
DPR Version 1	2014/15	Cultural-cum-Convention Centre
DPR Version 2	March 2016	Skill Development Centre and Convention Centre
DPR Version 3	July 2016	Varanasi Commons – A Cultural Centre
DPR Version 3’	September 2016	Ganga Commons – A Learning Centre

(1) DPR vers.1

The first DPR for VCC was prepared in 2014/2015 by Varanasi Municipal Corporation (hereinafter referred to as “VMC”), as a centre to present Varanasi’s culture and history, with the concept of “Cultural-cum-Convention Centre”.

The project site proposed in this plan was relatively smaller than the other versions. The two wings of the existing municipality building, where the Mayor’s room and the Municipal Hall (Sadan) are located, and the CRPF house will remain as they are.

Total floor area of the proposed building (above ground) is 11,800 m², major proposed facilities are:

- Convention Centre
 - Multi-purpose Conference/ Banquet Hall
 - Seminar Halls
 - Multi-purpose Meeting Rooms/ Banquet Hall
- Library and Viewing Gallery/ Museum
- Cultural / Heritage Centre
- Light and Sound Show Centre

(2) DPR vers.2

During the India-Japan summit meeting in December 2015, the “Japan and India Vision 2025 Special Strategic and Global Partnership” was announced, and the expectation to develop VCC was mentioned in this statement.

In response to this statement, the new DPR (vers.2) was prepared by the India side - National Mission for Clean Ganga (NMCG), and submitted to the Government of Japan (hereinafter referred to as “GOJ”). In this version, the VCC is proposed as a “Skill Development Centre and Convention Centre” having the following facilities;

- Convention Centre :
Auditorium (1,000 seats), Multi-purpose Hall, Seminar Rooms, AV Hall
- Exhibition Hall/Galleries
- Vocational Training Centre
- Offices (including Mayor’s office)
- Guest Suites

The total floor area of the proposed building was 13,783 m² (above ground), proposed to be rated as GRIHA 5-star with “Net Zero” emissions.

(3) DPR vers.3

Based on the comments of the JICA mission on points to be covered in the DPR in May 2016, the DPR was revised and a comprehensive DPR vers.3 was submitted to JICA in July 2016. By reviewing benchmarks and analysing the Varanasi context, three options for the concept of “Varanasi Commons – A Cultural Centre” were proposed.

Option 1 proposed a group of small blocks with open air spaces, and its design of façade represented heritage ghats with bricks and red sand stones, and the floor area was 28,733 m².

- Convention Centre :
Auditorium (1,000 seats), Multi-purpose Hall, Seminar Rooms, AV Hall, Restaurant
- Urban Gallery
- River Ecology Centre
- Art and Performance Centre, Library
- Language Centre
- Offices (including Mayor’s office and Sadan)
- Artist Residences

Option 2 proposed a large complex of convention and exhibition facilities. The design of façade represented Sarnath, and the floor area was 31,350sqm.

- Convention Centre :
Auditorium (1,000 seats), Seminar Rooms, AV Hall, Restaurant
- City Museum
- Ganga Knowledge Centre, Book shop
- Offices (including Mayor's office and Sadan)
- Guest Suites (including Gym)

Option 3 was prepared with 2.25 FAR. It had the facilities of Option 1 and additional accommodation facilities in two high-rise 11-story towers.

(4) DPR vers.3'

This DPR version 3', prepared in September 2016, was a revised version of DPR vers.3. The major facilities are almost the same as DPR vers.3, but a new aspect of a "learning centre" was introduced, and a revised image of proposed options were presented with a concept of "Ganga Commons – A Learning Centre".

Table 2.1.1 Comparison of DPR

	DPR Vers.1	DPR Vers.2	DPR Vers. 3/3' Option1	DPR Vers. 3/3' Option2	DPR Vers.3/ 3' Option3
Image of the Proposed Building					
Date of issue	2015	May 2016	September 2016	September 2016	September 2016
Total Floor Area	20,400m ² (Above ground: 11,800 m ² , basement:8,600 m ²) [GF: 4,300 m ² , 1F:3,300 m ² , 2F:3,300 m ² , 3F:900 m ²]	27,782m ² (Above ground: 13,783 m ² , basement: 14,000 m ²) [GF:3,378 m ² ,1F:2,940 m ² ,2F:1,485 m ² , 3F:892 m ²]	Total: 28,733m ² (Above ground: 19,715 m ² , basement:9,018 m ²) [GF: 5,130 m ² , 1F:4,230 m ² , 2F:3,280 m ²]	31,350m ² (Above ground: 23,450 m ² , basement: 7,900 m ²) [GF: 6,300 m ² , 1F:4,800 m ² , 2F:5,550 m ² , 3F:3400 m ²]	40,450m ² (Above ground: 30,450 m ² , basement: 10,000 m ²)
Ground Coverage	43%	-	30%	47%	-
FAR	117%	103%	147%	175%	225%
Auditorium	Auditorium (960 persons) :Total 4,300m ² + Mini Auditorium, Multi-purpose Hall Banquet Hall, Kitchen 	Auditorium (1,000 persons) :Total 3,673m ² +Multipurpose Hall, Kitchen, VIP entrance Lobby, Ticket Booth, Cloak Main Auditorium 	Auditorium (1,000 persons) : Total 2,470m ² + Exhibition Areas Main Auditorium 	Auditorium (1,000 persons) : Total 3,356m ² +Kitchen, Restaurant, Pantry Main Auditorium 	Auditorium (1,000 persons) : Total 2,470m ² + Exhibition Areas Main Auditorium 
Seminar Hall	Seminar Halls : Total 3,300m ² + Conference Hall + Exhibition Hall (900m ²),	Seminar Room : Total 2,645 m ² + Galleries /Exhibition Hall, Store, AV Room	Seminar Hall (120persons) : Total 2,140m ² + Exhibition Area, + Meeting Space (45 persons) +AV Room (120persons)	Seminar Rm(150 persons) : Total 2,569m ² + Ganga Knowledge Centre + Pre-function Area, lobby, storage, +AV Room (100 seats)	Same as Option1
Art & Culture	Cultural/ Heritage Centre (Museum Halls) +Library + viewing gallery + Lounge + Guest Rooms : Total 4,200 m ²	Vocational Training Centre Suites + Store : Total 2,574m ²	Art and Performance Centre Library + Visitor Hall + Multi-Purpose Hall + Language Centre + Artist Residence : Total 2,875m ²	City Museum +Gallery + Book Shop + Gymnasium : Total 5,293 m ²	Same as Option1
Municipal office	(Existing offices will remain.)	Mayor's office : Total 1,250m ²	Sadan Seater (400 persons) : Total 1,150m ² + Mayor's office, Meeting Rm, Staff Rm	Sadan + Mayor's office : Total 840m ²	Same as Option1
Parking	Basement 2F	For 276 vehicles	For 400 vehicles (Basement, Surface)	For 246 vehicles, 1,720m ² (Basement, Surface)	Same as Option1

Source: Detailed Project Report version 1,2,3 and 3'

2.2. Request from Indian Side

In general, a “Convention Centre”, as a venue specialized for MICE business, is the best way to accommodate a set of certain facilities: a main hall, an exhibition hall, small and medium meeting rooms, and a foyer. The combination of these facilities will make the Convention Centre more attractive for the convention organizers.

However, as summarized in Table 2.1.1, the proposed Convention Centre in DPRs consists of several types of facilities, such as conference halls, museum, learning centre, and guest rooms. It was recognized that there is a significant gap between the proposed facilities for VCC in DPRs and ideal facility settings for an internationally recognized “Convention Centre”.

In the initial stage of this study, the JICA Study Team (hereinafter referred to as “JST”) has confirmed the intention of the Indian side for the function of VCC.

2.2.1. Central Level

(1) Functions of VCC (December 2016)

After the first field survey, JST received a list of the proposed functions of VCC from MOUD in December 2016, as shown below.

Table 2.2.1 Planned functions of VCC (December 2016)

Part	Expected functions and necessary facilities
PART A: Convention Function	<ul style="list-style-type: none"> a. Act as a new state-of-the-art Centre for holding events in Varanasi in different scales (Conferences-1000, Seminars and lectures 200-300 capacity). b. To provide space for Meetings, Incentives, Conferences and Exhibitions, (MICE) based tourism. c. To promote the heritage and culture of India and to be used for special symposia /seminars or workshops. d. To act as a forum for cross-disciplinary discussion with International universities tie-ups. e. To provide space for training and capacity building of urban local bodies and other agencies.
PART B: Sadan	<ul style="list-style-type: none"> a. To provide a new-state-of-the-art Sadan hall with Mayor’s office, ancillary facilities and offices with meeting rooms. b. To be used to create awareness amongst people about the city and its culture. This gallery has space for a 3d model of Varanasi that could highlight urban projects and initiatives.
PART C : Cultural Centre :	<ul style="list-style-type: none"> a. To be used for learning and performances including languages, music, arts, theatre by local teachers and artists. b. To be used for promoting arts, language and culture with some studio accommodation for artists to reside. c. Outdoor performance areas informally landscaped for Music performances and Theatre. d. Spaces to highlight the unique culture of Varanasi in terms of music, and architecture, such as audio-visual rooms, dedicated gallery, interactive displays and visual content. e. Spaces for food and beverage refreshments focusing on the unique cuisine of Varanasi, indoor-outdoor environment preferred. f. Fine Dining Venue to assist in evening functions and musical shows.

Source: List from MOUD, December 2016

(2) Request for Grant Aid project

After a series of discussions between MOUD and GOJ/ JICA, including the budget, scale and schedule of this project, GOJ received a request for Grant Aid for VCC from GOI in January 2017. In the document, the Convention Centre of 15,000m² (above the ground) for 3,000 people with an estimated cost of 2 billion Japanese Yen was requested.

(3) Function of VCC discussed on March, 2017

In March 8, 2017, based on the preliminary and rough estimates, the capacity of the hall was determined to cover only a main hall, having a capacity of 1,200 seats with a total floor area of approximately 4,000 m², within the budget of 2 billion Japanese Yen. MOUD, Government of UP, and VNN accepted the proposal, but requested to secure capacity of 2,000 seats for the main hall because 1) the existing facility of 1200 seats in Varanasi does not satisfy the need for organizing any major national/ international conference/ convention, and 2) the convention centre should be befitting the standards of an Indo- Japan Partnership Project. It was agreed that the request for the seat capacity would be reviewed in the following survey with due consideration to the budget allocation by GOJ.

However, after further study and discussion, MOUD informed JICA in an official letter that plan of providing a seating capacity of 1,200 seats along with basement for parking is acceptable to Indian Side, thus the conceptual plan was prepared accordingly.

Also, the expected functions of VCC explained by MOUD are as follows;

a) Expected events at VCC:

- Act as a convention centre for potential government meetings, cultural events, summits, citizen interactions, etc.
- Host international conventions, investment promotion summits etc. to promote international relations.
- Tap into the increasing MICE Tourism in addition to religious / cultural tourism

b) Expected results of the program include:-

- Increase in tourists including MICE Tourism through business travellers.
- Increase in national and international conventions in Varanasi

2.2.2. Varanasi Municipality Level

Through the series of discussions with Varanasi Municipality, it was confirmed that VMC is willing to develop VCC as a place to present VARASHI's culture and history. Their expectations for VCC are listed below.

- To be a place to represent the unique history and culture of Varanasi: as a historical, holly, cultural and academic city.

- VCC should have a museum/ gallery, which can be a showcase of Varanasi City, and give a comprehensive picture of Varanasi.
- Varanasi was selected as a UNESCO's Creative City of Music. VCC should have a hall and stage to play music and dance, and have an exhibition to introduce the music of Varanasi.
- To be a symbol of friendship between India and Japan, and between Varanasi and Kyoto.
- To be a landmark of Varanasi City.
- Underground parking spaces for the municipality vehicles are required.
- Space for Mayor's room and Sadan

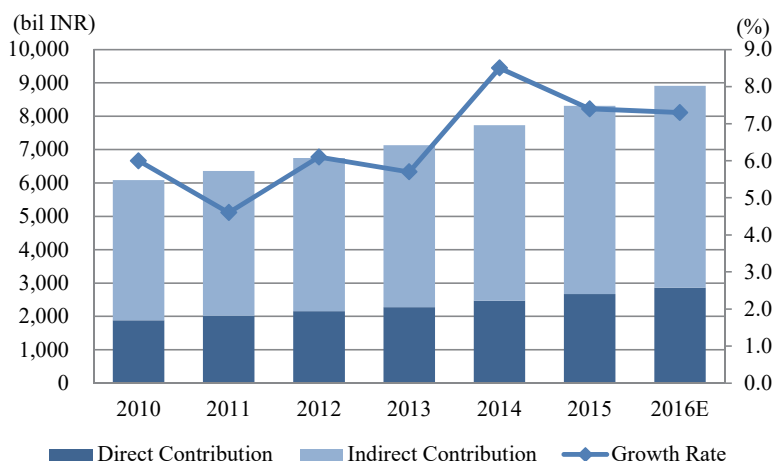
CHAPTER 3. POLICY OF THE GOVERNMENT OF INDIA

3.1. Government Policy for Tourism Development and Promotion of MICE Business

3.1.1. Policy for Tourism Development in India

The Travel & Tourism sector holds strategic importance in the Indian economy providing substantial socio-economic benefits. Moreover, through its direct economic impacts such as accommodation services, food & beverage services, retail trade and transportation services, the sector has significant indirect and induced impacts such as travel & tourism investment, government collective travel & tourism investment and consumption of direct and indirect employees.

India has been witnessing steady growth in its travel and tourism sector over the past few years. The total contribution of Travel & Tourism to GDP in India was INR 8,309.4 billion (7.4% of GDP) in 2015, and was forecasted to rise to INR 8,913.6 billion (7.3% of GDP) in 2016, with 6.5% CAGR (Compound Average Growth Rate) in the last seven years.



Source: Travel & Tourism Economic Impact 2016 in India – World Travel & Tourism Council

Figure 3.1.1 Travel & Tourism's Contribution to GDP and Its Growth Rate

This contribution share to GDP (7.4% in 2015) is relatively low compared to other countries in the Asia-Pacific region, such as 29.9% in Cambodia and 20.8% in Thailand. It is even below the world average of 9.8% and Asia-Pacific average of 8.5%. The total contribution to employment in 2015 showed 8.7% in India, which is also below the world average of 9.5% and slightly higher than Asia-Pacific average of 8.6%. This shows the possibility that India's Travel & Tourism sector can expand its contribution to GDP.

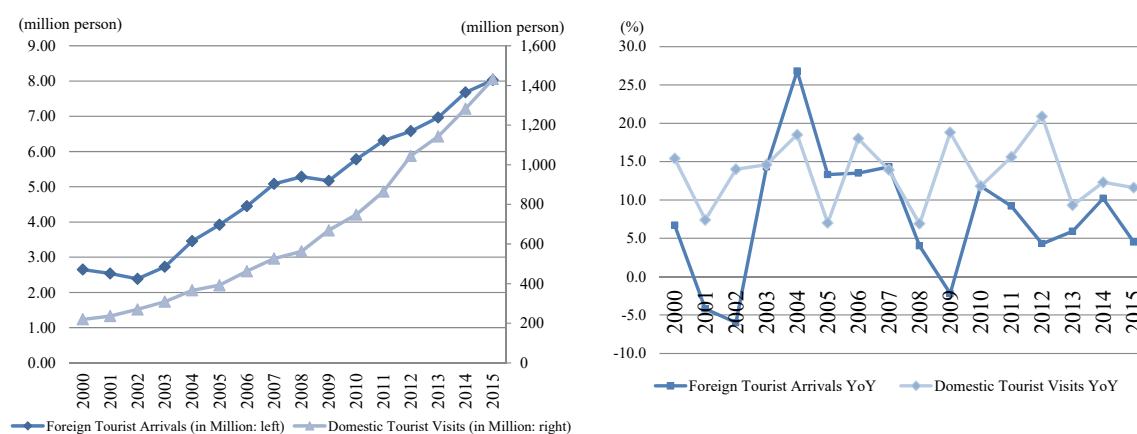
Table 3.1.1 Travel & Tourism's Total Contribution to GDP (left) and Total Contribution to Employment (right) in Asia Pacific (2015 % Share)

No.	Country	% share	No.	Country	% share
1	Cambodia	29.9	1	Cambodia	26.9
2	Thailand	20.8	2	Thailand	15.4
3	Vietnam	13.9	3	Malaysia	11.4
4	Malaysia	13.1	4	Vietnam	11.2
5	Sri Lanka	10.6	5	Sri Lanka	9.7
6	Indonesia	9.6	6	India	8.7
7	China	7.9	7	Indonesia	8.7
8	Pakistan	7.0	8	China	8.4
9	India	6.3	9	Pakistan	6.2
10	Bangladesh	4.7	10	Bangladesh	4.1

Source: Travel & Tourism Economic Impact 2016 in India – World Travel & Tourism Council

The total number of FTA (Foreign Tourist Arrivals) as well as DTV (Domestic Tourist Visits) has increased at the CAGR of 13.9% for the past 10 years. The number of tourists has increased from 466.89 million in 2006 to 1,440.00 million in 2015. The CAGR of FTA is 7.6%, which is higher than the CAGR of DTV 13.9%. The number of FTA in 2015 (8.03 million) was only 0.56% of the total tourist visits in India.

While the growth rates of DTV have been stable, the growth rates of FTA have fluctuated being affected by the world economic trends; i.e., it recorded negative growth in 2002 and 2009 during the global economic crisis.



Source: Annual Report 2015-16, Ministry of Tourism, GOI

Figure 3.1.2 Foreign Tourist Arrivals and Domestic Tourist Visits (left) and their Annual Growth (right) from 2000 to 2015

3.1.2. Promotion of MICE in India

(1) MICE Industry in India

The business tourism has gained importance in the international tourism market. Promoting MICE (Meetings, Incentives, Conferences and Exhibitions) would generate higher spending, reduce

seasonality, and enhance innovation and creation. Spill-over effects to other sectors would be expected by attracting conferences to the country.

The Ministry of Tourism, GOI, (hereinafter referred to as “MOT”) considers MICE as one of the initiatives of identifying, diversifying, developing and promoting niche products of the country. Medical and wellness tourism, eco-tourism and sustainable tourism are also identified as niche tourism products.

The draft national tourism policy 2015 laid strong emphasis on MICE Tourism by maximizing synergies between leisure and MICE Tourism. This aims to provide for pre and post leisure for MICE visitors motivating them to visit nearby locations.

According to the latest ICCA (International Congress and Convention Association) Statistics Report, more than 12,000 large scale meetings have been organized in all countries across the world and 2,546 meetings in Asia Pacific & Middle East in 2015. As per the report, India ranks in the 31st position in the world and 7th in Asia Pacific & Middle East.

Table 3.1.2 The Ranking of Meetings Organized in the World and Asia Pacific & Middle East in 2015

World Ranking			Asia Pacific & Middle East Ranking		
No.	Country	# Meetings	No.	Country	# Meetings
1	USA	925	1	Japan	355
2	Germany	667	2	China	333
3	UK	582	3	Korea	267
4	Spain	572	4	Australia	247
5	France	522	5	Singapore	156
6	Italy	504	6	Thailand	151
7	Japan	355	7	India	132
8	China	333	8	Taiwan	124
9	Netherland	333	9	Malaysia	113
10	Canada	308	10	Hong Kong	112
	Others	6,977		Others	556
	Total	12,078		Total	2,546

Source: 2015 ICCA Statistics Report

(2) ICPB (India Convention Promotion Bureau)

MOT of GOI has taken several initiatives to promote the MICE industry in India. The ICPB (India Convention Promotion Bureau) was established in 1988, a non-profit organization, with members comprising national airlines, hotels, travel agents, tour operators, tourist transport operators, conference organizers, etc. for promoting India more effectively as a convention destination.

The objectives of ICPB are:

- To promote India as a venue for International Congresses and Conventions.
- To undertake a continuing program of creating awareness of the role and benefits of Congresses and Conventions in the context of national objectives.
- To undertake research on the international conference market for development of India's conference industry

- To spread knowledge to conference industry personnel through educational programs, seminars, group discussions, courses of study and exchange of visits with Indian Associations / Organizations

ICPB recognizes the challenge that exists in the form of a lack of research on the size of the MICE industry in India such as its growth, trends and outlook. It is planning to develop MICE infrastructure by commissioning a research on the industry in 2017.

(3) MDA (Market Development Assistance)

MOT has announced the “MDA (Market Development Assistance) Scheme” to “Active Members” of ICPB to aid in bidding for International Conferences / Conventions, thereby bringing more MICE business to the country. Under the scheme, associations / societies would be given financial support on winning the bid or for obtaining second and third positions in the bidding process, subject to the terms and conditions. The financial assistance under the scheme is shown in the following table:

Table 3.1.3 Financial Assistance of MDA

Category I (500 pax and above):	
i)	INR 450,000 for winner of the bid for a Conference/Convention in India of 500 pax and above.
ii)	INR 150,000 for the bidder who comes in at second or third position among the bidders for Conference/Convention of 500 pax and above.
Category II (200 – 500 pax):	
i)	INR 250,000 for winner of the bid for holding the Conference/Convention in India of 200 to 500 pax.
ii)	INR 100,000 for bidder who comes in at second or third position for Conference/Convention in India of 200 and 500 pax.

Source: MOT

(4) Harmonized Master List of Infrastructure Sub Sectors

The Ministry of Finance, GOI on 7th October, 2013 publicized the Harmonized Master List of Infrastructure Sub-Sectors to boost supply of hotel rooms and convention centres in the country. Hotels with project cost of more than INR 2 billion and convention centres with project cost of more than INR 3 billion have become eligible for VGF (Viability Gap Funding) and lower interest rates on government bank loans. Hotels and convention centres have become recognized as important infrastructure in addition to transport, energy, water sanitation and communication.

3.2. Tourism Policy and MICE Promotion in Uttar Pradesh State

3.2.1. Tourism Development in Uttar Pradesh State

(1) Tourism Development in Uttar Pradesh State

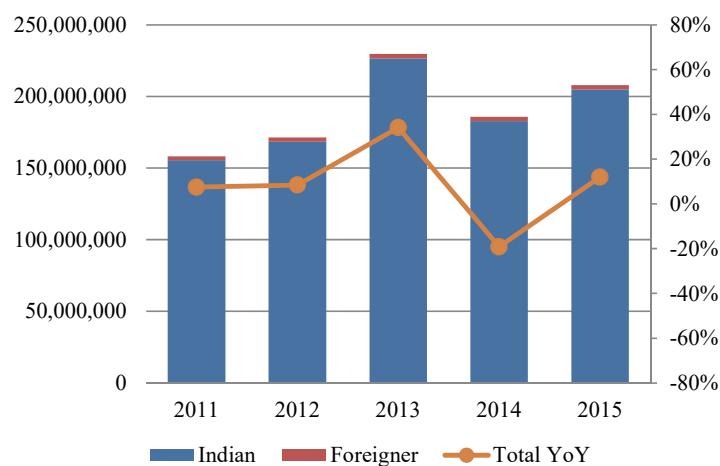
Located in the northern part of India, neighbouring the capital of India, New Delhi, Uttar Pradesh is one of the most popular and an established tourist destinations for Indians and non-Indians. Uttar Pradesh is known for its rich culture and tradition. Agra is famous for monuments such as the Taj Mahal. Varanasi and Allahabad are holy cities for Hindus, and Sarnath is important for Buddhists.

The state of Uttar Pradesh ranked second in DTV (Domestic Tourist Visit) and third in FTA (Foreign Tourist Arrival) in 2015. The total number of tourists recorded 207 million in 2015, of which FTA was only 1.5%. The CAGR of the total number of tourists in the past five years recorded 8.55%. The growth rate of tourist arrival in 2014 recorded ▲19.2%, this is due to Maha Kumbh Mela, a big Hindi festival in Allahabad in 2013. That festival is held once in every 12 years and attracted approximately 120 million people in 2013 over a two-month period. Even without considering the special factor of the festival, the number of tourists shows positive growth.

Table 3.2.1 Share of Top 10 States of India in Number of DTV and FTA in 2015

Domestic			Foreign		
No.	State	Number	No.	State	Number
1	Tamil Nadu	333,459,047	1	Tamil Nadu	4,684,707
2	Uttar Pradesh	204,888,457	2	Maharashtra	4,408,916
3	Andhra Pradesh	121,591,054	3	Uttar Pradesh	3,104,062
4	Karnataka	119,863,942	4	Delhi	2,379,169
5	Maharashtra	103,403,934	5	West Bengal	1,489,500
6	Telangana	94,516,316	6	Rajasthan	1,475,311
7	Madhya Pradesh	77,975,738	7	Kerala	977,479
8	West Bengal	70,193,450	8	Bihar	923,737
9	Gujarat	36,288,463	9	Karnataka	636,502
10	Rajasthan	35,187,573	10	Goa	541,480
	Others	234,605,820		Others	2,705,300
	Total	1,431,973,794		Total	23,326,163

Source: MOT



Source: Department of Tourism, Uttar Pradesh

Figure 3.2.1 The Growth Trends of Tourists in Uttar Pradesh

(2) Heritage Arc

To boost tourism in the state, the Uttar Pradesh government has established a “Heritage Arc” in 2014 covering the cities of Agra, Lucknow and Varanasi, the three most important tourist destinations. The government expressed its intent to improve infrastructure including roads, pathways and condition of monuments to attract tourists to promote the “Heritage Arc”.



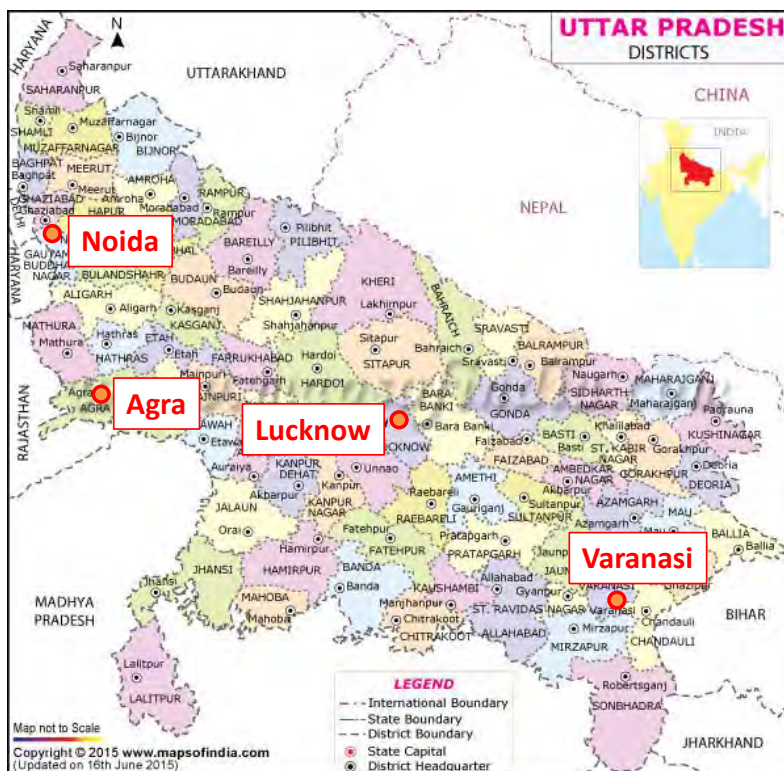
Source: Department of Tourism, Uttar Pradesh

Figure 3.2.2 The Heritage Arc

3.2.2. Promotion of MICE in Uttar Pradesh

The **Uttar Pradesh State Tourism Policy 2016** recognizes the importance of MICE Tourism as an engine to drive growth. The cities of Noida, Agra, Lucknow and Varanasi have been identified for promoting MICE in the state. The department of tourism will take the following initiatives-

- i. In collaboration with private entrepreneurs, Convention centres will be established for trade fairs, seminars, exhibitions etc. in Noida, Agra, Lucknow and Varanasi which are ideal tourism centres for MICE tourism in Uttar Pradesh
- ii. Private entrepreneurs will be provided land on a high priority to invest in Conventions
- iii. The new Convention Centres being constructed will be provided rebates in taxes for the first five years of business
- iv. The MICE facilities in the state will be widely promoted and publicized



Source: JST

Figure 3.2.3 Locations of Cities for MICE Promotion

3.3. Tourism Policy and MICE Promotion in Varanasi City

3.3.1. Tourism Development in Varanasi City

Varanasi is a city on the banks of the Ganges in Uttar Pradesh, the sacred city in Hinduism and Jainism, and it also plays an important role in the development of Buddhism. Sarnath, 10km from Varanasi, is one of the most revered Buddhist pilgrimage centres. Since visitors of Sarnath visit Varanasi for accommodation, the number of tourists in Varanasi and Sarnath can be combined.

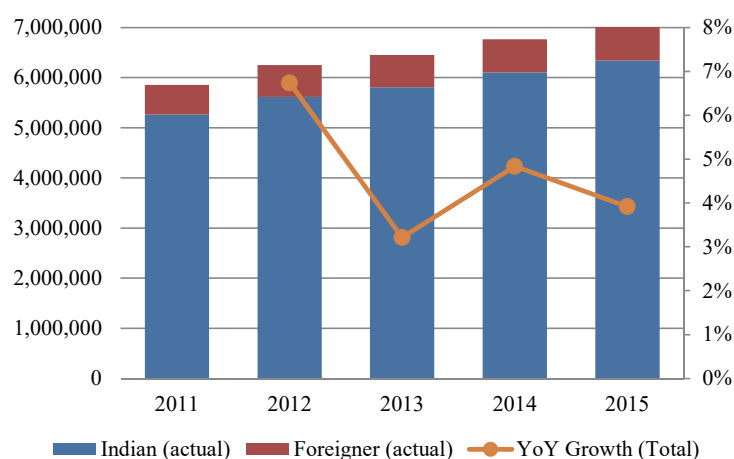
Varanasi/ Sarnath ranks eighth in DTV (Domestic Tourist Visit) and third in FTA (Foreign Tourist Arrival) in UP state in 2015. Although the destinations of DTV have been diverse across various cities in UP state, 65% of FTA has been concentrated in the top three cities: Agra, Sarnath and Varanasi (the share of Sarnath and Varanasi is 22%).

The total number of tourists in Varanasi/ Sarnath recorded 7.0 million in 2015, of which FTA was 9.8%, which is higher than the entire UP state. The CAGR of the total number of tourists in the past five years recorded 4.7%, but the growth rate has decreased over the years due to the insufficient initiatives taken to improve the existing tourism infrastructure.

Table 3.3.1 Share of Top 10 Cities in UP State in Number of DTV and FTA in 2015

Domestic			Foreign		
No.	State	Number	No.	State	Number
1	Allahabad	40,001,670	1	Agra	1,346,765
2	Ayodhya	15,432,558	2	Varanasi/Sarnath	690,472
3	Vrindavan	12,600,000	3	Fatehpur Sikri	199,279
4	Govardhan	12,050,000	4	Jhansi	125,596
5	Agra	9,466,670	5	Allahabad	109,281
6	Mathura	6,626,000	6	Shravasti	100,070
7	Varanasi/Sarnath	6,338,552	7	Kusinagar	68,830
8	Chitrakut	5,872,519	8	Lucknow	58,014
9	Soraun	5,200,000	9	Vrindavan	47,890
10	Radhakund	4,560,000	10	Gorakhpur	35,462
	Others	86,740,488		Others	322,403
	Total	204,888,457		Total	3,104,062

Source: Department of Tourism, Uttar Pradesh

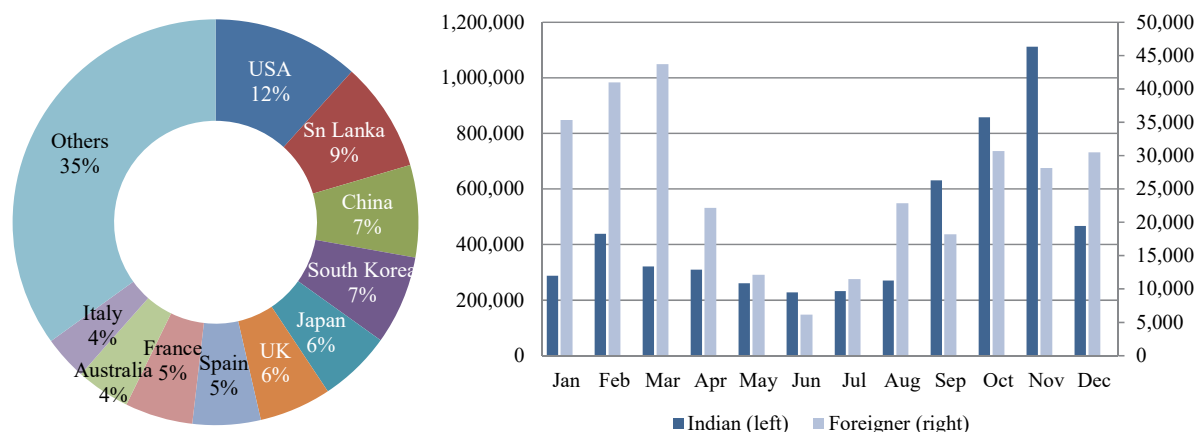


Source: Department of Tourism, Uttar Pradesh

Figure 3.3.1 The Growth Trends of Tourists in Varanasi/ Sarnath

The majority of the FTA in Varanasi/ Sarnath is from the US, Europe and Japan, and there is a growing number of tourists from South Asia and Southeast Asian countries such as Sri Lanka, China and Korea.

The DTA is concentrated between September and November; on the other hand, the FTA is concentrated between January and March. The overall peak season falls between October and March, and the other months are the lean season.



Source: Department of Tourism, Uttar Pradesh

Figure 3.3.2 The Share of Nationality in FTA (left) and the Monthly Trend of DTV and FTA (right) in 2015

3.3.2. MICE Policy in City Level

In the City Development Plan (CDP) for Varanasi 2041 that was drafted under the Capacity Building for Urban Development project (CBUD), the establishment of a convention centre has been proposed. The CBUD project was a joint partnership program between MOUD and the World Bank. In the report, under the ‘Local Economic Development Sector Strategy’, the need for a Convention centre was mentioned, which included provision for development of indoor exhibition areas, conference halls and accommodation units with services, at an estimated cost of INR 250 million.

3.3.3. Varanasi City of Music

The Department of Tourism, Uttar Pradesh has organized and promoted cultural events to boost tourism in Varanasi. The following list shows the major cultural events, including classical music and performances to be held in Varanasi in 2017.

Table 3.3.2 Cultural Events in Varanasi (2017)

Cultural Event	Date	Cultural Event	Date
Ganga Mohotsav	31 Oct - 03 Nov	Ramleela Ramnagar	5 Sep – 5 Oct
‘Sur Ganga’ Music Festival	18 Apr - 30 May	Sankat Mochan Music Festival	15 – 20 Apr
Dhrupad Mela	21 – 24 Feb	Naag Nathaiya	23 Oct
Buddha Poornima	10 May	Ganga Dushehra	3 June

Source: Department of Tourism, Uttar Pradesh

The protection and promotion of Varanasi’s music has been supported for centuries, and the number of active music companies in music sector has significantly increased to 3001. Such activities have led to an award of UNESCO’s ‘Cities of Music’ category under the Creative Cities Network in December 2015. To celebrate Varanasi’s ‘City of Music’ heritage, a carnival of music, ‘Sur Ganga’ will be held in Varanasi from April 18 to May 30 in 2017. The objectives of the event are to promote Indian music

¹ <http://en.unesco.org/creative-cities/varanasi>

among the youth in addition to promotion of tourism in the region, to promote mutual understanding among musicians and to share knowledge and experiences for music students.



Source: UNESCO Creative Cities – Varanasi

Figure 3.3.3 Music School and Music Event in Varanasi

CHAPTER 4. BENCHMARK STUDIES

This Chapter summarises a study on benchmarks for convention centres in India and Japan to guide the development of VCC.

4.1. Critical Issues in Developing Successful MICE Facilities

The purposes of constructing MICE facilities are to attract visitors and to increase consumption in the area, not just in the building, by holding events. It is necessary to develop facilities that can accommodate events of various sizes with large numbers of people. Therefore, the scale and structure have been the focus in this benchmark study.

Moreover, attracting MICE is a competition among cities, and competitiveness as an area, not just a city, including the access to/ from MICE facilities and the surrounding environment (the accumulation of hotels and commercial facilities) are important when planning a convention centre. Several suggestions can be made for developing a convention centre through benchmark studies as follows.

In addition to the main hall, it is advisable to install sub halls and exhibition halls as well as medium and small meeting rooms.

- Convention centres in India and Japan have exhibition halls as well as medium & small meeting rooms besides the main hall. Although outdoor space may be used for exhibition during the dry season, indoor exhibition space is required to host global events such as international conferences.
- For example, in an academic conference, the exhibition is held in a sub hall or exhibition hall and the subcommittee meetings are held in medium and small meeting rooms, whereas for a corporate meeting, the meeting is held in the main hall and a buffet party is held in the sub hall.
- It is necessary to improve the convenience of facilities by installing facilities that can meet various needs such as a main hall, an exhibition hall and medium & small meeting rooms.

In order to secure a high occupancy rate, it must be capable of handling various events, and the flexibility of each room should be enhanced.

- Make each room dividable by movable partitions so that various large and small events can be accommodated.
- Flat floors are more advisable than stepped floors with fixed seats for the main hall.

Secure sufficient common spaces such as foyers and corridors, as a large number of people move altogether at once.

- It is necessary to secure storage spaces for chairs, desks and other equipment, as well as to install secondary pathways, offices, etc.
- A total of 60 to 70% of the total floor area of the facility should be allocated to common spaces as mentioned above.

It is important to consider and develop the area surrounding the convention centre as a “MICE area” with accommodation and commercial functions.

- Hotels should be located in the vicinity (adjacent to the convention centre, if possible), as MICE is often organized as an event package with accommodation.
- Commercial facilities in the surrounding area can promote patronage of the visitors/facility users in the area

The difference between Japan and India is that India has many MICE facilities used for personal events such as weddings. There is also a possibility for VCC to hold individual events by improving the pantry area, equipment, etc.

4.2. Convention Centres in India

As shown in Chapter 3, the MICE industry has been promoted by the government and convention centres have been established at major cities in India. The names of the cities attracting MICE tourists in India and their major facilities are listed in the following table.

Table 4.2.1 Convention Centres in Major Cities in India

City	Facility
Delhi NCR (Delhi and NOIDA)	The City hosts the highest number of MICE in the country. The major convention centres are Pragati Maidan (100,000 sqm), Vigyan Bhawan, India Habitat Centre, and India Expo Centre. The hotels having conference facilities are ITC Maurya Sheraton, The LaLit, Taj Hotel, Shangrila, Ashok, Radisson Dwarka and Oberoi in Delhi, Crowne Plaza & Radisson Blue in Greater NOIDA, JW Marriott in Delhi Aerocity, and Westin in Gurgaon, etc.
Agra	The world famous tourist location has hotels hosting conferences such as Jaypee Palace Hotel and International Convention Centre (1,500 seats), Welcom Hotel Mughal Sheraton and Holiday Inn, etc.
Jaipur	Jaipur hosts conventions in B. M. Birla Auditorium (1,300 seats) and hotels with convention facilities include Jaimahal Palace, Le Meridien Jaipur and Welcome Hotel Rajputana Palace Sheraton, etc.
Mumbai	The convention facilities are available at Bombay Exhibition Centre, Nehru Centre, World Trade Centre and The Bandra Kurla Complex. The hotels hosting conferences are The Oberoi, Leela Kempinski, Taj Mahal Palace and Tower (1,300 seats), Taj President, Hyatt Regency, and ITC Grand Maratha, etc.
Goa	In Goa, a new convention centre, the International Convention Centre is coming up at Panaji. Hotels having conference facilities are Fort Aguada Beach Resort (225 seats), The Leela Goa, Majorda Beach Resort, Cidade De Goa, Part Hyatt Goa Resort and Spa, and Goa Marriott Resort, etc.
Bangalore	A new centre Bangalore International Exhibition Centre became operational in 2006. The hotels hosting conferences are The Leela Palace Kempinski (1,160 seats), The Oberoi Hotel, Taj West End, Gateway Hotel, and Golden Palms Spa, etc.
Hyderabad	The prominent convention centres in Hyderabad are HICC (Hyderabad International Convention Centre-promoted by EMAAR Group of UAE) (5,000 seats), HITEK, and Shilpa Kala Vedika. Hotels with convention facilities include the ITC Hotel Kakatiya Sheraton and Towers, and Taj Group Hotels, etc.
Chennai	Chennai is home to Chennai Trade Centre, which hosts a large number of conventions, trade shows and fairs as well as incentive meetings. Hotels having conference facilities are Taj Connemara (725 seats), and Taj The capital of the State of Tamil Nadu, etc.
Cochin	The Le Meridien Hotel in Kochi offers moderate conference facilities, with capacities up to 4,000 seats in theatre seating option across 9 halls.

Source: “India Inbound MICE Tourism”, May 2016, FICCI (Federation of Indian Chambers of Commerce and Industry), “India as a Global Conventions Destination Prospects & Strategies”, IIMB (Indian Institute of Management Bangalore) –ICPB (Indian Convention Promotion Bureau) Study

Convention centres of various sizes have been developed in India. Among these convention centres, JST picked out the representatives in the country and conducted case studies.

Table 4.2.2 Convention Centres for Case Study

Convention Centre (City)	Main Hall Capacity	Developer / Operator	Description / Reason for Choosing as Case Study
Mahatma Mandir (Gujarat)	6,000 m ² (6,000 seats)	Developer: State Government Operator: State Government	The convention centre developed when PM Modi was CM of Gujarat, chosen as a model of government owned and operated convention centre
Hyderabad Convention Centre (Hyderabad)	6,480 m ² (5,000 seats) (divided 6 Halls)	Developer: State Government / Private (PPP) Operator: Private	One of the best large-scale convention centres in India, chosen as a model of utilizing PPP scheme
Brilliant Convention Centre (Indore)	2,000 m ² (2,000 seats)	Developer: Private Operator: Private	One of the best middle-scale convention centres in India, chosen as a model of middle-scale convention centre in a middle-size city
Indira Gandhi Pratishthan (Lucknow)	1,500 seats	Developer: State Government Operator: State Government	A convention centre developed and operated by the state government, chosen as one of the existing convention centres in UP State
Jai Prakash Narayan International Centre (Lucknow)	2,000 m ² (2,000 seats)	Developer: State Government Operator: State Government	A new convention centre as a part of a sport complex, chosen as one of the latest convention centres in UP State
National Agricultural Science Complex Convention Centre (Delhi)	1,200 seats	Developer: Central Government Operator: TBD	A new convention centre developed by the central government dedicated for government functions, chosen as a model of the capacity with 1,200 seats

Source: JST

(1) Mahatma Mandir

A large-scale convention centre located in Ahmadabad, initiated by the Prime Minister Modi during his tenure as Chief Minister (CM) of Gujarat. The main hall has a floor area of about 6,000 m², and the three exhibition halls taken together have a floor area of about 8,000 m² for 14,000 in total. The convention centre is owned by the Government of Gujarat and is managed by a state organization (iNDEXTb, responsible for industrial promotion in Gujarat). Although it is mainly used by the state government, domestic and overseas companies can also use it. The convention centre is regarded as infrastructure for promoting the state industry. Academic conferences are also held.

The occupancy rate is about 50% (60 to 65 large-scale events are annually held). In particular, various events are held during the dry season from November to March. Since the convention centre is part of the public infrastructure, its usage is limited to events for industrial promotion or those worthy for the society (personal use, such as a wedding ceremony, is not permitted). The financial statement is in deficit, but since it is a facility for the state development and industrial promotion, the state government is providing the subsidy to cover the deficit.

The annual OPEX of Mahatma Mandir is around INR 82-85 million, while the revenue is around INR 58-60 million. The annual subsidy of around INR 25 million has been covered by the state government. The CAPEX and the land has been provided by the state government, however, they consider achieving the breakeven for the OPEX would be possible by improving the occupancy rates.



Source: JST

Figure 4.2.1 Facility Overview of Mahatma Mandir

KEYPOINTS	
Access	20 km from Ahmedabad Airport 30 km from Ahmedabad railway Station
Hotel	They have already invited a 5-star hotel to be established nearby
Event	<ul style="list-style-type: none"> ■ Only conferences related to GOI or academic conferences (No weddings nor concerts) ■ 70-80% of all events are related to GOI ■ Can be used for concert outside “Open Air Exhibition”
Profit	Deficit (but they are supported by GOI)
Attraction of Conferences	They don't attract other conferences because most of the current conferences are related to GOI

DATA	
Built	2011-2013
Construction Cost	INR 215 Crore
Construction Period	Phase 1 : 6 Months
Developer	Government of Gujarat
Operator	iNDEXTb (Industrial Extension Bureau, Government of Gujarat)

DATA	
Major Facilities	Main Hall 6,000 m ² (6,000 seats)
	Exhibition Hall: 3 Halls (3,600 m ² , 3,400 m ² , 1,500 m ²)
	Seminar Hall: 4 Halls
	Meeting Rm: 4 rooms
	Food Court (400 m ²)
	Parking: 400 cars + VIP parking
	Other Functions: Museum, Photo Gallery
Occupancy Rate	50% (65 events/year)(Nov.-Mar.)
Usage fee	70 INR/ m ² +extra
Profit Rate	Deficit (supported by the Government of Gujarat)
Staff	300 persons

Source: documents from Mahatma Mandir

(2) Hyderabad International Convention Centre (HICC)

HICC is India's leading convention centre. In the past, ICCA (International Congress & Convention Association), a global organization of MICE, held its annual general assembly here. The main hall has a floor area of about 6,500 m². In addition to the hotel adjacent to the convention centre, five-star hotels are found in five or six locations within a radius of 5 km. The operation and management of the convention centre and the hotel are entrusted to Accor Hotels, a French hotel company. Accor Hotels, formerly known as Accor, participated in the project from the beginning and provided advice on the design as well.

The occupancy rate is about 55% (about 1,000 events are annually held). International events account for about 40% of the total number of events. Many private events, such as wedding ceremonies, are also held.



Source: documents from HICC + JST

Figure 4.2.2 Facility Overview of Hyderabad Convention Centre

KEYPOINT	
Access	45-minute drive from The Rajiv Gandhi International Airport
Hotel	<ul style="list-style-type: none"> ■ 5-star hotel (283 rooms) as an annex ■ 5-6 5-star hotels located within 5 km
Event	<ul style="list-style-type: none"> ■ Conference, academic conference, social event, wedding ■ Domestic conference: 60%, international conference: 40% ■ Frequently used for weddings
Attraction of Conferences	<ul style="list-style-type: none"> ■ Accor has joined PCO and attracted events. ■ HICC and HCVB (Hyderabad Convention Visiting Bureau) and other hotels cooperated to invite events from outside Hyderabad

KEYPOINT	
Planning of CC	■ CC planning specialist who works in Accor has joined since the beginning of this plan
Others	HITEX (Exhibition Centre) is closed to HICC. They co-operate on 3-4 events/ year together.

DATA	
Built	2006
Construction Cost	INR 3.5 billion
Developer	JV of Andhra Pradesh Industrial Infrastructure Corporation Limited (APIIC) and Emaar Properties PJSC (UAE)
Operator	Accor Hospitality (French Agency)
Floor Area	27,000 m ² (Convention:15,300 m ² Hotel:11,700 m ²)
Major Facilities	6,480 m ² (5000 persons) (divided into 6 Halls) Conference Rm: 37 rooms (Equipped 1 Pantry/2 rooms)
	Food Court, Speaker Preparation Rooms
	Other Function: Golf course
Occupancy Rate	55% (1000 events/year)
Usage fee	55 INR/ m ²
Staff	450 persons (+200 outsource persons)

Source: documents from Hyderabad Convention Centre

(3) Brilliant Convention Centre

This is a medium-scale convention centre located in Indore. In addition to the main hall with floor area of about 2,500 m², it contains an exhibition hall with floor area of about 2,000 m², and 15 meeting rooms. The convention centre is owned and operated by Brilliant Estates Limited, a real estate developer in Indore. It has received various awards as an excellent convention centre.

The convention centre is used for meetings of corporations both inside and outside the state and for conventions organized by universities located in the city of Indore. In its surroundings, there are office buildings and hotels owned by Brilliant Estates Limited. The convention centre is positioned as a facility for raising values and profits from these properties. As it is a privately owned and managed organization, no tax money has been invested. It can also be used for personal use such as a wedding ceremony. Many events, including wedding ceremonies, are held from November to March. In other seasons, seasonal festivals, religious events, and corporate meetings are held. There are specialized rooms, e.g. a room equipped with soundproofing facilities, etc.



Source: JST

Figure 4.2.3 Facility Overview of Brilliant Convention Centre

KEYPOINT	
Access	12 km from Indore Airport
Hotel	Guest rooms (108 rooms)
Events	<ul style="list-style-type: none"> ■ Meetings of corporations, Conventions of local universities ■ No subsidy from the state government, can be used for personal occasions such as weddings
Attraction of Conference	<ul style="list-style-type: none"> ■ Brings spill-over effects to surrounding corporate offices and hotels ■ The profitability is slightly positive, but covering CAPEX by profit is not expected.

DATA	
Built	2003
Construction Cost	INR 150 Crore
Developer	Brilliant Estates Limited, Indore
Operator	Brilliant Estates Limited, Indore
Floor Area	Approx. 10,000 m ²
Major Facilities	Main hall: 2,000 m ² Exhibition hall: 2,000 m ² Conference room: 15 rooms
	Food Court
	Parking: 1,500 cars
	Other Function: Guest rooms (108 rooms)
Occupancy Rate	30-40% after 3 years of operation, but the demand is growing
Usage fee	55 INR/ m ²
Profit	INR 2 Crore / year
Staff	400 persons

(4) Indira Gandhi Pratishthan, Lucknow

Indira Gandhi Pratishthan is a convention centre owned and managed by the state government (Lucknow Development Authority: LDA) where social functions, government events and conferences are held. It is located in Gomtinagar and was inaugurated in 2010. The vast campus is spread over 25 acres and offers meeting space for 1,500 persons in its biggest auditorium. It also offers banquets for social functions, two large lawns and meeting rooms for holding official and social events. The auditoriums at the venue are of international standards and offer all advanced lighting and sound facilities that are required by the organisers of small and medium sized events.

At the inauguration of the convention centre, the venue was used only for government functions. However, due to the deficits in finance, it started to open for private social events like weddings. Now it holds small to big size conferences of 100-150 a year, as well as 200-250 weddings, which brings significant sustainability in the management.



Source: documents from Indira Gandhi Pratishthan

Figure 4.2.4 Facility Overview of Indira Gandhi Pratishthan

KEYPOINT	
Access	20 km from Lucknow Airport
Hotel	Guest Rooms (108 rooms) (3-4 hotels are under construction nearby)
Events	■ Social functions, government events and conferences
Attraction of Conference	■ Wedding use was prohibited at the beginning but it is now allowed since it is profitable

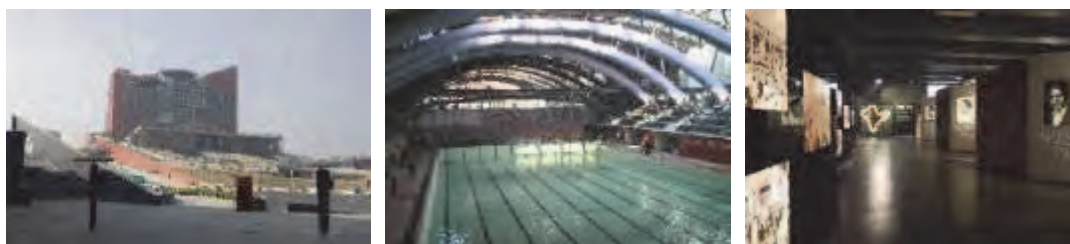
DATA	
Built	2010
Construction Cost	INR 843.01 Crore (Initial budget: INR 265.50 Crore)
Developer	Lucknow Development Authority (LDA)
Operator	Lucknow Development Authority (LDA)
Area	25 acres
Major Facilities	Auditoriums: 1,500/ 600/ 400/ 200 persons 4 Exhibition halls 2 Meeting halls Conference rooms
Other Facilities	Food court Parking: 600 cars (double basement parking) Other functions: guest rooms (118 rooms), art gallery, media centre
Occupancy Rate	150 events/year Weddings: 200-250/ year, 4 halls
Profit	Revenue: INR 49.5 million, Expense: INR 45 million Profit: INR 4.5 million (to be paid to LDA)

(5) Jai Prakash Narayan International Centre (JPNIC)

JPNIC is an architectural marvel conceptualised by leading architects and developers, which is being built by LDA. It is planned to open in early 2017. Jai Prakash Narayan International Convention Centre is designed as a signature building for the city of nawabs, Lucknow. The JPNIC at Lucknow comprises of multiple facilities ranging from an aquatic centre, a sports centre, a business centre, a museum and a hotel along with sufficient parking space. It is built on a massive area of 18.84 acres and has a built up area of 17,778 sqm while the total covered area for all floors is 88,867 sqm. This prestigious project is being built with an investment of INR 615 Crores.

The developer of JPNIC is the state government, but the operator will be outsourced to a hotel management company. In the RFP of operating JPNIC, a revenue sharing scheme was proposed. The

selected operator will pay to JPNIC either the assured minimum guarantee or 18% of actual revenues, whichever is higher. A hotel operator has been awarded and they will operate JPNIC.



Source: documents from Jai Prakash Narayan International Centre

Figure 4.2.5 Facility Overview of Jai Prakash Narayan International Centre

KEYPOINT	
Access	18 km from Lucknow Airport 7 km from Lucknow Charbagh Railway Station
Hotel	Guest rooms: 119 rooms, dormitory 107 rooms
Events	*Sport facilities for sports competitions and daily use by members
Attraction of Conference	Convention centre is located in the sports complex

DATA	
Built	April 2013 – March 2017 (plan)
Construction Cost:	INR 850 Crore
Developer	Lucknow Development Authority (LDA)
Operator	Convention and hotel: FORTUNA Museum: Envisage
Floor Area	88,867 m ²
Major Facilities	Convention hall: 2,000 m ² for 2,000 persons Conference hall: for 1,000 persons Seminar hall: for 100 persons
Other Facilities	Sub-hall, sports facilities (swimming pool, diving pool, tennis & badminton courts) Hotel and dormitory Museum for Socialism, Library, Amphitheatre
Parking	Indoor (530 cars) + outdoor (200 cars)

(6) National Agricultural Science Complex Convention Centre

The National Agricultural Science Complex (NASC) Convention Centre is currently under construction inside the NASC complex, located in Delhi. It is going to be operational by April 2018. Since it will be used only for government functions and will not allow private use, it is designed particularly for VIPs. VIPs can approach the VIP lounge through the VIP lift located in the basement, where they can continue to the stage without encountering non-VIP participants.

It has 1,200 seating capacity, with 400 fixed chairs and desks on the first floor, and 400+400 fixed chairs on the second floor. The hall can be divided into areas with 400 seats each by the partitions to hold different seminars at the same time.

The O&M will be outsourced to a private company through an AMC (Annual Maintenance Contract) for fixing ACs, cleaning, managing pantries and energy. Marketing staff is not necessary as it is only for government seminars.



Source: documents from National Agricultural Science Complex Convention Centre

Figure 4.2.6 Facility Overview of National Agricultural Science Complex Convention Centre

KEYPOINT	
Access	20 km from Delhi International Airport
Hotel	Guest house in the complex (76 rooms, 22 VIP suites)
Events	<ul style="list-style-type: none"> ■ Limited to only government conferences ■ Private events are not allowed
Attraction of Conference	<ul style="list-style-type: none"> ■ Initiated by PM Modi, dedicated for government functions

DATA	
Built	To be operational in April 2018
Construction Cost:	INR 160 Crore
Developer	Government of India
Operator	To be outsourced to a private company through an AMC (Annual Maintenance Contract)
Floor Area	21,600 m ²
Major Facilities	Ground floor: Exhibition & retractable chairs First floor: 400 fixed chairs with desks & 5-6 training rooms Second floor: fixed chairs in groups of 400+400
Other Facilities	Parking, pantry area

4.3. Convention Centres in Japan

In Japan, the construction of MICE facilities and the attraction of MICE events have been generally implemented by city governments, with support from Japan Tourism Agency and the Japan National Tourism Organization (JNTO).

There is at least one MICE facility in each prefecture in Japan. The following table shows the representative cities and MICE facilities where the convention bureaus have been responsible for attracting MICE events.

In order to support MICE facility development and attracting activities in these cities, GOJ has supported various activities such as calculating the effects (economic effects, etc.) of MICE, enlightening MICE and dispatching advisors.

Table 4.3.1 Convention Centres in Major Cities in Japan

City	Facility
Tokyo	There are large-scale MICE facilities such as Tokyo International Forum (5,000 seats) and Tokyo Big Sight (exhibition hall, approximately 80,000 m ²), as well as many hotels with large banquet areas. Tokyo International Forum is located in the central business area of Japan.
Yokohama	PACIFICO Yokohama (main hall: 5,000 seats, Exhibition hall: 20,000 m ²) is a complex MICE facility with main halls, exhibition halls and small meeting rooms.
Osaka	There are large-scale MICE facilities such as the Osaka International Convention Centre (main hall: 2,600 m ²) and INTEX Osaka (exhibition hall, approximately 70,000 m ² , as well as MICE facilities operated by the private sector.
Kyoto	Kyoto International Convention Centre (main hall: 3,000 m ²) is the first large - scale MICE facility (opened in 1966) in Japan, with high - quality international conferences and ceremonies in particular in mind.
Nagoya	There are Nagoya International Conference Hall (3,000 seats) and Port Messe Nagoya (Exhibition hall; 35,000 m ²). Also, an exhibition hall of 60,000 m ² will be newly constructed in the same prefecture.
Sapporo	Sapporo Convention Centre (main hall: 2,600 m ²) is smaller than the other facilities, but it is conveniently located in the city centre.
Fukuoka	There are Fukuoka International Convention Centre (main hall: 2,700 m ²) and Marine Messe Fukuoka (Exhibition hall, arena: 8,000 m ²). Redevelopment that is integrated with the neighbouring waterfront area is under way.

In this survey, MICE facilities that consist of Tokyo International Forum, the PACIFICO Yokohama, and the relatively small Sapporo Convention Centre have been selected as benchmarks.

(1) Tokyo International Forum (TIF)

Japan's leading convention centre, located within walking distance from Tokyo Station. There are many hotels and commercial facilities in the surrounding area. Opened in 1997, it is owned by Tokyo Metropolitan Government. Its operation is entrusted to Tokyo International Forum Co., Ltd., a quasi-public company.

TIF is a comprehensive MICE facility equipped with large, medium and small halls, medium and small meeting rooms, and exhibition halls. Common areas such as the lobby and its beautifully exposed structures are spacious. Besides global conferences such as the IMF/ World Bank Annual Meeting 2012 and academic conferences (domestic and international), various concerts are held at the Forum. The exhibition and other halls can be divided by a flexible partitioning system.



Source: <https://www.t-i-forum.co.jp/organizer/data/gallery/>

Figure 4.3.1 Facility Overview of Tokyo International Forum

KEYPOINT	
Access	About 30 minutes by train from Haneda Airport
Hotels	Many luxury hotels and business hotels are within walking distance
Events	<ul style="list-style-type: none"> ■ International and domestic conventions ■ Meetings of corporations ■ Concerts
Attraction of Conference	<ul style="list-style-type: none"> ■ The operator conducts attraction activities in cooperation with Business Events TOKYO (convention bureau of Tokyo).
Profit	Surplus (it has an extremely high occupancy rate, because of the convenient location in the centre of Tokyo)

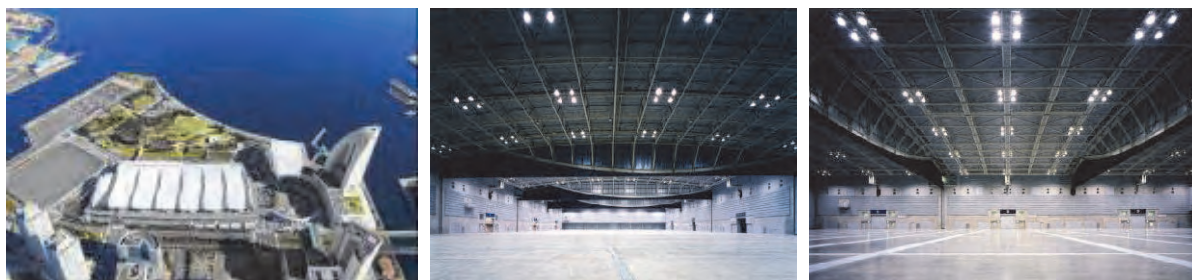
DATA	
Built	1997
Construction Cost	165 billion Yen
Developer	Tokyo Metropolitan Government
Operator	Tokyo International Forum Co., Ltd. (a joint venture company of local government and private capital)
Floor Area	Approx. 145,000 m ²
Major Facilities	Main Hall: approx. 5,000 seats Exhibition Hall: 5,000 m ² Conference Rooms: 34 rooms Food Court
Occupancy Rate	70-80%
Staff	61 persons (part of O&M and consignment outsourced)

Source: <https://www.t-i-forum.co.jp/>

(2) PACIFICO Yokohama

One of Japan's leading convention centres, is well known in particular for hosting many international conferences. It is located approximately 30 minutes by car from Haneda Airport, and is also adjacent to a subway station. Pacific Convention Plaza Yokohama, a quasi-public company, owns and operates the facility.

PACIFICO Yokohama is well reputed for its good facility configuration: Exhibition Hall with a floor space of 20,000 m², many medium and small meeting rooms, and Japan's largest hall which accommodates 5,000 people. The rental income (hotel tower rental fee) is obtained by renting facilities to the adjacent hotel, InterContinental Yokohama Grand. The Exhibition Hall and several conference rooms can be divided by partitions, enhancing convenience.



Source: SS.inc + JST

Figure 4.3.2 Facility Overview of PACIFICO Yokohama

KEYPOINT	
Access	About 30 minutes by car from Haneda Airport
Hotel	Luxury hotel (600 rooms) is on site
Events	<ul style="list-style-type: none"> ■ International and domestic conventions ■ Meetings of corporations ■ Exhibitions ■ Concerts
Attraction of Conference	<ul style="list-style-type: none"> ■ The operator conducts attraction activities in cooperation with Yokohama Convention & Visitors Bureau
Profit	Surplus (due to its extremely high occupancy rate, and rent from hotel operator)

DATA	
Built	1991
Construction Cost	84.5 billion Yen
Developer	PACIFIC CONVENTION PLAZA YOKOHAMA (a joint venture company of local government and private capital)
Operator	PACIFIC CONVENTION PLAZA YOKOHAMA
Floor Area	Approx. 168,000 m ²
Major Facilities	Main Hall: approx. 5,000 seats Exhibition Hall: 20,000 m ² Conference Rm: 42 rooms Food Court
Occupancy Rate	70-80%
Staff	57 persons (part of the operation and maintenance and consignment outsourced)

Source: <http://www.pacifico.co.jp/>

(3) Sapporo Convention Centre

The convention centre is located in Sapporo, the core city of northern Japan. Although being far from the airport, about 1 hour by train, it is located at the city centre and there are many hotels and commercial facilities in the surrounding area. It has been developed by the City of Sapporo and its operation is entrusted to private companies.

In addition to the large hall accommodating 2,600 people, it consists of small halls and 19 meeting rooms. The large hall can be divided into three parts.



Source: JST

Figure 4.3.3 Facility Overview of Sapporo Convention Centre

KEYPOINT	
Access	About 1 hour by train from New Chitose Airport
Hotel	Many hotels are within walking distance
Events	<ul style="list-style-type: none"> ■ International and domestic conventions ■ Meetings of corporations ■ Incentive
Attraction of Conference	<ul style="list-style-type: none"> ■ The operator conducts attraction activities in cooperation with Sapporo Convention Bureau

DATA	
Built	2003
Construction Cost	10.2 billion Yen
Developer	Sapporo City Government
Operator	SORA-SCC (a joint venture company of private capital companies)
Floor Area	About 20,000 m ²
Major Facilities	Main Hall: 2,607 seats Sub Hall: 533 m ² Conference Rm: 19 rooms
Occupancy Rate	70-80%

Source: <http://www.sora-scc.jp/access/>

CHAPTER 5. STUDY ON THE POSSIBILITY OF ESTABLISHMENT OF VARANASI CONVENTION CENTRE

5.1. Overview of Varanasi City

Varanasi is a city on the banks of Ganga River in UP State. This city is considered as one of the holiest cities in Hinduism and Jainism, and has played an important role in the development of Buddhism as well. It has been a cultural centre of North India for thousands of years and is a major centre for pilgrimage.

It is considered one of the oldest continuously inhabited cities in the world. The city of Varanasi is archaeologically proven to have been continuously inhabited by humans since ca. 800 BC and therefore described as one of the most ancient and continuously living cities in the world.

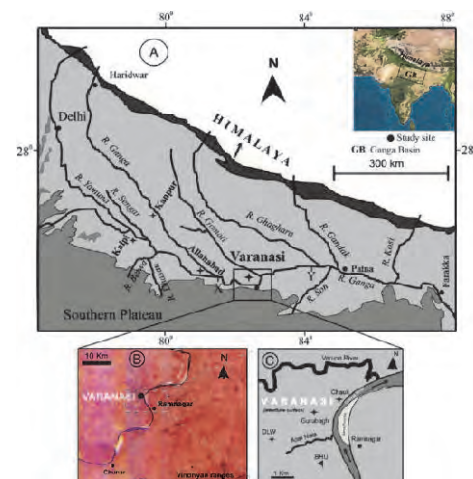
(1) Geographical Location

Varanasi City is the centre of Varanasi District in UP State which has 71 districts. Varanasi City is located in 25°15' to 25°22' north latitude and 82°57' to 83°01' east longitude, 80.71m above sea level, with the state capital Lucknow 320 Km south-east and Allahabad, 121 Km east. Ganga river flows from south to north of Varanasi and has the world famous Ghats on the West side bank.

Traditional etymology of "Varanasi" is said to come from the two Ganges tributaries forming the city's borders: Varuna in northern Varanasi, and Assi a small stream in the southern part of the city.

(2) Climate

Varanasi experiences a humid subtropical climate with large variations between summer and winter temperatures. The dry summer starts in April and lasts until June, followed by the monsoon season from July to October. The temperature ranges between 22 and 46 °C (72 and 115 °F) in summer. Winter in Varanasi has very large diurnal variations, with warm days and cold nights. Cold waves from the Himalayan region cause temperatures to dip across the city in winter from December to February and temperatures below 5 °C (41 °F) are not uncommon. The average annual rainfall is 1,110 mm (44 in). Fog is common in winter, while hot dry winds, called loo, blow in summer.



Source: <https://www.researchgate.net/>

Figure 5.1.1 Location of Varanasi

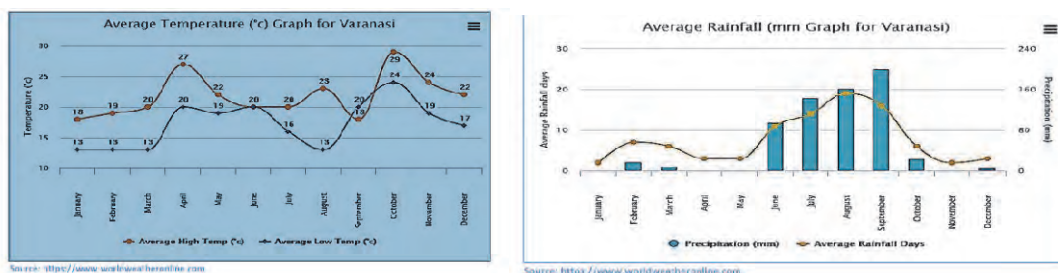


Figure 5.1.2 Average Temperature and Average Rainfall in Varanasi

(3) Demographic Information

According to Census 2011, total population of UP state was 199.8 million, and that of Varanasi District was 3.78 million, which accounts for 1.84% of the total state population. There are 39 urban centres in the district, and Varanasi City is one of the largest urban centres in the state.

The population in Varanasi Urban Agglomeration (VUA) area was 1.424 million in 2011, of which 1.19 million were in Varanasi City area. The population density of Varanasi City (82.1 sqkm) was 146 per hectare in 2011, an increase from 133 per hectare in 2001. VUA’s population growth from 2001 to 2011 was 18%, which is above the national average of 17.64%.

Population growth in Varanasi is predicted as shown in Figure 5.1.3 in the “City Development Plan for Varanasi, 2041_ Capacity Building for Urban Development Project (CBUD)”.



Source: CDP 2041, Varanasi

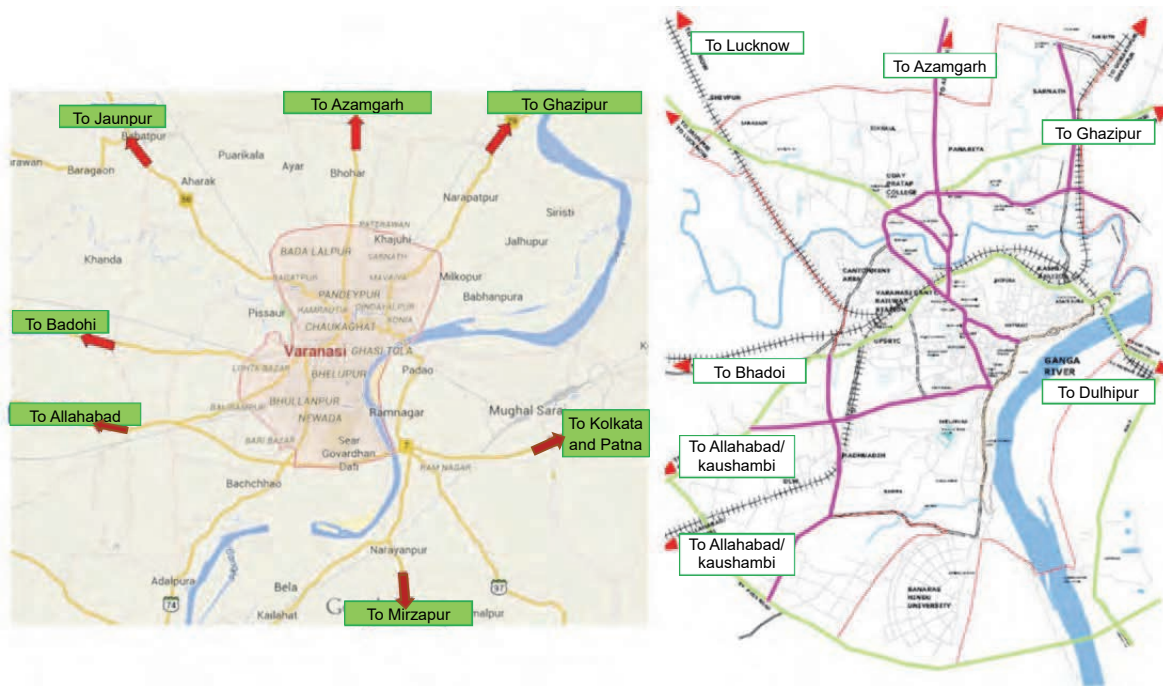
Figure 5.1.3 Population of Varanasi Urban Agglomeration

(4) Linkages and Connectivity

Varanasi is well-connected and is accessible by road, rail and air. The distances from major cities are: Delhi-750 km, Lucknow-286 km and Allahabad -125 km. There are three national highways and four state highways passing through the heart of the city.

Varanasi is also well connected by railways with broad gauge. There are three rail lines entering the city from Lucknow, Bhadoi and Allahabad, which divert into the two lines to Gorakhpur and Mughal Sarai. The city lies on the Delhi-Kolkata rail route of the North Eastern Railways, which is a broad gauge. A rail line connects the town with Sarnath. Other cities having good connectivity through railways are Patna, Guwahati, Chennai, Mumbai, Gwalior, Meerut, Lucknow, Kanpur and Allahabad. The town also has an airport at a distance of about 24 km from the city. There are flights to Varanasi from Agra, Bhubaneshwar,

Kolkata, Delhi, Gorakhpur, Khajuraho, Lucknow, Raipur and Kathmandu (Nepal). It is on a regular aviation route from Delhi to Kolkata and Bhubaneshwar. It is also the aviation gateway to Nepal.

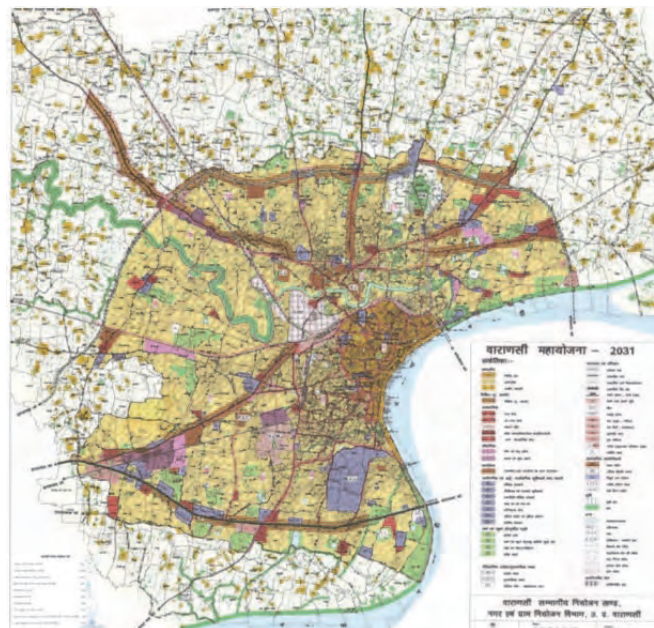


Source: DPR

Figure 5.1.4 Linkages and Connectivity

(5) Master Plan of Varanasi -2031

The Varanasi Master plan 2031 was developed in 2013 by Varanasi Development Authority (hereinafter referred to as “VDA”), but it is still under the approval process. This master plan defines the new boundary of Varanasi Development Region (VDR), new road network and land use, including new ring roads and commercial areas. The land use of the project site for VCC is for office use (refer to Chapter 5.3.2)



Source: Master Plan Varanasi 2031

Figure 5.1.5 Master Plan –Varanasi 2031

VDA, the ensuring agency of the planned expansion of the city, is also planning a Varanasi Metro as a part of Master Plan –Varanasi 2031. Two corridors are proposed: Corridor 1 connects between BHU and BHEL (Bharat Heavy Electricals Ltd) and Corridor 2 between Benia Bagh and Sarnath. The traffic demand estimated for the corridors of Varanasi Metro is about 24,000 passengers for Corridor 1 and 18,000 passengers for Corridor 2.



Note: Liable to change.

Source: DPR

Figure 5.1.6 Metro Corridors and Station Locations

(6) Kyoto-Varanasi Partner City Promotion

The Prime Minister of India Mr. Narendra Modi and the Prime Minister of Japan Mr. Abe announced an agreement to promote the Kyoto-Varanasi Partner City in 2014. This agreement included culture, art, academics, heritage conservation and city modernization as potential areas of cooperation.

This Partnership is expected to facilitate as follows;

- Modernisation of Varanasi, including upgrading water management and sewage facilities, waste management, urban transportation etc., drawing upon Japan’s expertise and technologies;
- Application of Japanese practices, techniques and management for conservation of the rich heritage of Varanasi; and
- Exchanges between Kyoto University and Banares Hindu University (hereinafter referred to as “BHU”), as well as religious organisations.

Source: December 3, 2014, the Press Information Bureau (PIB) of the GOI’s MOUD

In addition, the memorandum for academic cooperation and exchange and a student exchange agreement between Kyoto University and BHU were concluded in August 7, 2015. BHU is the first university in India with which Kyoto University has concluded agreements for academic cooperation

and student exchange. The university-level agreements will provide a framework for a broad range of collaborative activities, including research collaboration and student exchange programs.

(7) UNESCO Creative City of Music

Varanasi was selected as one of the UNESCO Creative Cities in the field of Music in 2015, with its historical contribution to promotion of music festivals such as the Subah-e-Banaras Festival that focuses on the power of music for enhancing inner well-being, and traditional music schools. As a Creative City of Music, Varanasi is planning the following activities:

- Establishing Sangeet Sankul Music School to protect and promote music traditions and knowledge, the Guru-Shishya Parampara method in particular;
- Giving a new impulse to the 350-year-old city's festivals of Gulab Bari, Budwa Mangal and Ramlila by nurturing multidisciplinary approaches and learning from experiences of other Creative Cities;
- Using music as a driver of intercultural dialogue and mutual understanding through the Jugalbandi Fusion Interactions, focusing on jam sessions with musicians from diverse backgrounds; and
- Supporting exchange schemes for music students of Creative Cities of Music to learn about Guru-Shishya Parampara and share their own knowledge and experiences.

Source: <http://en.unesco.org/creative-cities/varanasi>

(8) Smart City

Under the Prime Minister Modi's initiative, MOUD has started implementing the smart city projects under Smart City Mission. Varanasi was selected as one of the smart cities in September 2016 with a vision "To rejuvenate the oldest Indian living city of Varanasi as a great place to live and visit by conserving and showcasing its enriched heritage, culture, spirituality and traditions through innovative social and financial inclusion solutions".

The SPV for the Smart City Project was nominated as operation body for the VCC (refer to Chapter 6), and a consulting firm for PMC service for the Smart City Mission is under selection.

5.2. Demand Analysis of Varanasi Convention Centre

5.2.1. Similar Facilities in / around Varanasi

The JST conducted a survey on similar facilities in the city of Varanasi and the surrounding areas. The summary of each facility is as follows.

Table 5.2.1 Relevant Facilities in Varanasi

Study Object	Description
Banaras Hindu University (BHU) Auditorium	Auditorium owned by BHU, the largest facility in the city, with a capacity of 1,500 people
Trade Facilitation Centre	Exhibition hall under construction in the city suburb
Ramada Hotel JHV Varanasi	Hotel with the biggest hall in Varanasi
The Gateway Hotel Ganges Varanasi	The most luxurious hotel in Varanasi with a hall
Nagari Natak Mandali	Auditorium for local cultural events
Sanskritik Sankul	Auditorium for local community events

Source: JST

(1) Banaras Hindu University (BHU) Auditorium

Facility:

- Capacity: 1,500 people
- Hall Design: Fixed seats
- Other rooms: Medium and small meeting rooms

Functions:

- The largest hall in the city, with a capacity of 1,500 people. This hall is used mainly for academic conferences organized by professors as well as for theatres.
- The facilities are insufficient to host conventions of international standard (e.g. no A/C).
- As there is no exhibition space available in the building, outdoor tents are used instead.



Source: JST

Figure 5.2.1 BHU Auditorium

(2) Trade Facilitation Centre

Facility:

- Capacity: 900 people
- Hall Design: Fixed seats
- Other rooms: Nothing specific

Functions:

- It is being developed as an exhibition hall and is planned to host industrial trade fairs.
- It is not suitable for hosting academic conferences or corporate meetings as other halls or conference rooms are not available.



Source: JST

Figure 5.2.2 Trade Facilitation Centre

(3) Ramada Hotel JHV Varanasi

Facility:

- Capacity: 336 people
- Hall Design: Flat floor
- Other rooms: 3 medium halls, 1 small meeting room

Functions:

- Used for meetings of up to 350 people. Outdoor tents are used for exhibitions.
- Widely used for wedding ceremonies, especially during the dry season from October to March.
- An additional hall with a floor space of about 900 m² is planned to be operational in 2018.



Source: <http://www.ramadajhvnns.com/>

Figure 5.2.3 Ramada Hotel JHV Varanasi

(4) The Gateway Hotel Ganges Varanasi

Facility:

- Capacity: 200 people
- Hall Design: Flat floor
- Other rooms: A garden hall of approx. 900 m², and meeting rooms

Functions:

- Used for meetings of up to 200 people. Although there is an indoor hall of 900 m² with a concrete floor, it is not suitable for academic conferences or corporate meetings.
- Also, often used for wedding ceremonies.
- An additional hall with a floor area of about 700 m² is planned to be constructed by 2018.



Source: JST

Figure 5.2.4 Figure 5.5.2.5 The Gateway Hotel Ganges Varanasi

(5) Nagari Natak Mandali

Facility:

- Capacity: 900 people
- Hall Design: Fixed seats
- Other rooms: Nothing specific

Functions:

- Used for local cultural events, INR25,000 per hall
- This became the only existing public auditorium with a stage outside of BHU, after the auditorium in VMC was closed. This hall has very simple stage facilities and does not have green rooms.
- The place organises around 50 plays/events in a year and most of them are cultural plays and dramas. Many school events are also organized. The hall is one among the many venues that host the 'Sankat Mochan Festival', an annual musical feast of the famous Hanuman Temple. The classical music concerts are its major attraction. Some of the other events held in the last few years are Trividha - Play, Sangeet Utsav - Tribute to Pt. Kishan Maharaj etc.



Source: JST

Figure 5.2.6 Nagari Natak Mandali

(6) Sanskritik Sankul

Facility:

- Capacity: 1,200 people
- Hall Design: Flat Floor
- Other rooms: Nothing specific

Functions:

- Developed by CPWD, and managed by VDA, government/private/NGO events are organized. Recently training sessions were held during the state election.



Source: JST

Figure 5.2.7 Sanskritik Sankul

5.2.2. VCC Requirements Suggested from the Condition of the Existing Facilities

Establishing a new convention centre with new functions that the existing MICE facilities do not have is necessary. It is desirable that a new convention centre fulfils the following requirements.

- At present, the largest indoor hall in the city is the BHU Auditorium, which is insufficient to hold an international conference. A large hall (floor area $\geq 1,000 \text{ m}^2$) that meets international standards is desirable.
- In particular, in addition to a main hall, an exhibition space and several medium and small meeting rooms are required in order to host international conferences. The BHU Auditorium and the two hotels mentioned above do not have any indoor exhibition space. Therefore, a new VCC should have indoor exhibition space.

- Likewise, regarding medium and small meeting rooms, facilities of BHU Auditorium are insufficient and the two hotels lack in the number of conference rooms. Therefore, a new VCC should be equipped with at least five or more conference rooms.

5.2.3. Needs Survey on Convention and Cultural Facilities in Varanasi

JST conducted an interview survey on the needs of MICE and cultural facilities in Varanasi. The list of interviewees was as follows.

Table 5.2.2 List of Interviewees

Purpose	Study Object	Description
Potential MICE Needs in Varanasi	Inspiration India (Site Indian Chapter)	Incentive travel agency based in Delhi, functions as SITE India Chapter
	Plan it! By Creative Travel	Professional Conference Organizer in Delhi
	India Convention Promotion Bureau	Convention promotion bureau under MOT
Current MICE Situation in Varanasi	Ramada Hotel JHV Varanasi	Hotel with the biggest hall in Varanasi
	The Gateway Hotel Ganges Varanasi	The most luxurious hotel in Varanasi having a hall
	Institute of Medical Sciences, BHU	The biggest university in Varanasi with 167 faculties organizing academic conferences

Results of the needs survey are as follows.

- There is a demand for facilities for large-scale Meetings and Conventions with 100 to over 1,000 participants in Varanasi. As a large scale hall is not available, the demand is high. “Incentive travel” also has a potential as Varanasi is a tourist city.
- Varanasi is a global religious city, so there are needs to hold religious events. It is highly probable that convention centres will be used for these.
- In India there is a need to use convention centres for wedding ceremonies. Since wedding ceremonies are large-scale events and are held for several days, they are important demands in ensuring high occupancy rates of facilities.
- Currently, large-scale events are held at BHU Auditorium, but its facilities are insufficient, which has become a serious issue during the events. Developing a new convention centre will improve the potential for holding MICE, and eventually lead to the branding of the city and the promotion of industry and academia.
- Demand for hosting events in large halls is growing. This trend is proven by the two hotels located in the city, planning to build new large-scale halls.

Furthermore, MICE brings various effects each time an event is held. The following is a list of MICE and related effects that can be expected after a new convention centre is developed in the city of Varanasi.

Table 5.2.3 MICE Classification and Impacts on Varanasi

Classification	Organizer	Examples	Requirements of City	Impact
Meeting	Private companies in big cities(Delhi, Mumbai) and Varanasi, Central Govt and UP State Govt	Investment seminar of UP State Govt Product announcement of Amur	<ul style="list-style-type: none"> • Investment opportunities • Corporate headquarters and branches 	<ul style="list-style-type: none"> • Industry promotion through business chance expansion • City branding
Incentive	MNCs Big corporates in India	Incentive tour for excellent employees at TOYOTA or IBM	<ul style="list-style-type: none"> • High quality tourism contents • Several luxury hotels 	<ul style="list-style-type: none"> • High economic impact (consumption per person is specifically high)
Convention	Academic association HQ (overseas) Academic association Chapter (India)	<ul style="list-style-type: none"> • World Congress on Clinical Nutrition, • Asian Urbanization Conference 	<ul style="list-style-type: none"> • Leading university (Especially medical) • Various hotels 	<ul style="list-style-type: none"> • Provision of the latest academic knowhow to local researchers • Networking among local researchers • City branding
Exhibition	Central, local govt Exhibition organizer	<ul style="list-style-type: none"> • Carpet Fair • Broadcast India Show 	<ul style="list-style-type: none"> • Industrial clusters 	<ul style="list-style-type: none"> • Industry promotion by business meetings of local companies (scale is limited at the planned site)
Event	<ul style="list-style-type: none"> • Concert and religious events • Group tour for specific purpose (religious activities, etc.) 			<ul style="list-style-type: none"> • Satisfaction by citizens • Improvement of general tourism
Others	<ul style="list-style-type: none"> • Individual events such as wedding 			<ul style="list-style-type: none"> • Satisfaction by citizens

The following are the summaries of each interview result.

Inspiration India

- Incentive tours from Europe and the United States often visit India. Currently, their main destinations are Delhi, Agra and Jaipur (the Golden Triangle), but Varanasi has a potential to become the next destination. In particular, since Varanasi is famous as a religious city, travelling needs from Thailand and China may be expected.
- When holding an event, a collective reservation in luxury hotel rooms is necessary. At present, it is difficult to secure more than 200 rooms even in Delhi which becomes a bottleneck to holding incentive events. As a result, sizes of incentive tours are between a few dozens and 300 people at most. If a hotel has an adequate capacity, demand will increase.
- Demand from domestic participants (Indian) are also expected. However, in order to meet the demand, a luxury hotel will be required because Indians expect high grade experiences such as luxury hotels rather than tourist resources.

Plan it! By Creative Travel

- While Varanasi is a tourist city, Banaras Hindu University (BHU), a famous university, is also located in the city. Therefore, a certain level of convention needs for 1,000 to 2,000 people may exist. Convention organizers outside the city of Varanasi, may use the facility.
- Especially, East India does not have a sufficient number of convention facilities compared to other areas. There is no MICE facility capable of accommodating more than 600 people. In

addition to a main hall, an exhibition hall for sponsor exhibitions and medium and small conference rooms for holding subcommittee meetings are also required.

- A lack of hotels, airline flights and frequent traffic congestion are the bottlenecks in Varanasi.

India Convention Promotion Bureau

- There are needs for convention facilities that can accommodate up to 1,500 people in Varanasi.
- The strength of Varanasi is that BHU is located in the city. BHU medical schools are well known throughout India, and university researchers have needs to hold academic conferences. In the past, BHU Auditorium had hosted a conference where 2,000 people participated. Yet, the Auditorium is insufficient as a facility. It is desirable to have a new hall.
- Currently, there is a shortage of hotels in Varanasi. However, once a new convention centre is developed, new hotels may be built in the surrounding area.

Ramada Hotel JHV Varanasi

- Currently, Ramada Hotel has the largest hall with a capacity of 400 people in the city. The hall is well used with an occupancy rate between 70 to 80%. In particular, because of the Prime Minister Modi's initiative, Varanasi is drawing attention and the demand is now 1.5 times higher compared to last year.
- Although there are needs to hold wedding ceremonies, especially from November to March, there are also needs for corporate meetings and academic conferences.
- Furthermore, there are also needs for holding larger events in Varanasi. However, due to a lack of facilities, these events are carried out in other cities (Delhi and Agra). For this reason, when developing a new hotel in the next three years, meeting facilities with a hall of about 1,000 m² are to be installed.

The Gateway Hotel Ganges Varanasi

- The Gateway has a hall with a capacity of 200 people. From November to March it is mainly used for wedding ceremonies, but corporate meetings are held regardless of the season.
- Events with hundreds or more than 1,000 participants have been held in the city. However, the BHU Auditorium is the only hall that can accommodate such number of people. This hall is not suitable for hosting MICE, and the demand for large conference facilities seems to be high.
- Since the demand for hall facilities is high, a new meeting space is planned. It is expected to be pillar-less with floor area around 7,500 square feet. The completion is scheduled in 2018.

Institute of Medical Sciences, BHU

- The Institute will be hosting a medical conference in 2018 with 3,000 participants. Due to insufficient facilities at BHU with limited capacity and no A/C, the conference will be held in several conference rooms at five-star hotels in Varanasi.
- There is a demand for a big hall in Varanasi with about 3,000 seating capacity. Varanasi has been missing several opportunities not being able to host big scale conferences. The number of

halls and hotels in Delhi is also not sufficient, and Agra and Jaipur have better conference facilities.

- A multi-purpose hall and an exhibition hall are required as medical conferences have sponsors who would like to showcase their products at an exhibition hall.

5.2.4. Risk and Challenges regarding Establishment of VCC

As described above, JST has confirmed that there is a need to develop a new convention centre in Varanasi. On the other hand, in regard of development and operation of a convention centre, there are challenges to be solved, as follows.

- (1) Development of hotels (4 to 5 stars) adjacent to the convention centre
- (2) Improvement of access from the airport to the venue
- (3) Improvement of access from the venue to the city centre
- (4) Ensuring scheduled flights
- (5) Establishing an organization for attracting MICE
- (6) Cooperation with companies, government organizations and universities in the city
- (7) Improvement of tourist attractions inside and outside the city

(1) Development of Hotels (4 to 5 stars) adjacent to the Convention Centre

Adjacent to the convention centre, hotels (4 to 5 stars) are required. In Varanasi, there are not enough hotel rooms throughout the city. Therefore, further hotel development should be promoted.

- For Conventions (of MICE), it is desirable to have a hotel adjacent to the convention centre, so that university professors and other VIPs among the participants can stay in them. Especially on the occasion of an international convention, a hotel adjacent to the venue is sometimes required as one of the conditions of the venue. Furthermore, it is desirable to have hotels within walking distance of 10 to 15 minutes from the venue. Hotels should include middle class hotels where students can stay.
- As “Incentive tour/event” is held for awarding purpose, organizers seek luxury hotels for accommodation. According to the Indian hotel classification, a luxury hotel roughly equals a five star hotel. In Varanasi, hotels such as the Gateway Hotel or higher class hotels are equivalent to the category “luxury hotel”. For Meetings, hotels of more than 4 stars are required.
- As a conclusion, the following should be promoted:
 - I. Development of a hotel adjacent to the convention centre (middle-class hotel of about 200 to 300 rooms); and
 - II. Development of other hotels in the city

Table 5.2.4 Desirable Hotel Image

Aspect	High Grade Hotel	Economy Hotel
Necessity	Required for accommodation of VIPs and professors participating in events, mainly conventions and academic conferences	Required for accommodation of general researchers and students participating in events, e.g. conventions and academic conferences
Airport Access	Direct access by taxi or dedicated shuttle bus	Access by shuttle bus, etc., and by walking from bus terminals or nearest stations
Accessibility	Located next to (or near) the MICE facility. Access by using a connecting passage between facilities or a secondary pathway for VIPs	Access by taxi, bus, walk etc., in about 30 minutes

(2) Improvement of Access from the Airport to the Venue

Since organizers and participants of business events place importance on good accessibility from the airport to the city centre, it is necessary to steadily advance development of the expressway which is currently underway.

- Globally observed, the convention centre should be preferably located within 20 to 30 minutes from the airport.
- The city centre of Varanasi is about 20 km from the airport, which is comparatively not far. However, sometimes it takes more than an hour when the road is congested. For this reason, organizers are required to consider the risk that participants may not arrive at the venue on time, which would be a major weakness of a venue.
- The city of Varanasi is currently developing a highway from the airport to the city centre. This development work must make steady progress. By the time the construction of the convention centre is completed, a smooth access way to the city centre (and to the airport) should be in place.

(3) Improvement of Access from the Venue to the City Centre

It is necessary to eliminate traffic congestion from city hotels to the convention centre or to tourist attractions. Also, the road environment should be improved so that large buses can travel smoothly.

- During an event, MICE participants (especially those attending from outside Varanasi) will be moving around the city for dining and sightseeing, in addition to going back and forth between their hotels and the convention centre.
- Presently, chronic traffic congestion is taking place in the city. This would lead to a decline in the event participants' satisfaction and a weakness of a MICE venue.
- In particular, after-convention programs (such as sightseeing) of academic conferences and "Incentive tour" would be travelling by large bus. Road conditions need to be improved so that these large buses can travel smoothly.

(4) Ensuring Scheduled Flights

Scheduled flights must be ensured so that events can be held as planned. (This, however, requires consultation not only with the city of Varanasi but also with airlines.)

- MICE is held as a part of business, and basically on-time travel is a prerequisite for hosting MICE.
- On the other hand, flight delays are frequently observed in India. This would be a serious issue in terms of participants' travelling time. (Participants may be required to arrive one day earlier before the event or to travel with enough time allowance, etc.)
- This is a matter that requires consultation with other city airports in India and the airlines. However, since attracting MICE is international competition among cities, efforts must be made to improve the situation.

(5) Establishing an Organization for Attracting MICE

Using Hyderabad as an example, the city of Varanasi needs to have an organization which supports activities of attracting MICE and holding events.

- In most of MICE-hosting cities in the world, so-called convention bureaus are developed. The objective of a convention bureau is to attract MICE and support organizers in holding events.
- In particular, in regard to Conventions, the Convention bureau attracts Conventions to its own city by preparing proposal documents for competitive bidding for a venue with event organizers (mainly university faculty members and researchers); arranging hotel room reservations at several hotels; and supporting organizers at the time of events. In regard to Incentives, the bureau carries out sales activities toward event organizers. As for Meetings, hotels tend to conduct their own activities to attract events.
- In India, a convention bureau has been set up in Hyderabad. Anticipating the development of a new convention centre and improvements of hotel-owned halls, Varanasi should also set up an organization such as a convention bureau to attract and support events.
- Hyderabad Convention Bureau has been established and run under the leadership of a private sector organization with cooperation of mainly hotels of the private sector in the city. In Japan and other foreign countries, many organizations tend to have a strong public leadership (governments provide most of the operating funds).

(6) Cooperation with Companies, Government Organizations and Universities in the City

Academic conferences sponsored by BHU may be held. Since there are few companies based in the city, efforts must be made to attract events.

- Worldwide demand for MICE is growing. Especially in Asia, demand for holding conferences in regional areas (East Asia, Southeast Asia, etc.) are increasing in line with the economic development of each country. Efforts should be made to meet these demands.

- Globally, about half of the conferences are medical conferences. BHU is well known for its medical schools and there are many prominent researchers at BHU. The Faculty of Medicine, BHU is now working to host the Annual Conference of ISCCM (Indian Society of Clinical Care Medicine) in 2018, but is facing difficulties to secure appropriate facilities. Cooperation with researchers will be a key to invite international conferences.
- Lucknow is the state capital of Uttar Pradesh. Private companies and government organizations in UP are concentrated in Lucknow. Varanasi has few opportunities to host corporate seminars and meetings of government agencies, thus the city needs to make efforts in actively attracting events. However, there are cases where companies conduct incentive tours combined with sightseeing in Varanasi. Also, due to the increase of infrastructure projects in recent years, donor agencies and infrastructure-related companies are increasingly holding seminars.
- Also, there are possibilities of academic conferences in India, organized by BHU professors specialized in medical fields.

(7) Improvement of Tourist Attractions Inside and Outside the City

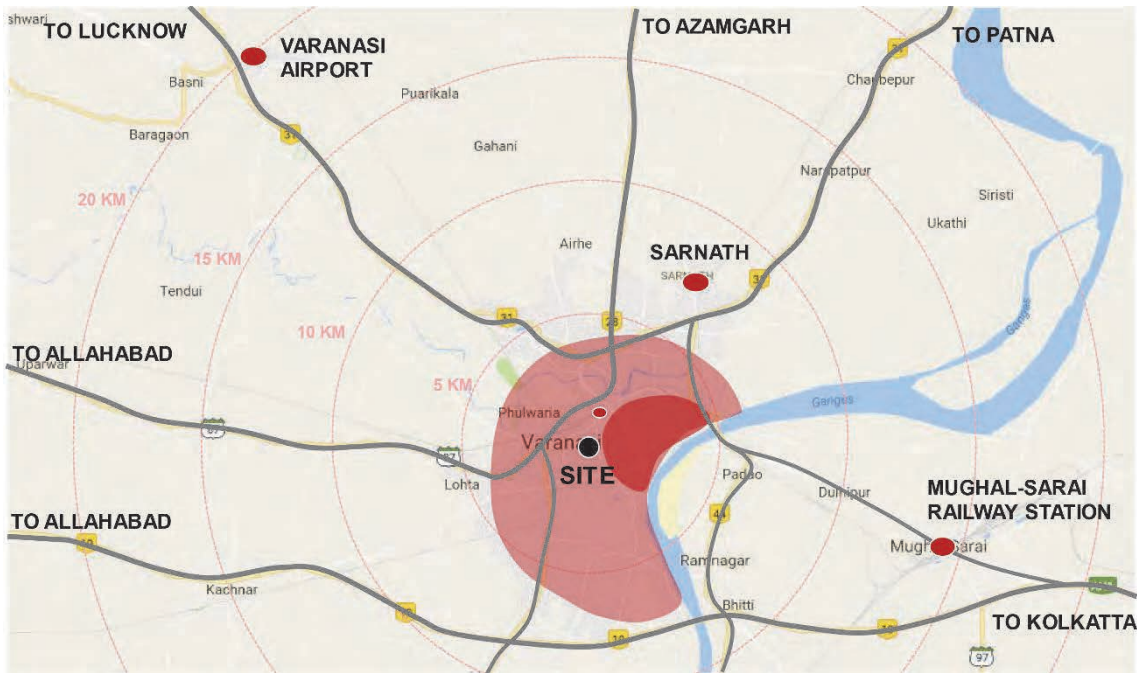
Varanasi has notable tourist attractions such as the Ganges River and Sarnath. However, access, traffic congestions and sanitation need to be improved.

- Although MICE is held as a part of business, the probability of attracting participants may increase if an event is held in a famous tourist place. Indeed, many global tourist cities such as Paris and Vienna are included in the world famous MICE host cities.
- Since Varanasi has many tourist attractions, sightseeing programs after conferences or company incentive tours can be planned.
- On the other hand, problems such as inconvenience in access to Varanasi, traffic congestion in the city and poor sanitation have been pointed out. The environment must be improved.

5.3. Condition of the Site and Surrounding Area

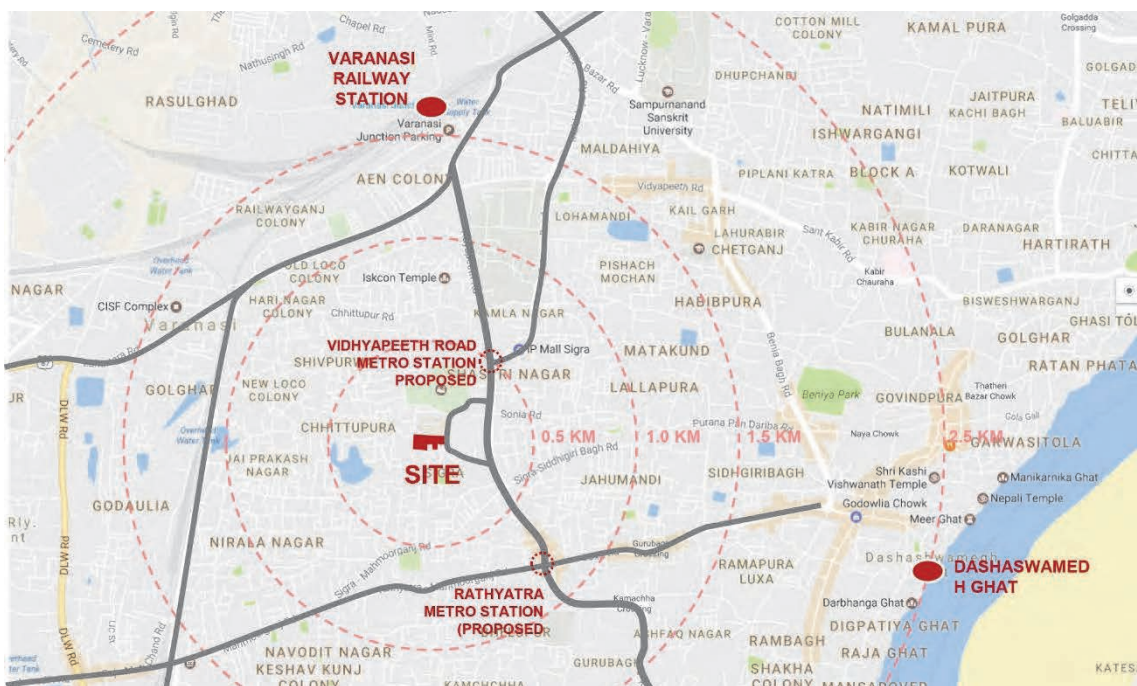
5.3.1. Accessibility to the Site

The proposed project site is located within the premises of Varanasi Municipal Corporation (hereinafter referred to as “VMC”) and is adjacent to the main building of VMC. The site is approximately 1.7 km from Varanasi Junction, the main railway station, 2.3 km from the Main Bus Stand and 24 km from Lal Bahadur Shastri International airport. From a tourism perspective, the site is located close to Varanasi Old City (3 Km from Dashaswamedh Ghat) and approximately 15 km from Sarnath Heritage Site. The site is situated off Sigra Chauraha Road, very close to Dr. Sampurnanad Sport Stadium and well linked with public commuter facilities (bus, taxi & auto) within 500m. The proposed underground Metro line has its two proposed stations of Kashi Vidyapeeth and Rathyatra almost equidistant from the site at a walkable distance of 750 m. For all practical purposes, the 18m wide Sigra Chauraha Road (city arterial road) is the main connectivity to the site.



Source: Google Maps + JST

Figure 5.3.1 Accessibility to the Site (Regional Level)



Source: Google Maps + JST

Figure 5.3.2 Accessibility to the Site (City Level)

5.3.2. The Current Condition of the Site and its Surroundings

The site is located in a transition zone of the old and new city witnessing heavy transition in terms of physical infrastructure as well as other city developments. The 24m wide (proposed) Sigra Chauraha Road near the site, marks the boundary of change from the old city mixed-use to a well-defined singular land use.



Source: Varanasi Development Plan 2031

Figure 5.3.3 Site & Surrounding Land-Use Plan

(1) The current condition of the surroundings:

The site is situated on the campus of the Varanasi Municipal Corporation main building with Dr. Sampurnananda Sports Stadium (popularly known as Sigra Stadium) to its north side and a public park called Shaheed Udyaan and Herbal Park towards the east side just across the road. Adjacent to the site on south-west corner there are semi-public organization offices belonging to BSNL (Bharat Sanchar Nigam Limited – Telecom) and UPPCL (Uttar Pradesh Power Corporation Limited). The south & west sides of the site have low rise residences of G+1 or G+2 heights, starting as regular plotted land to organic low income residences, but the economic value of the land keeps on decreasing as one moves away from the Sigra Chauraha Road.



Source: Google Map + JST

Figure 5.3.4 Site & Surrounding Satellite Image



Source: JST

Figure 5.3.5 Sampurnanand Sports Stadium



Source: JST

Figure 5.3.6 Saheed Udhyan Park

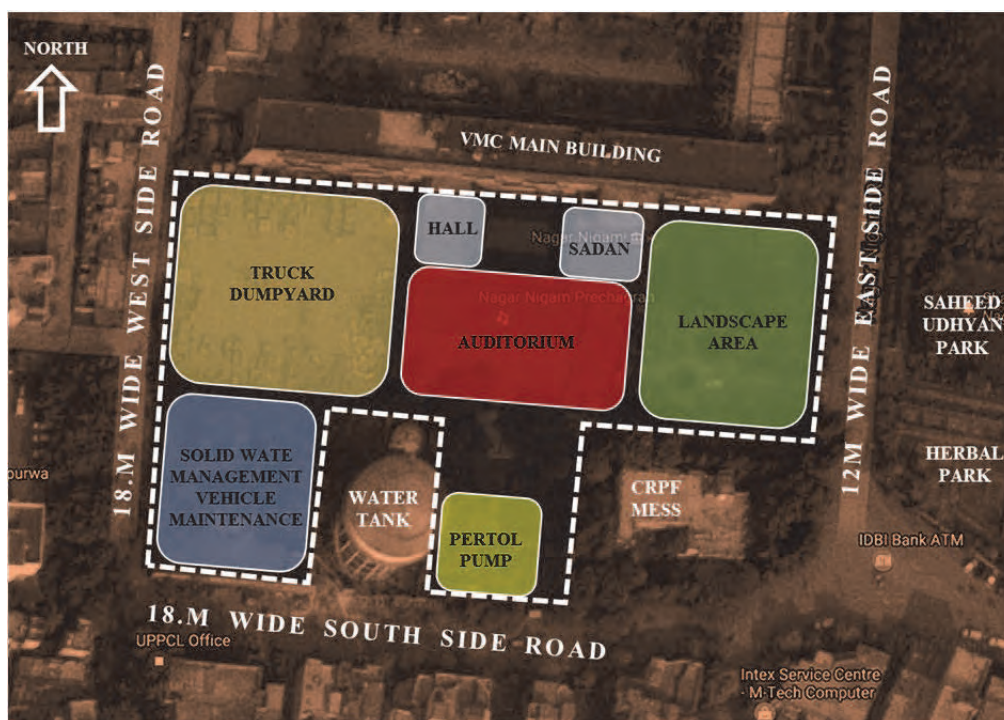


Source: JST

Figure 5.3.7 Srigra Chauraha Road

(2) The current condition of the site

The site is a linear parcel of land with an approximate area of 1.33 Ha (3.3 Acres). The site can be approached from roads on three sides: shorter sides are from east and west and the longer side is in the south. The existing building is a 40 year old auditorium of 800 seat capacity in a dilapidated condition yet it still is in use.



Source: Google Map + JST

Figure 5.3.8 Site Satellite Image

a) North side

The north side of the site abuts the main VMC building. Currently, two wings which include the Mayor's office, Sadan Hall Multipurpose Hall on the Ground Floor and other offices on the 1st Floor are located in the site. An outdoor badminton court has been constructed in the courtyard formed by the Sadan Hall, the multipurpose hall and the auditorium. All these would have to be relocated in the process of redevelopment of the site.



Source: JST (all photographs on this page)

Figure 5.3.9 VMC Building (left) and Sadan Hall (right)

b) East side

The east side abuts a 12m-wide road opposite to the Saheed Udyan Public Park, which is also the current entry to the existing auditorium. Also abutting the east side and located in the north-east corner of the site is a CRPF Mess (Central Reserve Police Force) with high compound wall and high security. This piece of the plot was originally a part of the project site but was sold to the CRPF some years ago.



Figure 5.3.10 East Side – VMC Building Entrance (left) and East Side – Shaheed Udyan Park Entrance (right)



Figure 5.3.11 South East Corner – CRPF Mess Building



Source: JST (all photographs on this page)

Figure 5.3.12 East Side - Road Profile

c) South side

Adjacent to the CRPF is a gasoline stand meant for VMC vehicles only. Adjacent to the Gasoline stand is an ESR (Elevated Service Reservoir) with its pumping room in the rear side for daily water supply to the nearby neighbourhoods. The ESR was built around year 2010 and has been supplying water to about 6,000 households in the surrounding areas. Between the CRPF Mess and the gasoline stand is a small room consisting of valves for water distribution to the region coming from ESR. Currently in front of the high walls of the ESR compound is an area for collecting garbage from the nearby areas which makes the area unhygienic. As per Varanasi Development plan the South Road is to be an 18m wide road.



Figure 5.3.13 South Side – Road Section



Source: JST (all photographs on this page)

Figure 5.3.14 South Side – Garbage Collection (left) and Point and South Side – Petrol Pump (right)



Figure 5.3.15 South Side – Water Tank (left) and South Side – Water Distribution Valve Room (right)

d) West side

The area adjacent to ESR, i.e. the south-west corner of the site is currently being used for storage and also a repair work-shop for the solid waste collector tricycles inside a compound wall. Adjacent to this area are some small community shops like a barbershop and a pay to use public bath & toilet recently constructed under a JICA funding scheme. Adjacent to the community utilities is the Western Gate to the site, which is currently used like a dump-yard for parking the non-working vehicles (mainly trucks) of VMC. There is an culvert sewage drain along the western edge of the site. As per Varanasi Development plan the West Road is to be an 18m wide road.



Source: JST (all photographs on this page)

Figure 5.3.16 West Side – Non-Usable Truck Dump-yard inside the Site



Figure 5.3.17 West Side – Road Section



Figure 5.3.18 West Side –JICA Funded Public Bath & Toilet (left) and West Side – Community Stores (right)



Source: JST (all photographs on this page)

Figure 5.3.19 South West Side – Solid Waste Collector Tricycle Maintenance Workshop

e) The Central Area

The Central Area of the site contains the old dilapidated building of an auditorium. The auditorium can be accessed from the Eastern side entrance as well as from the VMC main building close to an outdoor badminton court on the Northern side of the site. The auditorium was neatly designed considering the time it was built (approximately 40 years old) with a decent size entrance foyer and toilets attached to it. The Auditorium is still being used, with a fixed stage and small green rooms attached to it and fixed wooden chairs in the seating area.



Figure 5.3.20 Central Area – Existing Auditorium Entrance Side



Figure 5.3.21 Central Area – Existing Auditorium Seating Arrangement



Source: JST (all photographs on this page)

Figure 5.3.22 Central Auditorium – Side Aisle from VMC Building Side



Source: JST

Figure 5.3.23 Open Area beside the Auditorium on the West Side

Currently, the site also has a small garden nursery and some small and medium trees which can be transplanted or cut based on their ecological value.

The site in its current status is fragmented into several sub-plots often compounded and used under different ownership patterns as per convenience. The plot does not have internal access to all corners. Although the site should be technically approachable from the south side, there are various activities aligned along the longer south edge thus the only accessible sides are the shorter east and west sides.

(3) The current condition of infrastructure in / around the site

There is no existing utility. It was confirmed in the meeting with Varanasi city on December 16th 2016 that power, potable and wastewater could be connected from the surrounding road.

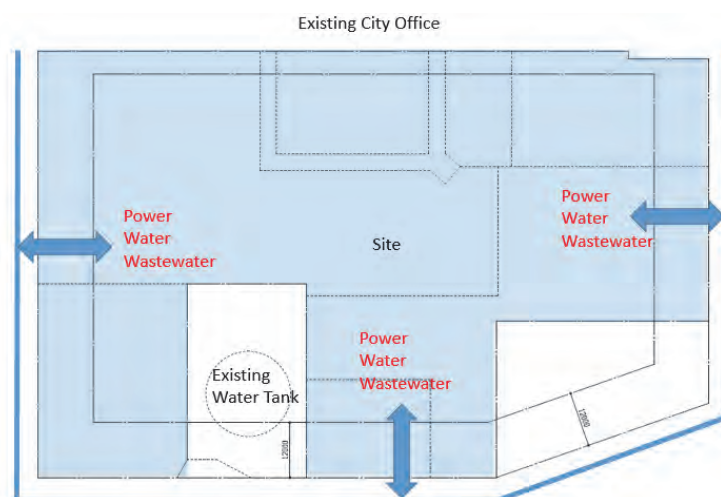


Figure 5.3.24 Utilities around the construction site

(4) Power

An 11kV power grid is installed on the road around the site. New incoming lines would be installed after the discussion with the Power Company for necessary capacity. The Electrical Wire network is along roads and can be 6m above ground. However additional lines are added in an unplanned manner, and as a result, at times the height of the overhead wire is as low as 3.5 to 4 m above ground. The electrical transformers are mainly oil type and mounted on electrical poles along the road side as shown in the photograph.



Source: JST

Figure 5.3.25 Existing pole mounted transformer & Overhead transmission system

Power break down/ black-out due to lack of a power supply especially in summer is common. It is common to have a diesel based power generator in most offices and commercial places. Even in the existing city auditoriums, there are exterior diesel generators to cope with the occasional power blackout. Taking into consideration the potential hazard of air pollution, noise pollution as well as fire safety from diesel generators, these are better kept in either a basement or in a remote corner of the site.

In India, rated voltage is 230V. However AVRs (automatic voltage regulator) are installed to ensure stable power for air conditioner in the existing city hall due to unstable power quality.



Source: JST

Figure 5.3.26 Voltage stabilizer & Diesel Generator

(5) Potable water

The existing elevated water tank (ESR) has been installed in the south side to supply potable water. The water supply for this project will be from the same source. Apart from a pump house at its base, in close proximity is a water distribution valve room where the water coming from the ESR is distributed to the neighbourhood areas.



Source: JST

Figure 5.3.27 Existing high level water tank & Water Distribution Valve Room

Though the water coming from ESR is potable, due to the unreliability of the water quality especially during monsoon and change of seasons, most of the houses and offices have additional filter systems at the consumption end point. The Reverse Osmosis System is one of the popular filter system used in India and is also used in the existing VMC building. Due to the hot climate, often the filtered water is stored in a water cooler. In the proposed project there would be a need to have a similar system for drinking water.



Source: JST

Figure 5.3.28 Potable water equipment with filter

(6) Sewerage System

The area adjoining VMC is well connected with the sewerage network. This sewer line leads towards Sigra road and connects with the main sewer line. A new connection will be installed for this project.



Figure 5.3.29 Sewerage System

(7) Fuel gas

There is no piped fuel gas service. LPG cylinders would be used, if fuel gas becomes necessary.

5.4. Legal Framework

The site lies in a zone that has been marked as Government and Semi-Government buildings in the Master Plan 2031.

5.4.1. Building Bye-laws, Uttar Pradesh

According to UP Building bye-laws some of the major provisions are as follows:

- i. The allowable FAR is 1.5
- ii. The allowable ground coverage is 40%.
- iii. It is mandatory to provide a minimum setback of 6m on the sides.
- iv. The applicable parking norms would be as follows;

No.	Activity	Standard Applicable
1	Auditorium	1 Car per 10 seats
2	Allied Commercial Activities	2 Cars per 100Sq.M

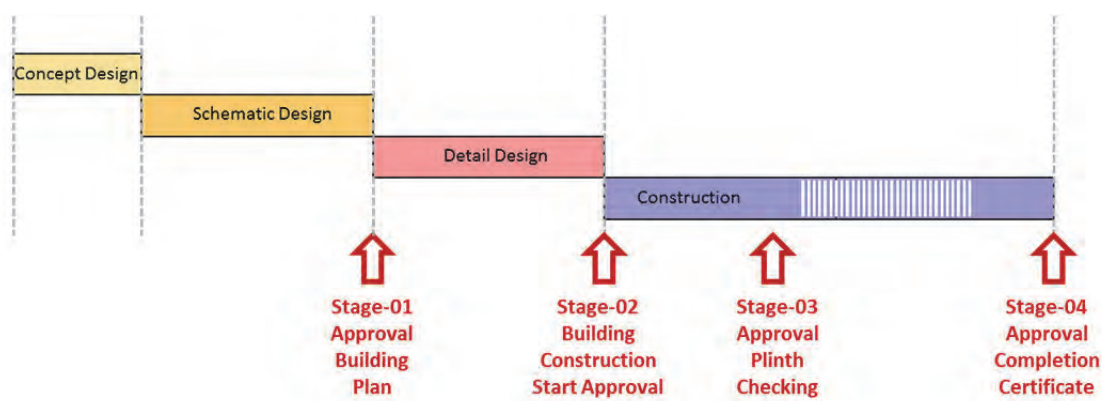
No.2 would be applied if the commercial facilities will be developed by Indian side in future.

- v. For a public assembly building above 12m high and having a footprint of more than 500 sqm and important infrastructure development, there is a need to follow Earthquake Resistant Building under the NBC (National Building Code) with a certification from a qualified Structural Engineer.

- vi. For a public assembly building above 15m high and having a footprint of more than 500 sqm the development shall adhere to the requirements of 'The Uttar Pradesh Fire Prevention and Fire Safety Rules 2005' Section 4 and would be planned, designed and executed as per Fire Safety provisions of the National Building Code (NBC) Section 3 & 4. The development would also need to be certified by a Fire Safety Officer.
- vii. It is mandatory for buildings of more than 300 sqm to incorporate Water Harvesting techniques for rooftop areas as well as other open areas.
- viii. It is mandatory for developments of more than 5000 sqm to install photo-volt panels on a minimum of 25% of the rooftop area.
- ix. For public use buildings, Barrier Free Design Standards as per UP State Bye-laws are to be incorporated from the planning stage.

5.4.2. Approval Process

The development of VCC would require multiple clearances and sanctions at various stages of project development, from pre-feasibility to the construction and implementation stages. Requisite clearances would have to be obtained by the developer (CPWD/ VMC) and the operator (Requisite SPV/ VMC/Private party). Various kinds of clearances and necessary regulations that would have to be adhered to are listed below, amongst others:



Stage 1 – At Building Plan Approval Stage

- i. Approval is required from the local authority and local body under the provisions of the Local Building Bye-laws, Master plan and Local Body Acts.
- ii. A No Objection Certificate (hereinafter referred to as “NOC”) is required from the National Monument Authority (NMA) / Archaeological Survey of India (ASI), when the entire project site or part/s of it are within a 300 meter radius from the declared boundary of any monument protected under the Ancient Monument Act and is under the control of ASI.
- iii. Approval is required from the Tree Authority Committee of the Municipal Corporation when there is a proposal for tree cutting/ felling and/or transplantation at the site & protection of the rare tree species.

- iv. An Approval /Fire Safety Certificate is required from the Chief Fire Officer (CFO) (municipal) for the proposals at layout plan stage as stipulated in the local building bye-laws and National Building Code (NBC).
- v. Environmental clearance is required from the Ministry of Environment and Forests and Climate Change (MOEF)/ State level expert committee for all building / construction projects that have a built up area of more than 5,000 sqm.
- vi. Various NOCs may be required from appropriate authorities like DCP (District Police Commissioner) for auditorium/ theatre/ large hall with seating capacity of more than 50 persons to be used for public amusement as well as from the Power distributing/ supply agency, water supply agency, Storm Water & Drain Department/ Sewerage Department etc. for supply of necessary utilities both during and after construction.

Stage 2 – Approval for Starting of Construction Stage

The owner/ applicant who has been granted a building permit shall inform the local Authority (VDA/VMC) in writing at least 7 days before starting of construction work at the site in the prescribed form. An acknowledgement needs to be obtained from the Authority of this notice.

Stage 3 – Approval for Plinth Completion Stage

Plinth Level Notice (information of completion of work up to plinth level in the prescribed format along with requisite documents, fee and charges mentioned therein) is required to be submitted by every owner/ lessee to the local authority (VDA/VMC).

Stage -4 Completion-cum-occupancy certificate stage

- i. An Approval /Fire Safety Certificate is required from the Chief Fire Officer (CFO) (municipal) for the proposals at completion stage to confirm adherence to the related local building bye-laws and National Building Code (NBC).
- ii. A Completion-cum-Occupancy Certificate is required from the local body/ authority (VDA/VMC) before the occupation of a building or part of a building for any purpose.
- iii. Certain NOCs may be required with regards to utility services before granting Completion-cum-Occupancy Certificate when lifts are installed in a building.

5.4.3. Various rules and regulations that have to be adhered to are as follows:

(1) Uttar Pradesh Town and Country Planning Act 1973

The main objective of this Act is to provide for the regulation of planned growth of land-use and development and for the making and execution of master plans and zonal development plans in the state of Uttar Pradesh.

(2) Varanasi Development Authority – General Rules and Building Byelaws

VDA will provide necessary clearances in respect to land-use, design scheme, adherence to the norms and regulations from the planning stage to the construction stage.

(3) The Environmental (Protection) Act, 1986 (EPA)

According to EPA, the "Environment" includes water, air and land and the inter- relationship which exists among and between water, air and land, and human beings, other living creatures, plants, microorganisms and property. Section 3 of the EPA states that the Central Government shall have the power to take all such measures as it deems necessary or expedient for the purpose of protecting and improving the quality of the environment and preventing, controlling and abating environmental pollution.

(4) National Environment Policy, 2004

The National Environment Policy (NEP, 2004) is a response to the national commitment to a clean environment, mandated in the Constitution in Articles 48A and 51 A (g), strengthened by judicial interpretation of Article 21.

(5) Construction and Demolition Waste Management Rules, 2016

While demolishing the existing structures, necessary care shall be taken to minimize the impact of air pollution by dust and sound pollution as well as land pollution by the demolished waste. The concerned department in the State Government dealing with land shall be responsible for providing suitable sites for setting up storage, processing and recycling facilities for construction and demolition waste.

(6) Structural Safety And Natural Hazard Protection Of Buildings

Recently there has been a lot of awareness towards the Structural Safety and Natural Hazard Projection of buildings as they have been one of the main causes of human deaths in the recent past. There are some specific guidelines prepared based on Indian Standards, National Building Codes, Guidelines and other documents that need to be observed for structural safety and natural hazard protection of buildings etc.

Information based on the location of a building in a hazard prone area that is subject to earthquakes, cyclone or wind storms, and floods, reference may be obtained from the "Vulnerability atlas of India", which was written by the expert group, government Of India, Ministry of Urban Affairs & Employment, Published by the Building Materials Technology Promotion Council, 1997.

(7) Environmental Impact Assessment (EIA)

Recently MOEF has issued a notification for integrating standards and objectively monitor-able environmental conditions with building permissions for buildings of different sizes; Category 1: 5000 sqm to 20,000 sqm; Category 2: 20,000 sqm to 50,000 sqm and Category 3: 50,000 sqm to 150,000 sqm, with rigorous monitoring mechanisms for implementation of environmental concerns and obligations in building projects (refer to Chapter 6.3).

5.4.4. Expected criteria for environmental grading

With explosive urbanization, the building sector in India is growing at a rapid pace and contributing immensely to the growth of the economy. This augurs well for the country and now there is an imminent need to introduce green concepts and techniques in this sector, which can aid growth in a sustainable manner.

The green concepts and techniques in the building sector can help address national issues like water efficiency, energy efficiency, and reduction in fossil fuel use in commuting, handling of consumer waste and conserving natural resources. Most importantly, these concepts can enhance occupant's health, happiness and well-being.

The building shall have a certified environmental grading. This could either be by GRIHA rating system or IGBC Green New Buildings Rating System. While both have been briefly summarized below, the detail study of the same would be carried out in the design stage of work.

(1) GRIHA Buildings Rating System

GRIHA is a guiding and performance-oriented system, founded by TERI (The Energy and Resources Institute, New Delhi) with support from the Ministry of New and Renewable Energy (MNRE), GOI.

All buildings of more than 2,500 sqm, (except for industrial complexes), which are in the design stage, are eligible for certification under GRIHA. Buildings include: offices, retail spaces, institutional buildings, hotels, hospital buildings, healthcare facilities, residences, and multi-family high-rise buildings.

GRIHA rating system consists of 34 criteria categorized under various sections such as Site Selection and Site Planning, Conservation and Efficient Utilization of Resources, Building Operation and Maintenance, and Innovation points. Proof of compliance, as specified in the relevant criterion, have to be submitted in the prescribed format. While the intent of some of the criteria is self-validating in nature, there are others such as energy consumption, thermal and visual comfort, noise control, and indoor pollution levels which need to be validated on-site through performance monitoring. The points related to these criteria (specified under the relevant sections) are awarded provisionally while certifying and are converted into firm points through monitoring, validation, and documents/photographs to support the award of point.

Eight of these 34 criteria are mandatory, 4 are partly mandatory, while the rest are optional. Each criterion has a number of points assigned to it. This means that a project intending to meet the criterion would qualify for the points. Different levels of certification (one star to five stars) are awarded based on the number of points earned. The minimum points required for certification is 50. GRIHA is a 100-point system consisting of some core points, which are mandatory, while the rest are optional.

Points achieved	GRIHA Rating
50-60	★
61-70	★★
71-80	★★★
81-90	★★★★
91-100	★★★★★

(Entire Section Source: GRIHA Building Website)

(2) IGBC Green New Buildings Rating System

IGBC stands for Indian Green Building Council is also often referred as 'India LEED'. The Green building rating brings together a host of sustainable practices and solutions to reduce the environmental impacts. Green building design provides an integrated approach considering life cycle impacts of the resources used.

a) Overview

IGBC Green New Buildings rating system® addresses green features under the following categories:

Sustainable Architecture and Design

- Site Selection and Planning
- Water Conservation
- Energy Efficiency
- Building Materials and Resources
- Indoor Environmental Quality
- Innovation and Development

The guidelines detailed under each mandatory requirement & credit enables the design and construction of new buildings of all sizes and types (as defined in scope). Different levels of green building certification are awarded based on the total credits earned. However, every new green building should meet certain mandatory requirements, which are non-negotiable.

b) Scope

IGBC Green New Buildings rating system® is designed primarily for new buildings. New Buildings include (but are not limited to) offices, IT parks, banks, shopping malls, hotels, airports, stadiums, convention centres, libraries, museums, etc. Building types such as residential, factory buildings, and schools will be covered under other IGBC rating programmes. The IGBC Green New Buildings Rating System is broadly classified into two types:

1. **Owner-occupied buildings** are those wherein 51% or more of the building's built-up area is occupied by the owner.
2. **Tenant-occupied buildings** are those wherein 51% or more of the building's built-up area is occupied by tenants.

Based on the scope of work, projects can choose any of the above options.

The project team can evaluate all the possible points to apply under the rating system using a suitable checklist (Owner-occupied buildings and Tenant-occupied buildings). The project can apply for IGBC Green New Buildings rating system® certification, if it can meet all the mandatory requirements and achieve the minimum required points.

c) Certification Levels

The threshold criteria for certification/ pre-certification levels are as follows:

Certification Level	Owner-occupied Buildings	Tenant-occupied Buildings	Recognition
Certified	40 - 49	40 - 49	Best Practices
Silver	50 - 59	50 - 59	Outstanding Performance
Gold	60 - 74	60 - 74	National Excellence
Platinum	75 - 100	75 - 100	Global Leadership

(Entire Section Source: IGBC Website)

5.4.5. Standards and Regulations

Structural & Facility planning shall be based on compliance with the local and national codes, standards, bye-laws & regulations as follows;

i. Structure

- National Building Code of India (NBC Part 10 Structures)

ii. Fire protection

- National Building Code of India (NBC Part 4 Fire and Life Safety)
- National Fire Protection Association (NFPA)
- Indian Standard (IS) and Local Regulation

iii. Plumbing

- National Building Code of India (NBC Part 9 Plumbing Services)
- Uniform Plumbing Code (UPC)
- Chartered Institution of Building Service Engineers (CIBSE)
- International Plumbing Code (IPC)
- American Society of Plumbing Engineers (ASPE)
- Central Public Health and Environmental Engineering Organization Manual (CPHEEO)
- Indian Standard (IS) and Local Regulations

iv. HVAC

- National Building Code of India (NBC Part 8 Building Services)
- American Standard Heating Refrigerating and Air conditioning Engineers (ASHRAE)
- Indian Standard Heating Refrigerating and Air conditioning Engineers (ISHRAE)
- Indian Standard (IS) and Local Regulations

v. Electrical

- National Building Code of India (NBC Part 8 Building Services)
- International Electric Technical Commission (IEC)

- Institute of Electrical and Electronics Engineers (IEEE)
- Indian Electricity Rules
- Indian Standard (IS) and Local Regulations

vi. Environment

- Environmental Protection Act (EPA)
- Energy Conservation Building Code (ECBC)
- Central Pollution Control Boards (CPCB)
- American Standard Heating Refrigerating and Air conditioning Engineers (ASHRAE)
- Green Rating for Integrated Habitat Assessment (GRIHA)
- Indian Green New Building Council (IGBC)
- Indian Standard (IS) and Local Regulations

vii. Sound system

- National Building Code Section 4 Acoustics, Sound Insulation and Noise Control