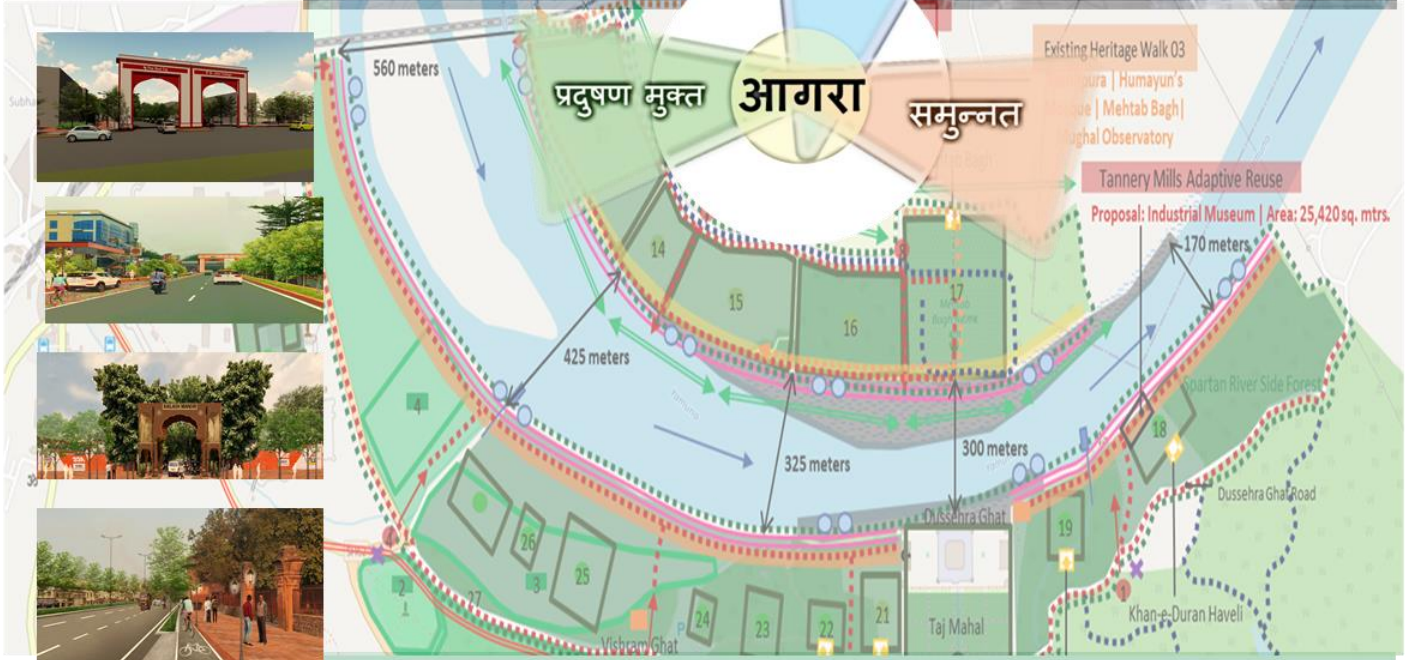


EXECUTIVE SUMMARY



VISION PLAN, IMPLEMENTATION STRATEGY & INTEGRATED INFRASTRUCTURE PLAN FOR AGRA, 2051

(Final Report)
JANUARY, 2023

MEINHARDT SINGAPORE PTE. LTD.

In association with

**MAHINDRA CONSULTING ENGINEERS LTD.,
TETHYS DEVELOPMENT SERVICES PVT. LTD.**

MEINHARDT

In association with

Mahindra Consulting Engineers **Tethys**

1. EXECUTIVE SUMMARY

1.1. Introduction

In view of the growing urban requirements, the government in Uttar Pradesh has come up with envisions the betterment of the city of Agra among others by enhancing comprehensive elements of tangible and intangible aspects of historic identity city holds and layering, social, cultural and economic infrastructure within the same urban intensity by modern and innovative urban planning principles. The project envisages preparing the Vision, Implementation strategy, and Integrated Infrastructure Plan to support objectives of holistic, sustainable, and planned development of Agra city considering long term heritage-tourism vision and planning methodologies.

1.2. Objectives

The purpose of this assignment is to drive economic growth, improve the quality of life of people by strengthening city's inherent potentials, augmenting existing infrastructure and plan its growth which is sustainable and resilient in nature. Key objectives of the assignment are:

- Preparation of Vision plan to promote long term growth and development of the city
- Adopting comprehensive development approach for the city to improve quality of life, creation of employment, boost regional development guide city's planned expansion in the future.
- Preparation of city's Business Plan and identification of projects of importance developed through private sector participation.
- Identification of programmes, stakeholders, institutional arrangements and resource requirements adopting project structuring mechanism.

1.3. City Characteristics

Leather Products, Foundry Work, and Handicraft Goods are the major commodities manufactured in Agra. Agra's economy is based on tourism, handicrafts, and manufacturing.

Agra is known for its royal crafts such as Pietra Dura, marble inlay, and carpets, as well as its thriving tourism economy. It has strong existence of medical facilities. To act as a catalytic role player of city economic upliftment of city is focused to make self-reliant economy by enhancing existing economic base as tourism sector with cultural tourism, eco-tourism, heritage tourism, medical tourism. Urban improvement is needed to deal with Urban renewal, redevelopment of tourist spots as well as new area's urban fabric. The strategies shall focus on urban renewal of heritage precincts, transit nodes (railway stations, bus terminals, NMT stands) and corridors and streets of historic importance. The goal shall focus towards recreating the historic character within the city and upgrading the cultural as well as the natural landscape. The integration of historic precincts as well as the rejuvenation of heritage sites especially the world heritage sites shall be an important part of the vision. The holistic approach shall be carved out towards integration of infrastructure and facilitating public private partnerships to enhance the essence of Agra's local trade and business. In addition to the infrastructure, the local industrial development (footwear and petha) and its promotion to global platforms through urban design strategies and expression of the local business. All these strategies and proposals are in accordance with the norms and guidelines of NGT and TTZ. Outer Ring Road for the future scenario will be driven factor to make growth towards it.

1.4. SWOT Analysis

Strength

1. Religious sites of tremendous importance for various faiths
2. Top two major locations in India for international tourist interest/visitation: Taj(Agra) and Varanasi (including Sarnath) .

Weakness

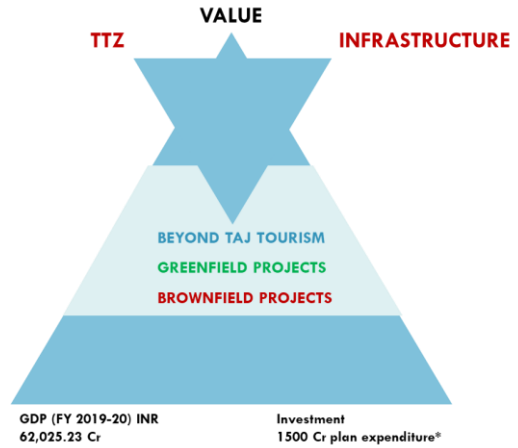
- 1 Large no. of general interest tourists and international tourists visiting only two sites (Agra and Varanasi): implies limited

Opportunities

1. General interest tourism/international tourists: Leveraging on existing lead tourism destinations (eg: Taj Mahal-site -at-Agra & Varanasi) from being end destinations to “gateway points” for tourism within U.P.

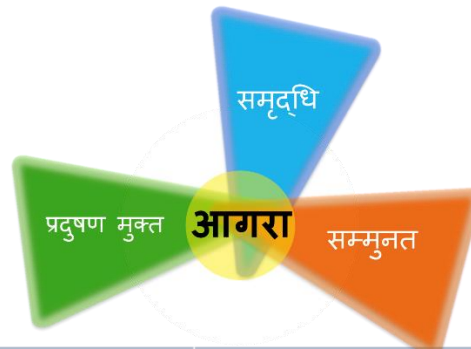
1.5. Vision Framework

- A. Redefining City’s Identity.
- B. Urban Renewal and Rejuvenation.
- C. Strengthening Linkages and Connectivity.
- D. Dissecting Urban Layers.
- E. Potential Economic Growth.
- F. Nostalgic Cognitive Impressions.
- G. Unexplored Potentials.



1.6. Vision Statement for Agra

“प्रदुषण मुक्त समृद्धि सम्मुनत आगरा”



प्रदुषण मुक्त	समृद्धि	सम्मुनत
Nuclei of TTZ Zone need to be Clean air Clean Water Clean environment Zero Waste Green City	Agra a wealthy town which is known for its grandeur since medieval times. A centre of trade and Commerce. A land of culturally enhanced, Braj Bhumi, a centre for sufi culture and different religion identity	As a second largest city in UP and import town need to develop flourishing city of happy, healthy and economic self sustained city.
River Edge Development Water Bodies Revival Bio Diversity Park Development Open Area Development Renewable Energy Use Pollution free Transportation Planning White industrial Base City	Employment Generation Cottage Industry Upgradation Better Education Facility Better Connectivity Medicity Strengthening to Medical Industry Ayurveda Centre Eco Tourism- Recreation	Braj Regional Circuit Kailash Circuit Cultural Festivals Shilpagrams Craft Revival Braj Van Logistic Hub Craft Revival

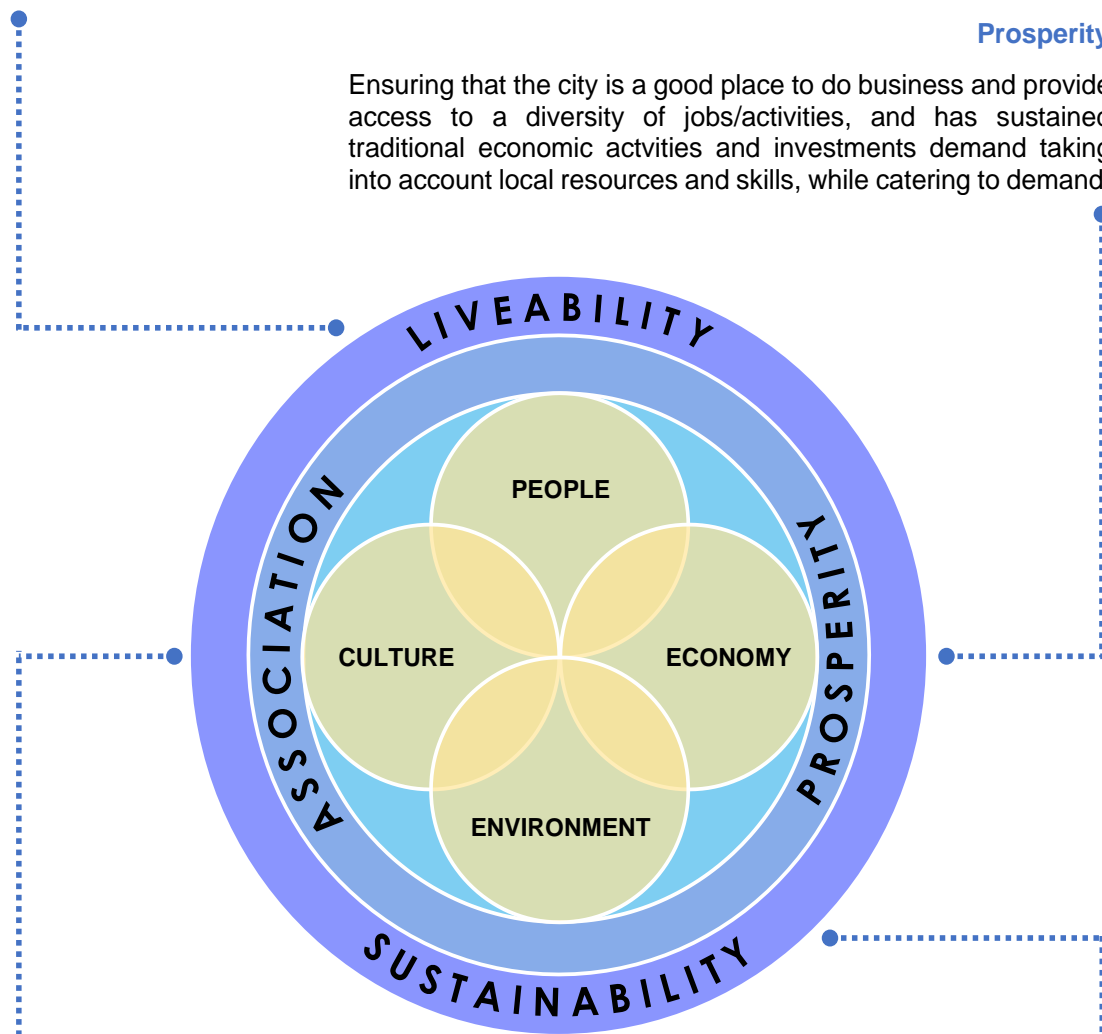
1.7. Expected Outcome

Liveability

Enhancing aspects of social well-being of a city that enable citizens to live a decent life ranging from access to basic services, safe streets and public spaces, public transport, facilities for health and education, places for recreation and fun. For better happiness index, healthy life and right to live.

Prosperity

Ensuring that the city is a good place to do business and provide access to a diversity of jobs/activities, and has sustained traditional economic activities and investments demand taking into account local resources and skills, while catering to demand.



Association

Any settlement from its past carries associational characters in the form of tangible and intangible (historic and cultural places) assets which are of significance to maintain emotional rhythm within the city for its people and for the coming generations.

Sustainability

Maintaining the balance between natural and built ecosystems in a city to address and prevent issues like rising temperatures, deteriorating air and water quality, more frequent floods and droughts, and declining urban biodiversity.

This vision Plan has been prepared for a design period of 30 years with the initial stage taken as the year 2021, mid stage as the year 2036 and ultimate stage as the year 2051. For outline development next 20 years plans perspective vision has been addressed and demand has been assessed.

The physical expanse of the city is expected to also incorporate as master plan suggested with the availability of physical infrastructure. As per UDPFI Guidelines Medium town population density: 100-115 pph. As per trend developed area population density assumed 125-135 pph (following other town with same class of population & growth pattern) New area population density assumed for planning is 75-100 pph for 2036 & 2051 respectively.

1.8. Stakeholder Consultation

Stakeholder consultation forms a critical part of the vision development and they were consulted and engaged at every stage of development for suggestions, review and discussions for.

- Consultation
- Data collection
- Data for ongoing and existing proposals
- Discussion of Issues and concerns
- Review and suggestions

Stakeholder list and Meeting work have been appended with List of formats to obtain details of works.

For Agra, the major stakeholders were listed as under:

National Level

- National Highways Authority of India (NHAI)
- Dedicated Freight Corridor Corporation of India Limited (DFCCIL)
- Ministry of Railways (Northern Railways)
- The National Green Tribunal (NGT)
- Ministry of Housing and Urban Affairs (MOHUA)
- Ministry of Tourism (MoT)
- National River Conservation Directorate (NRCD)
- Central Pollution Control Board (CPCB)
- Yamuna Pollution Control Unit
- Central Ground Water Board, Ministry of Jal Shakti
- Ministry of Environment and Forests Wildlife

- Ministry of Petroleum and Natural Gas
- Ministry of Road transport and Highways
- Department of Economic Affairs, Ministry of Finance
- Indian Industries Association (IIA)
- Unified Regional Land Use Transport Authority (URLTA)

State Level

- Uttar Pradesh Irrigation & Water Resource Department (UPIWRD)
- Uttar Pradesh Jal Nigam
- Uttar Pradesh Public Works Department (P.W.D)
- Uttar Pradesh Metro Rail Corporation (UPMRC)
- Uttar Pradesh Awas Vikas Parishad
- Uttar Pradesh Tourism Department (UPTD)
- Uttar Pradesh State Road Transport Corporation (UPSRTC)
- Uttar Pradesh Power Corporation Limited (U.P.P.C)
- Uttar Pradesh Town & Country Planning
- Uttar Pradesh Housing & Development Board
- Uttar Pradesh Pollution Control Board (UPPCB)
- Uttar Pradesh State Bridge Corporation Ltd. (UPSBC Ltd.)
- Yamuna Expressway Industrial Development Authority (YEIDA)
- Uttar Pradesh Energy Development Agency (UPEDA)
- Uttar Pradesh State Industrial Development Corporation (UPSIDC)
- Infrastructure and Industrial Development Department, Uttar Pradesh (IIDUP)
- Uttar Pradesh Expressways Industrial Development Authority (UPEIDA)
- Uttar Pradesh Forest Corporation
- A.S.I
- INTACH

City Level

- Agra Development Authority
- Agra Municipal Corporation (AMC) or Agra Nagar Nigam (ANN)
- Agra Mathura City Transport Services Limited (AMCTSL)
- Agra District Administration
- Market Associations
- Transport Associations

- Vendor Associations
- Resident welfare association (RWA)
- Police
- Traffic Police
- Religious Board
- NGOs
- Braj Mandal Heritage Conservation Society
- Agra Development Foundation
- Taj Trapezium Zone Pollution (Prevention and Control) Authority

1.9. Project Identification and Phasing

Table 1-1 Capital Investment Plan Summary (in Rs. Lakh)

Sr No	Projects	Total Capex	Short Term (2022-28)	Medium Term (2028-37)	Long Term (2037-51)	Mode of Development
1	Yamuna River edge rejuvenation for revival of heritage gardens and improved quality of public life along the river.	10,067	6,692	3,375	-	EPC
2	Revival of Heritage Garden along river Yamuna	205	205	-	-	EPC
3	Braj Theme based Botanical Park: Eco-Sensitive Zones Landscape Planning	1,135	-	-	1,135	EPC
4	Rejuvenation of lakes/ water body, Rainwater Harvesting	2,573	1,021	1,552	-	EPC
5	Waste Management	501	501	-	-	BOT
6	EV electric charging station	2,260	2,260	-	-	EPC
7	Use of Solar in Public Buildings	1,000	-	1,000	-	EPC
8	Development of international "Medicity" as a major regional healthcare facility over an area of 125 Hectare in close proximity to Greater Agra project	49,350	32,967	16,353	30	Private Development
9	Development of Industrial growth Centers in conformity with regulations of TTZ at Gutila and Mundhera- in two phases	500	-	500	-	Private Development
10	Development of international leather design center to catalyse world class leather product development in Agra Near UPSIDA proposed Leather Park and over an area 25 Hectare	31,516	-	-	31,516	Private Development
11	CITY LOGISTIC HUB: Establishment of City Logistic Hub for efficient distribution of inter & intra urban freight	11,346	5,684	5,662	-	Private Development
12	UPRADATION OF RADIAL ROADS: Corridor improvement of Radial Road from Agra city towards Outer Ring Road.	51,600	12,900	25,800	12,900	HAM
12a	Intracity connectivity of radial road connecting to Ganga expressway from Agra	2,23,300	55,825	1,11,650	55,825	HAM
13	Identification of new Flyover/Underpass proposal for the congested areas.	10,500	3,000	4,500	3,000	EPC

Sr No	Projects	Total Capex	Short Term (2022-28)	Medium Term (2028-37)	Long Term (2037-51)	Mode of Development
14	Integrated transit corridor development plan with pedestrian facilities, parking, and junction improvement plan.	1,001	1,001	-	-	EPC
15	Park & ride the bus to Taj Mahal with EV Bus.	2,250	1,125	1,125	-	BOT
16	NEW BUS TERMINAL: Redevelopment of New Bus Terminal for State/Inter-state with Commercial Space	20,000	10,000	10,000	-	EPC
16 a	Alternate roads to be identified within the city (ref.elevated road, closed canal, closed railway line)	3,170	3,170	-	-	EPC
17	Ropeway connectivity (Fatehpur Sikri ticket counter to Gulistan garden Parking).	5,000	2,500	2,500	-	Private Development
18	Car Parking: Improvement and Expansion.	5,250	2,100	1,050	2,100	BOT
19	Improving legibility of 18 monuments on Badshahi Sadak	10,000	10,000	-	-	EPC
20	Streetscape and facade improvement for Fatehabad road, MG road, Mall road and Jeoni Mandi road	3,818	2,818	1,000	-	EPC
21	Planned Expansion of City for Residential Use	15,000	-	10,000	5,000	EPC
22	Outline Development of Leather and Foundry Industry to International Standards	1,766	-	-	1,766	Private Development
23	Enhancing Tourism Infrastructure	5,000	1,000	1,500	2,500	EPC
24	Development of Kailash mandir mala and upgradation of infrastructure facilities at the five temple complex	19,625	19,625	-	-	EPC
25	Development of Braj Spiritual Circuit (regional level)	6,000	-	2,400	3,600	EPC
26	Planning Tourism (Hospitality and Stay) Infrastructure Enroute Agra	1,000	-	1,000	-	EPC
27	Planning Primary and Secondary Feeder Areas (Cultural Centres/Hubs) Communities and Tourists Engagement Spaces (Festivals and Events Venue)	3,870	1,240	1,450	1,180	EPC
28	Site Management Plan for Lesser Known Archaeological Sites (under the ASI Agra Circle)	500	350	125	25	EPC
29	Development of Crafts Centers, Workshops , Display Outlets and Skill based learning centres with Public Conveniences, Signages and Tourist Guide Maps at Intersections of Kuberpur, Tedhi Bagia, Artauni, Sahara Sarai, Rohta Bagh and Dhamota	5,000	950	2,550	1,500	EPC

Sr No	Projects	Total Capex	Short Term (2022-28)	Medium Term (2028-37)	Long Term (2037-51)	Mode of Development
30	Development of proposed Heritage Villages	500	492	6	2	EPC
31	Adaptive reuse and area development of Industrial Heritage of Agra – Johns Mill under PPP Model as Cultural Centre and Tannery Mill (Khan-e-Duran Haveli Garden) as Industrial Museum of Leather and Art Centre.	100	-	-	100	EPC
32	Adaptive reuse and site development of 7 identified heritage havelis under PPP Model for Literary Festival and Sangeet Samaroh	100	20	60	20	EPC
33	Upgradation of Shilpgram for year round activities with state of art infrastructure facilities	10	5	4	1	EPC
34	Taj Barrage Project	41,334	37,201	2,583	1,550	HAM
	Total Capex (Excluding Price Inflation)	5,46,146	2,14,650	2,07,746	1,23,749	

Note:

*Average of minimum and maximum capex figures is taken for calculating phase wise capex.

*All Capital Investment/CAPEX figures are excluding price inflation.

*Land Acquisition cost is not included in Capital Investment/CAPEX.

*Capex figure may vary since technical feasibility is yet to be done of the projects.

More than 54% of the total investment is planned in Short Term spanning from 2022-28 while 26% has been planned for Medium Term spanning from 2028-27 and rest of the 20% in the Long Term spanning 2037-51. Majority of the investment is required for mobility, connectivity, water, sewerage, and electricity related projects however this is the consolidated investment requirement through various sources.

1.10. Report Structure

The report structure is divided into Eight Deliverables:

D1: Inception Report: Data Collection, Stakeholders meetings, Finalization of Approach & Methodology

D2: Existing Situation Analysis Report: Existing condition of city with emphasis of Heritage, Urban Planning, Transport Planning, Services, Physical and Social Infrastructure, Urban Designing,, energy and Fiscal condition assessment

D3: Demand Assessment Report: Basis of estimated population and market demand total services demand have been derived

D4: Vision Plan Report: Basis of existing condition and demand for city vision charter has been framed

D5: Identification of Bouquet of Project and Prefeasibility Report: To achieve the Vision target total 34 projects have been identified and 18 projects prefeasibility report have been framed

D6: Integrated Infrastructure Development Plan: Strategy and Action plan have been framed and budgetary needs have been identified.

D7: Draft Business Plan: Project phasing and funds requirement have been framed .

D8: Final Report consists of three Volume. Volume (i) summarize existing and Demand of city, vision plan and bouquet of project with pre-feasibility analysis report in final version after incorporating stakeholders view and clients suggestion. Volume (ii) refers final report of strategy and action plan report of Integrated Infrastructure and Development Plan, Volume (iii) explains detail Business plan report.

Every reports are also attached with annexures, stakeholders minutes of meetings and animation of the Vision Plan.

1.11. Implementation Strategy

Implementation plan has been frame out under three project horizon:

- i. Short Term: 2022-27
- ii. Mid Term: 2028-2037
- iii. Long Term: 2038-2051

City's project need have been put forth after consultation and analysis and priorities the projects, prepared phasing of cost expenditure. Component wise bulk cost have been derived and project implantation strategy have been framed by under Govt policies , rules and public mode of operation. Different stakeholders have been identified to framework the execution plan. Revenue model have been framed for Operation and Maintenance cost and viability analysis of project. At end mode of operation have been framed basis of revenue model of the project.

In Brief infrastructure development project like roads, bridges, water supply, sewerage, drainage will be constructed by Govt fund, City's tourism and aesthetic improvement plan would be constructed by EPC mode and operation have been framed by Leasing or PPP mode. Major economic boost up oriented project like mendicity, industrial node, City logistic hub have been framed under PPP mode. Heritage improvement plan will be executed under tourism plan.

1.12. Declaration of the Experts

Following experts were involved for preparation of the report and complete the work till end.

Name of Experts Involved in preparation of Agra Vision Plan			
Sl No.	Experts	Name	Signature
1.	Team Leader - Urban & Regional Planning	Dr. Sanhita Bandyopadhyay	
2.	Market Analyst / Economist	Maharishi Shandilya	
3.	Infrastructure Planning	P.K. Balajee	
4.	Water Supply, Sewerage, Drainage Utilities	Shaukat Ali	
5.	Urban Transportation	Neelam Kishore	
6.	Urban Design	Vikas Kanojia	
7.	Heritage & Tourism	Sangeeta Bais	
8.	Solar Energy	Deepak Khandekar	
9.	Financial Expert	G. C. Tripathi	