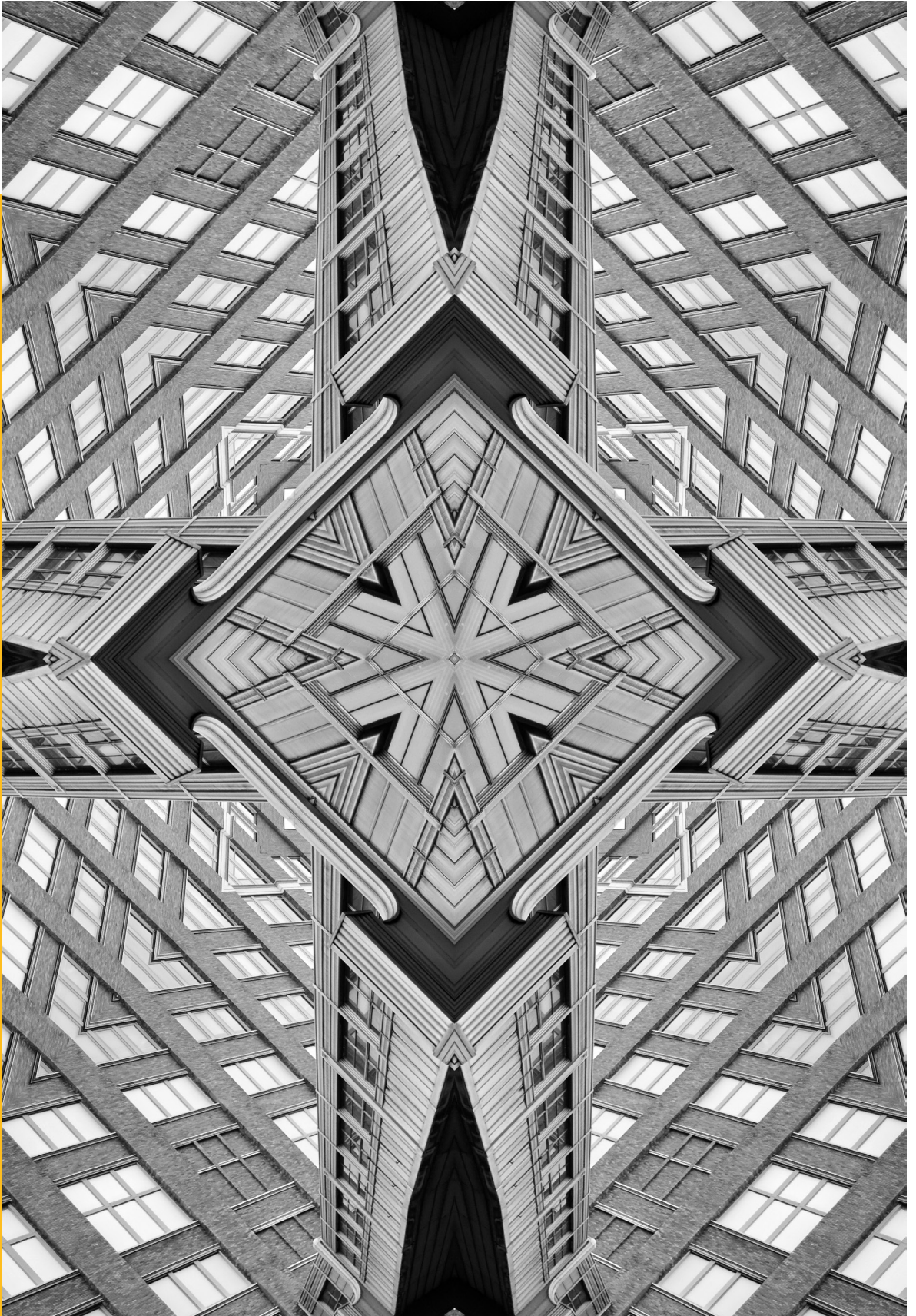


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Delhi Master Plan 2021 - 41: Towards a People's City?

Rumi Aijaz

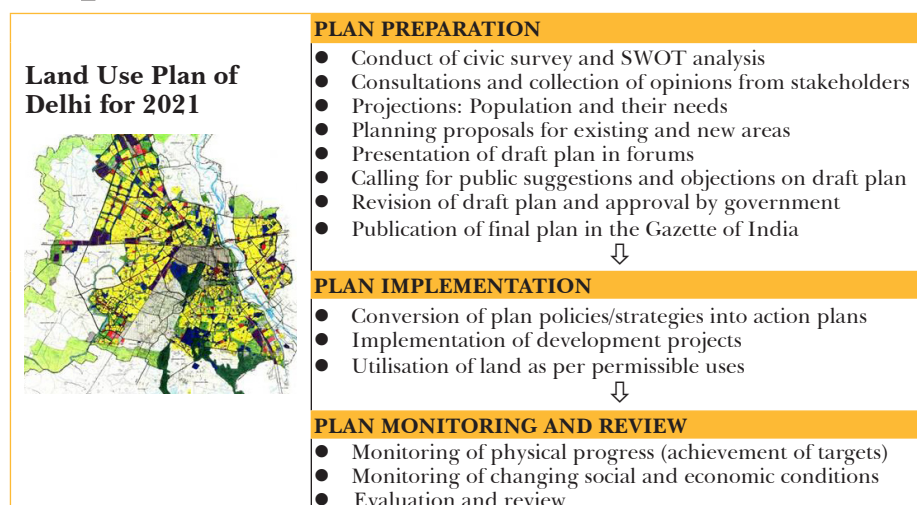
Abstract

By 2041, Delhi's population is expected to reach 28-30 million. To meet the requirements of a massive population in a systematic and sustainable manner, the Fourth Master Plan for Delhi (MPD) is being prepared and expected to be completed in 2021. This paper describes the progress and preliminary focus areas of the forthcoming plan, highlighting current challenges during preparation, as well as future ones expected in the implementation. This is done by drawing on lessons learnt from previous MPDs, and taking into account the ongoing COVID-19 pandemic. The paper argues that city planners must aim to make Delhi a "people's city", and outlines the manifold requirements to make it happen.

Most city planning agencies across the world use a master plan to guide the development of their cities, which offers a vision for a certain number of years. The preparation of this plan involves conducting a civic survey^a and a SWOT^b analysis of the city, to estimate variables such as the future population size and their requirements until the end of the period covered by the plan, as well as to recommend measures for the city’s progress in a multitude of realms, i.e. social, physical, economic, and environmental.^c

In India, for preparing city master plans, importance is given to the relationships between various urban activities.^d After the draft plan is prepared by the plan preparation agency, it is discussed in public forums.^e Based on the comments, the draft is revised and sent to higher levels of government for approval, after which the plan comes into operation^f (See Figure 1).

**Figure 1:
Delhi Master Plan: Preparation and Implementation**



Source: Delhi Development Authority.¹

a A survey conducted by a planning agency to collect data from citizens on their needs and requirements. The data is expected to guide the planners.

b “SWOT analysis” is a technique used in planning where an entity (person or organisation) identifies and analyses the strengths, weaknesses, opportunities, and threats related to a plan.

c These include recommendations for existing (built/occupied/brownfield) areas, i.e. their revitalisation, upgrade, and conservation; and vacant (greenfield) areas, where land is allocated for the development of new housing, physical and social infrastructure, recreation facilities, work centres/offices, industrial and manufacturing units, and trade and commerce establishments.

d Such as work areas, travel corridors, residential and recreational areas.

e In Delhi, these include parliamentary committees, the state cabinet, and the central government group of ministers.

f The plan is published in the Gazette of India, and city-level implementing agencies convert various plan proposals into time-bound action plans and projects.

The master plan document provides information on four main aspects: (i) use of land for various purposes, i.e. residential, commercial, industrial, recreational, transportation, utilities, government, public and semi-public facilities, green belt, and water body; (ii) development codes (i.e. space/size standards for buildings, parking, basements) to regulate development; (iii) development guidelines for various implementing agencies; and (iv) plan monitoring and review framework. The main aim of preparing and implementing a master plan is to ensure the proper use of land, protect the environment, and preserve the people's cultures and traditions.^g

Most Indian cities suffer from areas of informal growth and spatial inequalities in development between pockets of planned development.² Every urban sector—whether it is housing, mobility, infrastructure, or environment—faces manifold challenges. For example, in the peri-urban areas and census towns of Delhi, there is an uncontrolled growth of built structures, resulting in the shrinking of open spaces and indiscriminate land-use conversion, as well as deteriorating water, sanitation, and environmental conditions.³ Moreover, there are unauthorised colonies⁴ and slums⁵ where the work of regularisation, in-situ rehabilitation, and service provision is lagging. Over 30 percent of the population are designated as “encroachers” who live in unplanned areas under poor conditions.⁶ Reliable, constant water supply is not available, and water-harvesting measures are inadequate. There is a gap of over 300 million gallons per day (MGD) in water demand and production.⁷ Groundwater levels in several parts of the city have declined up to 64 metres below ground due to illegal/uncontrolled extraction.⁸

This paper examines the ongoing work related to the preparation of the Fourth Master Plan for Delhi (MPD), from 2021 to 2041, and weighs its components against the universally accepted norms of an effective city master plan. It makes recommendations for ensuring that the master plan becomes an effective tool for managing the city in the medium term. The following section outlines a history of the three previous MPDs.

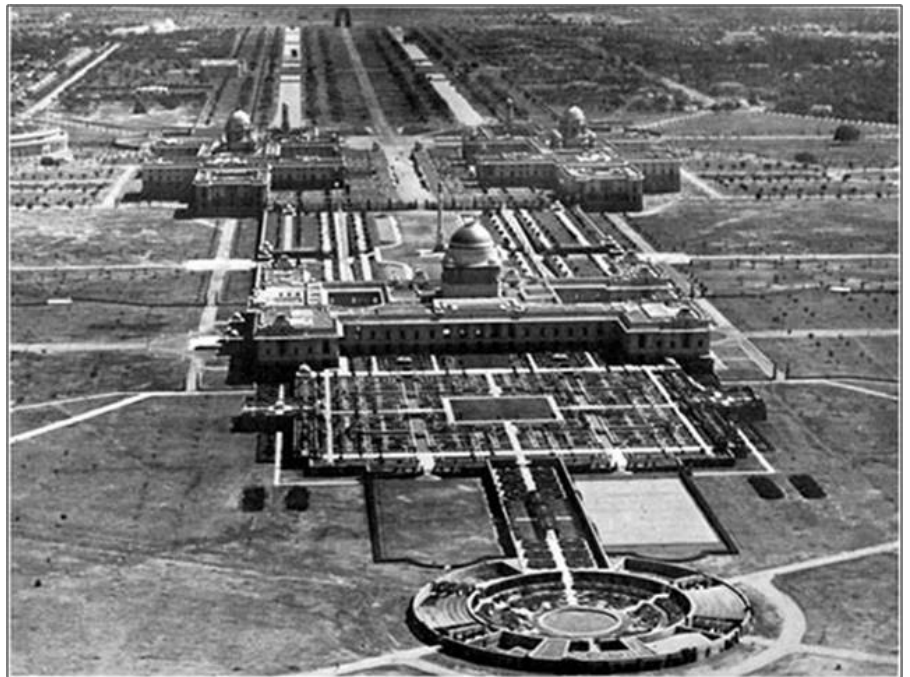
^g Cities for which master plans have not been prepared, or prepared plans have not been implemented and monitored properly, demonstrate chaotic conditions and poor quality of life. For example, in Bihar, of the total 139 statutory towns, a master plan exists only for Patna (“Master plans in offing for 44 cities in Bihar,” *The Hawk*, February 20, 2021, <http://www.thehawk.in/states/bihar/master-plans-in-offing-for-44-cities-in-bihar-207247>). Thus, cities such as Chapra, which have a population of over 200,000, are grappling with a number of civic problems (H.K. Verma, “DM initiates move to curb traffic snarls in Chapra,” *The Times of India*, June 4, 2018, <https://timesofindia.indiatimes.com/city/patna/dm-initiates-move-to-curb-traffic-snarls-in-chhapra/articleshow/64440406.cms>).

Delhi's Development Plans Over the Years

Pre-Independence (1911-31)

After Delhi became the capital of India in 1911, Emperor King George V commissioned two English architects—Sir Edwin Lutyens and Sir Herbert Baker—for the task of preparing a plan for New Delhi.⁹ The plan offered a “garden-city pattern, based on a series of hexagons separated by broad avenues with double lines of trees” (See Figure 2).¹⁰ It provided for the construction of a Parliament House, a Presidential House/Palace (or *Rashtrapati Bhawan*, formerly, the Viceroy’s House), North and South Blocks (comprising important government offices), King’s Way (or *Rajpath*, a ceremonial boulevard/wide road), India Gate (also known as All India War Memorial arc), National Archives, and several other buildings, gardens, as well as a network of roads.

Figure 2:
Aerial View of New Delhi

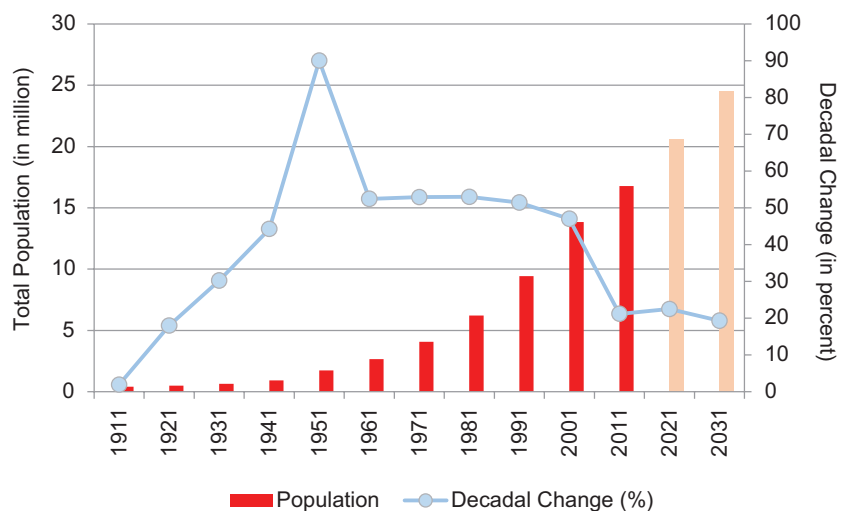


Source: Shreeya Sinha, “Video: Asia Society Museum Exhibit Depicts ‘Transitional Moment’ in India’s History”, *Asia Society*, February 2, 2012, <https://asiasociety.org/blog/asia/video-asia-society-museum-exhibit-depicts-transitional-moment-indias-history>.

Delhi's Development Plans Over the Years

In 1911, Delhi's population was less than half a million (~413,851). However, during India's independence in 1947, Delhi experienced immigration on a large scale, primarily due to the separation from Pakistan. Consequently, Delhi's population increased to 1,744,072, as recorded in the 1951 population census (See Figure 3). The absence of a master plan during this period—and the increase in land speculation—resulted in haphazard growth and sub-standard development.¹¹

**Figure 3:
Decadal Change in
Delhi's Population**



Source: (i) Census of India¹²; (ii) National Commission on Population.¹³

First Master Plan for Delhi (1961-81)

In 1957, the Delhi Development Authority (DDA) was constituted to ensure the planned development of the city.¹⁴ The DDA prepared the First MPD in 1962, for the period 1961-81, with assistance from Ford Foundation and Town Planning Organisation.¹⁵ The plan projected a population of 5.5 million for 1981 (urban: 4.6 million; rural: 0.9 million) and was prepared according to the provisions of the DDA Act, which mandate: (a) the division of Delhi into zones for the purpose of development; (b) indicating the manner in which land in each zone is proposed to be used; and (c) preparation of a zonal development plan for each zone.¹⁶

Delhi's Development Plans Over the Years

Since Delhi's population was growing, the first plan proposed strengthening the economic base of its ring towns—i.e. Ghaziabad, Faridabad, Ballabgarh, Gurgaon, Bahadurgarh, and Loni. That way, the wave of migrant workers coming to Delhi could be contained, and partly diverted to the ring towns where work opportunities were being created. For Delhi, the proposal was to extend the urbanisable area from 42,700 acres (173 sq. km) in 1958-59 to 110,500 acres (447 sq. km) by 1981^h to ensure the housing, infrastructure, and other requirements of the projected 4.6 million residents of urban Delhi.¹⁷

For the balanced distribution of population, the First MPD proposed redevelopment to reduce the population density of Old Delhi and increasing it in New Delhi (except in Lutyens' zone).ⁱ For the proper development of buildings, facilities and services, zoning, and subdivision regulations (relating to density, coverage, floor area ratio, and setback) were introduced. For the development of new buildings and facilities,¹⁸ the MPD included proposals to acquire large tracts of vacant land. Approximately 62,000 acres (250 sq. km) of land was earmarked for the development of residential, commercial, industrial, recreational and other areas, and the process of planned development was to be led by the public sector. Finally, the plan included recommendations on urban renewal and redevelopment.¹⁹ For example, slums in congested parts of the old city would be relocated to newly developing colonies so that these became an integral part of a neighbourhood.

Second Master Plan for Delhi (1981-2001)

After the term of the First MPD ended in 1981, the second plan was notified by DDA only in 1990. During the period of the First MPD, Delhi experienced rapid growth in population and an expansion of economic activities. The city's central location in north India, which granted it regional connectivity as well as livelihood opportunities, led to its emergence as an economic and commercial centre. People from neighbouring states and distant regions migrated to Delhi and were absorbed into various professions. In 1982, the city added new

h The entire urbanisable area was to be divided into eight planning divisions. Each division was to be self-contained with district centres (including a college, hospital, and park in the vicinity) and work centres, community facilities, and a network of roads and streets for smooth flow of traffic. The eight planning divisions were to be further sub-divided into 136 development zones for the purpose of detailed planning.

i The Lutyens' Zone is an area in New Delhi. It is named after Sir Edwin Lutyens, who had prepared a development plan for New Delhi after Delhi became the capital of India. It is declared as a heritage zone, with strict height, FAR and reconstruction norms.

Delhi's Development Plans Over the Years

infrastructure after winning the bid for hosting the Asian Games, e.g. stadiums, hotels, a games village, which further added to its allure.

According to the 2011 Census, after 1941-51, Delhi witnessed the highest decadal population growth rate of 53 percent during 1971-81 (See Figure 3),²⁰ creating immense population pressure on the city's resources. In response, the National Capital Region (NCR) Planning Board formulated a regional plan for Delhi-NCR in 1988, in line with the First MPD's emphasis on planning and developing in a regional context. In the NCR plan, a region was delineated with Delhi in the centre and adjoining areas of Haryana, Rajasthan, and Uttar Pradesh—aimed at reducing the number of people migrating to Delhi by developing other areas of the region. The plan proposed the accelerated development of rural and urban settlements outside Delhi, the creation of work opportunities, planned and regulated development along national highways, and the development of local and regional infrastructure.

“During the period of the First MPD, Delhi experienced rapid growth in population and an expansion of economic activities.”

The Second MPD²¹ reiterated the need for working together with the state governments of Haryana, Rajasthan, and Uttar Pradesh to ensure the balanced development of the region and to improve the condition of settlements outside Delhi. The plan proposed setting up offices of public-sector undertakings, pollutive industries, and trading activities in designated areas away from human habitation, as well as relocating the existing ones in regional towns and “counter magnets.”^j

The plan estimated a population of 12.8 million (urban: 12.17 million; rural: 0.63 million) in Delhi by 2001, and worked out requirements of land, infrastructure, transportation, housing, and other facilities accordingly. To meet the requirements of the projected urban population, the Second MPD proposed two measures:

j Counter magnets are urban centres that are located sufficiently away from the NCR and have the potential to function as independent growth centres. Examples include Hissar and Ambala in Haryana, Bareilly and Kanpur in Uttar Pradesh, Kota and Jaipur in Rajasthan, Patiala in Punjab, Gwalior in Madhya Pradesh, and Dehradun in Uttarakhand.

Delhi's Development Plans Over the Years

1. Extending the urbanisable area²² by 18-24,000 hectares (180-240 sq. km), i.e. from 44,777 hectares (447 sq. km) to about 65,000 hectares (657 sq. km)²³ over the next two decades (1981-2001). This would urbanise 44 percent of Delhi's total area.
2. Increasing the population holding capacity within the existing urbanisable area through judicious infill and modification of densities. For example, in the housing sector, the plan proposed low-rise, high-density development, i.e. accommodating more families on plots measuring 80-120 sq. m and 150-250 sq. m, as well as the development of community modules for a population of 100,000. The aim was to achieve a city density of 180-200 persons per hectare.

For a balanced development, the Second MPD recommended preparing zonal plans²⁴ for the 15 zones of Delhi, and offered a hierarchical structure (division, district, community, neighbourhood, housing area, housing cluster) and standards/norms for the provision of essential facilities and services. For example, each housing cluster (comprising 50 families or 250 people) would be provided with a tot lot, and each housing area (1,000 families or 5,000 people) would be allocated a nursery school, community room, milk booth, convenience shopping, a park, and a playground. Some other important proposals in the plan were: a) the formulation of a balanced policy for mixed use²⁵ of built-up areas considering environmental, social and economic aspects; b) the demarcation of industrial activity use zones; c) the decentralisation of city centres (such as Connaught Place, Chandni Chowk) by establishing district centres in each district; d) the provision of facilities for retail and commerce at five levels; e) the incorporation of the informal sector in trade in planned areas and the development of standards for mobile and stationary units; f) the improvement of informal areas and villages; g) the conservation and revitalisation of traditional areas (such as the Walled City) and monuments; and h) the development of multi-modal MRTS corridors, peripheral expressway and freight complexes.

The Second MPD proposed a mid-term review of the plan proposals. Further, it addressed the hitherto absence of a mechanism for monitoring and reviewing a master plan by recommending the creation of a monitoring unit with modern data-processing facilities to track the progress of plan targets and the physical and socio-economic changes occurring in the city. The exercise was aimed at generating data that would help modify and improve the plan.

Delhi's Development Plans Over the Years

Third Master Plan for Delhi (2001-21)

The DDA's Third MPD, for 2001-21, was notified in 2007, with a vision “to make Delhi a global metropolis and a world-class city, where all the people would be engaged in productive work with a better quality of life, living in a sustainable environment.”²⁶ By this time, Delhi's decadal growth rate of population had begun to decline (See Figure 3)—from 53 percent during 1971-81 to 47.02 percent during 1991-2001.²⁷ The previous policies of relocation of economic activities away from Delhi, the development of the ring towns, and the plan for a metro rail system connecting populous NCR cities (namely Faridabad, Ghaziabad, Gurugram, and NOIDA) in the adjoining states of Haryana and Uttar Pradesh had played an important role in reducing the pressure on the national capital.

Nevertheless, Delhi was expected to continue to experience immigration, with a steady growth in its absolute population. The 2011 population Census corroborated this trend, showing a further sharp decline in decadal growth rate from 47.02 percent during 1991-2001 to 21.21 percent during 2001-11, even as the absolute population grew from 13.85 million in 2001 to 16.78 million in 2011 (See Figure 3).²⁸ By 2011, over 93 percent of Delhi's population was living in areas classified as “urban.” According to the 2011 population census, Delhi is the second-most populous city of India (the first being Mumbai) and the most populous urban region of India on a regional scale (which includes NCR cities in Haryana and Uttar Pradesh). The combination of a huge population, strong inter-regional linkages, and planning and governance deficits resulted in numerous problems (See Introduction).

In view of the emerging challenges posed by urbanisation, and to restrict population growth, the Third MPD proposed the constitution of a high-level group for effective implementation of the policies and proposals put forward in the NCR plan. It also recommended preparing

“The DDA's Third MPD aimed “to make Delhi a global metropolis and a world-class city.””

Delhi's Development Plans Over the Years

a sub-regional plan for Delhi. Since nearly half of Delhi's area had already been urbanised, it was decided that the remaining area/land should be optimally utilised and that proposed development activities should not harm natural features (such as ridge, forest, greenery, and water bodies). The plan projected a population of 23 million by 2021, and based the requirements for land, housing, infrastructure, transportation, and other facilities on this.²⁹ To accommodate this estimated population, the DDA decided to extend Delhi's urbanisable area from 70,200 hectares (702 sq. km) in 2001 to 97,790.90 hectares (977.9 sq. km) by 2021—allocating 225 persons per hectare. This total urbanisable area proposed would take up 66 percent of Delhi's total area of 148,300 hectares (1,483 sq. km) and land under existing as well as proposed built structures, natural features, sanitary landfill, metro services and utilities, and agriculture zone.

The Third MPD, too, proposed a three-pronged strategy:

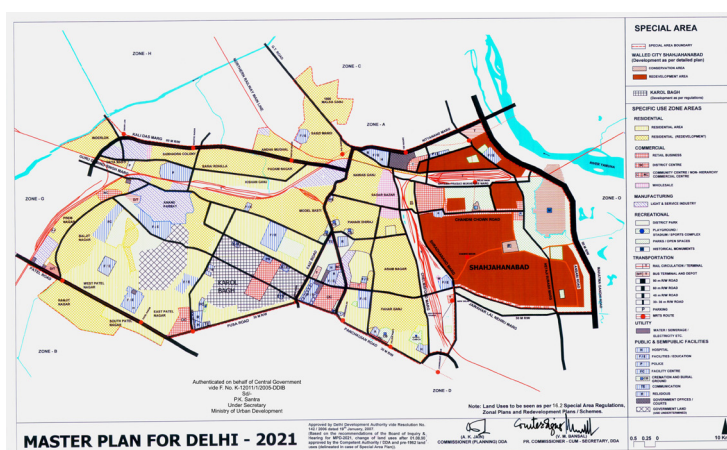
- i. Encourage incoming population to deflect to NCR towns by effectively implementing recommendations of the NCR plan.
- ii. Increase the population holding capacity within existing urban limits through a redevelopment strategy and modified development norms (i.e. higher floor-area ratio and building height).³⁰ This could be achieved by the identification of redevelopment areas (planned, low density, walled city, unplanned, and villages) and the early implementation of development schemes in such areas; increasing densities in existing low-density housing and work areas (underused land with vacant sites and dilapidated built-up areas owned by the government to be used for redevelopment); full utilisation of newly developed areas (such as Dwarka, Rohini, and Narela); and the implementation of schemes under the planning stage. The metro rail and key transport corridors, for instance, allow optimum utilisation of land/intensive development in terms of accommodating population, as well as providing facilities and workplaces.
- iii. Extend the urban limits by assembling land to the extent possible for accommodating future population growth. To this end, rural/agricultural areas should be protected and preserved, and future development should be undertaken along the major transport corridors and fringes of already urbanised areas.

Delhi's Development Plans Over the Years

The following are some of the other proposals of the plan:

1. Land up to the depth of one peripheral village revenue boundary along Delhi's border to be maintained as a green belt;
2. Conservation of ridge and rejuvenation of Yamuna river;
3. Preparation of zonal plans and provision of various facilities (tot lot, shopping, park, milk booth, school, and dispensary) according to planning norms and a hierarchical structure (housing area, neighbourhood, community, district, zone/subcity, and city);
4. Mixed use of land to meet the growing demand of commercial activities;
5. Development of district and community centres along major corridors to prevent unplanned ribbon development;
6. Preparation of redevelopment scheme with suitable building regulations for special areas (walled city, Karol Bagh; see Figure 4), shifting of noxious and hazardous trades and industrial activity, and the provision of a minimum level of facilities (parking, pedestrianisation) in such areas;
7. Shifting from plotted housing to group housing for the optimal utilisation of land;
8. Private-sector participation (PSP) in housing;
9. In-situ rehabilitation of slums, resettlements, and unauthorised colonies;
10. Earmarking of hawking zones;
11. Provision of facilities and services in villages, and their integration with surrounding areas;
12. Constitution of a unified metro transport authority and private sector development of parking facilities; and
13. Establishment of a disaster management centre in each administrative zone.

**Figure 4:
Plan for Areas Designated
as Special: Walled City
Shahjahanabad and Karol Bagh**



Source: Delhi Development Authority.³¹

Table 1 lists the third plan targets to be achieved by 2021.

**Table 1:
Third Master Plan Targets for City
Development**

Sector	Unit	Target for 2021
Population	Million	23
Urbanisable Area	Sq. km	977.9
Houses/Dwelling Units	Million	2.4
Augmentation of Water Distribution	MGD	730
Municipal Solid Waste	Tonnes	10,207
Hospitals and Dispensary	Number	342
School, College, Institute, Vocational Training Centre	Number	81
Police Station	Number	36
Disaster Management Centre	Number	1 in each admin zone
Old Age Home, Working Women Hostel, Night Shelter	Number	54
Mass Rapid Transit System (Length)	Km	250
Parks	Number	117
Sports Centres	Number	117

Source: Delhi Development Authority.³²

Note: Information on achievements vis-a-vis targets is not available in the public domain.

Delhi's Development Plans Over the Years

To ensure efficient implementation of plans such as the construction of houses; water treatment plants; health, education and communication facilities, police and fire stations; petrol and CNG stations; and parks, the constitution of a monitoring unit was proposed. The plan period (2001-21) was to be divided into three phases (2007-11, 2011-16, 2016-21) and a record had to be maintained of the targets achieved in each phase.

Finally, a mid-term review of the plan was proposed to ensure mid-term correction and modifications in policies and implementation procedures. The review, for which suggestions were sought from the public, government agencies, professionals, and through a national workshop, led to modifications in the plan. These were in the areas of land reservation for the economically weaker section (EWS), housing in residential areas and an increase in the size of their house from 25 sq. m to 45 sq. m, an increase in floor-area ratio for the provision of essential facilities (such as health, education, shopping, hotels), permission for the construction of low-density residential plots in the green belt and low-density residential areas, introduction of land pooling guidelines, and transit-oriented development.³³

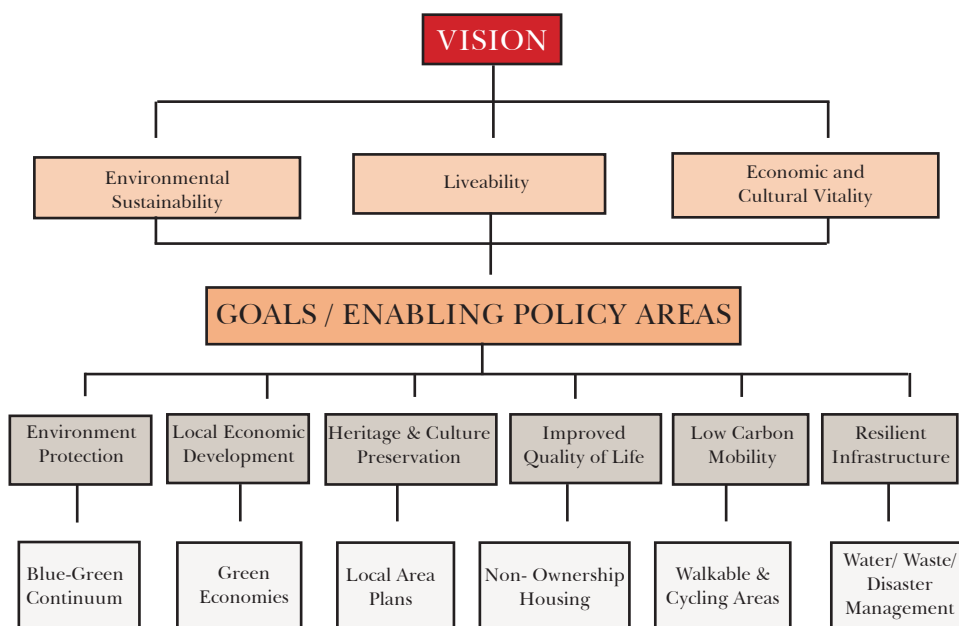
“The Third MPD projected a population of 23 million by 2021 and decided to extend Delhi's urbanisable area to 66 percent of total.”

Fourth Master Plan (2021-41): An Overview

The forthcoming plan will offer a perspective for the next 20 years, i.e. 2021 to 2041. According to the DDA website, as well as media and other sources,³⁴ detailed baseline studies have been conducted on the current status of various urban sectors.³⁵ Further, consultations on a wide range of topics are in progress to understand people’s needs. The DDA has also created an interactive microsite, called the “Citizen Engagement Portal for MPD 2041,” to encourage greater public participation in the plan preparation.


Upon finalisation, the fourth plan will offer a vision for Delhi, and in this regard, an enabling policy framework and a set of spatial planning strategies are being formulated (See Figure 5).³⁶ The proposed vision is to make Delhi environmentally sustainable, liveable, and economically and culturally strong. The vision will be achieved through six broad goals (or enabling policy areas): environment protection; local economic development; preservation of heritage and culture; improved quality of life; low carbon mobility; and resilient infrastructure. Two sets of spatial-planning strategies will be applied—catalysing urban regeneration (brownfield improvement), and smart and sustainable development of new areas (greenfield development).

**Figure 5:
Provisional Vision and Goals,
MPD 2041**



Source: ITPI-DRC Webinar.

Fourth Master Plan (2021-41): An Overview



Further details³⁷ on enabling policy areas proposed in the fourth plan cover the following:

- The environment of Delhi will be improved by adopting a green-blue infrastructure approach, i.e. improving existing environmental and ecological assets together with built areas; and protecting and improving existing forests, Yamuna river, drains, underutilised sites, wastelands, landfills; and the greening of built structures.
- Local economic development will be promoted by identifying strategic hubs and corridors and establishing clean economies in these hubs (cyber, knowledge, R&D, clean manufacturing, and light industry). Efforts will be made to promote a green economy (green produce, recycling of products) and support the unorganised sector (design of vending zones).
- Greater attention will be paid to the development of heritage and culture by preparing local area plans, ensuring safety in public areas, and promoting nightlife.
- Non-ownership housing will be supported (e.g. rental housing; serviced apartments; residential facilities for migrants, students, and working women); mixed use of buildings will be encouraged to bring homes, jobs and amenities closer; buildings will be made more structurally safe; and social infrastructure provision will be facilitated.
- For better mobility, the plan proposes creating walkable and cycling areas, transit-oriented development, mobility corridors (for freight movement, bypasses) to reduce congestion on roads; shifting from private to public transport; rationalising parking; and promoting the use of low-carbon technologies (e.g. electric vehicles).
- Establishing a resilient infrastructure will be achieved through integrated water management, decentralised waste management, the setting up of digital infrastructure, and facilities for disaster management.

Unresolved and Future Planning Issues

Table 2 lists the challenges that should be addressed by the plan preparation agency (i.e. DDA) and the concerned government departments.

**Table 2:
Planning Issues and Suggestions**

Issue	Suggestion
Delays in plan preparation, notification, and implementation	Process of obtaining approvals and release of funds to be shortened Geo-spatial and revenue data, cadastral maps to be made available
Lack of people's participation	Widespread public consultations to be held at the community level
Inaccurate population projections	Greater accuracy in projecting population to be achieved Strategy to be devised for identifying number of people migrating to the city everyday
Inadequate monitoring of changing conditions in city and data gaps	Real-time information on ground realities and data on various city aspects to be maintained
Weak implementation, enforcement and monitoring of plans	Managerial, financial and monitoring capabilities of administration to be strengthened Backlog in implementation of projects to be cleared Regulations on land use to be observed
Less responsive planning	Planning provisions for poor communities, green areas, etc. should be appropriate and not modified Planning decisions should be based on consultations
Absence of information on finance	Planning proposals to be accompanied by cost estimates and sources for mobilising funds Remunerative schemes to be implemented first
COVID-19 pandemic	Suitable health and sanitary arrangements in public areas, work and other places to be made People's access to technology and online services to be facilitated Traffic infrastructure and management, and people's access to health, water and sanitation services to be improved

Source: Based on the author's survey of literature and interactions with urban-planning professionals.

Unresolved and Future Planning Issues

Delays in Plan Preparation and Notification: Timely availability of master plans and lower-level plans (i.e. zonal and layout plans) is crucial for implementing agencies to carry out the work of planned development. The DDA Act³⁸ does not provide a timeline for plan preparation, submission, or approval. Consequently, the First MPD for 1961-81 was made available in 1962, the Second MPD for 1981-2001 was made available in 1990, and the Third MPD for 2001-21 was made available in 2007. Further, the zonal plans of four of the 15 planning zones in Delhi were not finalised on time. These delays in the availability of plans have allowed scope for the growth of unauthorised constructions in many parts of Delhi. Hindrances in obtaining approvals from associated departments, delays in the release of funds for implementing the projects, non-availability of geo-spatial and revenue data, and lack of cadastral maps are some of the factors that impede timely plan preparation and notification.

To address the issue, the Urban and Regional Development Plans Formulation and Implementation (URDPFI), 2014 guidelines suggest that data gaps can be overcome by setting up a Planning Information System, which can streamline the work of data collection, analysis and interpretation for preparing the master plan, and through the integration of cadastral records with the National Land Record Modernisation Programme.³⁹ The process of obtaining approvals must also be shortened.

Lack of People's Participation: People's participation is an important component in the plan preparation. Section 7 of the DDA Act⁴⁰ mandates a civic survey as part of plan preparation, aimed at providing for the needs of the citizens in the master plan. However, a recent survey regarding the upcoming Fourth MPD reveals that of the 1,025 people interviewed, 80 percent of the respondents are not aware of the plan.⁴¹ If a large proportion of the population is left out of the consultation process, their expectations are unlikely to be met. More public consultations should be conducted at the community level.

Inaccurate Population Projections: Conventional methods (i.e. arithmetic/geometric progression and incremental increase) cannot yield accurate population size projections. A projection on the lower side will lead to unfulfilled requirements. For example, the First MPD projected a population of 5.5 million by 1981, at a growth rate of 3.7 percent.

Unresolved and Future Planning Issues

However, the actual population growth per annum recorded was 4.3 percent. Similarly, the Second MPD projected 12.8 million inhabitants in Delhi by 2001, whereas the actual population recorded in the 2001 Census was 13.8 million.⁴² Thus, the requirements for housing, water and power did not match the pace of development. Greater accuracy in projecting population is crucial and can be achieved by reviewing various components of urban growth. For example, a strategy should be devised to record the number of people migrating to the city every day. Such data can be collected at the major entry points in Delhi.

Inadequate Monitoring of Changing Conditions and Data Gaps: The previous MPDs have been affected by diverse socio-economic conditions and fast-paced changes in Delhi. The First MPD, for instance, did not propose a system for monitoring the changing socio-economic profile of communities or the physical structure of the city, resulting in haphazard growth and unintended developments, such as slums, unauthorised colonies, informal sector, and non-conforming industries. Despite the city witnessing large-scale in-migration, little attention has been paid to the needs of poor outstation workers and their families. Similarly, the growth of the informal sector units in trade and services has been underestimated. Residential areas (particularly resettlement and unauthorised colonies) have developed at densities much higher than those proposed in the plan, mainly due to the weak economic condition of residents and their inability to buy the recommended size of plots. The plans have also failed to address the evolving conditions in peri-urban areas and census towns. In the transport sector, the high growth of automobiles, congestion, pollution, lack of safety, and shortage of parking spaces are emerging issues. To ensure that a realistic plan is prepared, real-time information and data on various aspects must be maintained.

“A recent survey regarding the upcoming Fourth MPD found that of the 1,025 people interviewed, 80 percent are not aware of the plan.”

Unresolved and Future Planning Issues

Weak Implementation, Enforcement, and Monitoring of Plans: The ability of implementing agencies/departments in executing planned development work in a time-bound manner is as important as the formulation of good master plans. The success of a plan largely depends on good implementation, periodic reviews, and close monitoring. Available information reveals several problems related to managerial and resource-raising capabilities of implementing agencies, availability of funds for implementing projects, and overlapping jurisdictions of multiple agencies. Other factors, such as weak database, land acquisition and encroachments, can further impede plan implementation.

For example, the Third MPD proposed the construction of 2.4 million new housing units by 2021 (See Table 1),⁴³ but this target was not achieved.⁴⁴ Consequently, immigrants have made their own housing arrangements in slums and unauthorised colonies. Similarly, targets for the development of district centres, commercial centres, local shopping centres, and convenient shopping centres have not been achieved, leading to a rise in the number of shops in residential areas.⁴⁵ The Third MPD also proposed the monitoring of physical targets and socio-economic changes occurring in the city, the formulation of a separate monitoring unit with modern data-processing facilities, a team of action groups, and a high-level committee under the Lieutenant Governor of Delhi. Despite this, an absence of periodic monitoring has been noted, leading to slow progress of projects and the lack of data on physical targets achieved with regard to various urban sectors, land and property records.⁴⁶

Compliance with planning proposals, norms and guidelines is equally important for ensuring proper development in the city. For this purpose, the planning authority (i.e. DDA) has been empowered to “ascertain whether any land is being or has been developed in contravention of the master plan or zonal development plan; and to penalise the violators.”⁴⁷ However, violations continue to occur. For example, despite regulations on land-use control and permissibility, several non-conforming activities (i.e. industrial/trading units) are being carried out in residential areas. There has been an increase in business and commercial establishments in the walled city, causing further congestion. Proposals for green-belt retention have not been maintained, and unplanned developments have been observed in these areas.

Unresolved and Future Planning Issues

Less Responsive Planning: The First and Second MPDs were reasonably responsive to the needs of the urban poor, evident in the explicit provisions made for housing low-income population, e.g. land allocations for plotted housing, and similar housing norms and standards for various income groups. These plans addressed housing concerns in an equitable manner and recognised the informal sector as an integral part of development. However, the entitlements of low-income groups have been reduced over time,⁴⁸ going against the provision in Article 21 of the Constitution of India: “No person shall be deprived of his life or personal liberty except according to the procedure established by law.”

The Third MPD was markedly less responsive to the needs of low-income communities. It diluted low-income housing provisions by removing the EWS category in some housing projects.⁴⁹ For example, the Third MPD did provide for 15 percent of floor-area ratio for EWS in all group-housing and land-pooling projects. However, construction agencies as well as the Central Public Works Department (CPWD) wanted to remove this provision. This is observed in East Kidwai Nagar, a 35-hectare residential-led project to the south of central Delhi, where houses for EWS have not been constructed. Moreover, service norms (with respect to education, health, open spaces) for areas inhabited by EWS were significantly lower in the Third MPD.

Often, master plans make provisions for the welfare of poor communities, but these are not carried out during implementation. Policies such as redevelopment, in-situ upgradation, and relocation of slum dwellers to city peripheries must be monitored for proper implementation. At many places in the city, green spaces have been taken over by development activities.⁵⁰ To address this issue, a balance must be maintained between built and natural areas. Finally, it has been observed that many planning decisions are taken without any consultations, e.g. the construction of flyovers.⁵¹

Absence of Information on Finance: Previous master plans have consistently failed to provide financial details or the sources for mobilising funds. The Fourth MPD offers an opportunity to address this shortcoming. Additionally, the issue of funding can be addressed partly through the judicious utilisation of collected taxes, surcharges, stamp duties, cess, charges, non-taxes, fiscal transfers and grants-in-aid, and private-sector financing. Another approach is to implement remunerative schemes, followed by the use of revenue generated on infrastructure development.⁵² This will make the development activities self-sustaining, with minimum dependence on budgetary support.

Unresolved and Future Planning Issues

COVID-19 Pandemic: The COVID-19 pandemic has claimed over two million lives globally and severely affected most human activities in cities. Reforms in urban planning are being discussed to address the emerging requirements. For example, in the future, people are likely to prefer sparse living in the suburbs over compact neighbourhoods in cities. In the transport sector, an increase in the use of private motor vehicles or isolated modes of travel (e.g. walking and cycling) is anticipated, as people with means will avoid commuting in shared public or private vehicles. Further, adequate access to health, water and sanitation services will become increasingly critical for maintaining good health. The emerging trends call for better traffic management and adequate availability of basic civic services for all communities.

In this context, the Asian Development Bank (ADB) proposes five key approaches: (i) remodelling of public spaces, commercial offices, industrial buildings, and civic institutions to adapt to COVID-19; (ii) providing essential water, sanitation (solid and medical waste), and hygiene services; (iii) addressing the special needs of informal settlements and vulnerable people; (iv) addressing people's changing travel needs during the pandemic; and (v) effectively using ICT solutions.⁵³

Under the current conditions, and with the rollout of the COVID-19 vaccines only having begun, it is essential to work towards improvements in city-planning and management as well as advanced preparation for emergencies.⁵⁴ Technology has played a powerful role in alleviating some of the issues caused by the pandemic, making a strong case for facilitating greater access to technological and online services for citizens. Additionally, suitable arrangements must be made for people to return to public areas, work and other places, since a work-from-home culture may not suit many sections of the population in the long run.

“The COVID-19 pandemic has affected most human activities in cities, necessitating improvements in city-planning and management, as well as preparation for emergencies.”

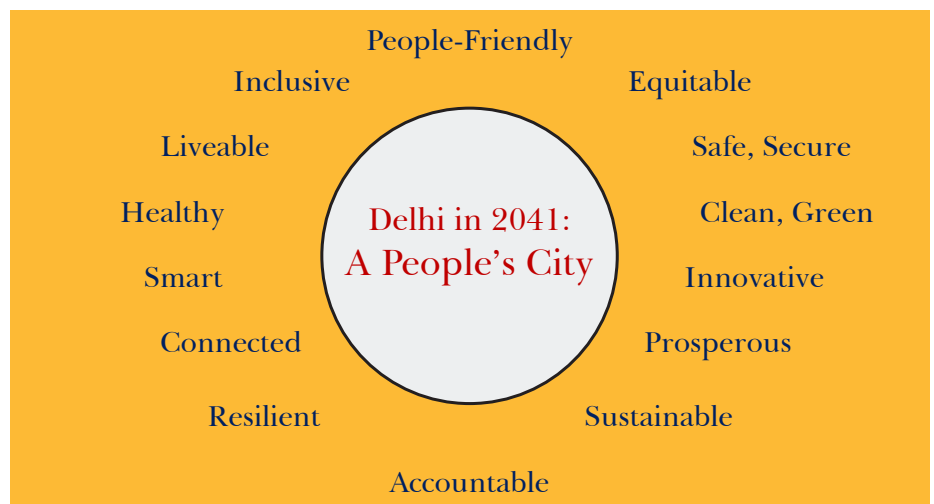
As it happens with most cities in the world, Delhi's characteristics and requirements have changed over time. In the last 70 years, the city has experienced a 10-fold increase in population size—from nearly 2 million in 1951 to over 20 million in 2020 (See Figure 3). However, the population growth rate of Delhi has been decreasing since 1991, and cities in the neighbouring states are growing at much a faster rate. By 2041, Delhi's population is expected to be in the range of 28-30 million.⁵⁵

In post-Independence Delhi, the master plan (or development plan) model was adopted to cater to various requirements and ensure the orderly development of Delhi. Since then, such plans have been implemented, each with a 20-year perspective.

An examination of the preliminary ideas developed for the fourth MPD shows tangible improvements over the previous plans along with sectoral solutions, based on the inflow of new ideas, experiences, and techniques.

In light of the COVID-19 pandemic, people's expectations from the Fourth MPD are likely to be high. Consequently, the authorities should ensure that the planning proposals address various essential requirements of the people of Delhi, and aim to make the city a "people's city" (See Figure 6).

**Figure 6:
A Proposed Vision for Delhi**



Source: Author's illustration.

Conclusion

1. *People-Friendly*: Planning should be done from the people's point of view. The administration should establish proper facilities and grievance redressal mechanisms. For example, facilities should be created for rituals such as those performed along holy rivers and at other public places.
2. *Inclusive and Equitable*: The needs of all individuals across demographics should be met with greater efficiency. Their opinions should be factored in at the time of plan preparation. A wide range of opportunities should be created for all communities based on their necessities.
3. *Liveable*: Better living and working conditions must be created, including the inhabitants of informal areas, informal-sector worker, outstation workers, and homeless people.
4. *Safe and secure*: The safety of all citizens must be prioritised, setting up necessary facilities and developing guidelines to be followed by the administration.
5. *Healthy*: Reliable and affordable healthcare services should be made available to all residents to address and curb the growing burden of diseases, including mental health.
6. *Clean and Green*: Environmental conditions, including air/water quality, sanitation, vacant spaces, and natural resources (rivers, lakes, forests, hill ranges), should be properly maintained.
7. *Smart*: Improved and effective planning practices and technologies should be employed to increase the efficiency of various urban sectors—health, education, buildings, energy, water, sanitation, mobility, and security.
8. *Innovative*: Facilities should be created for nurturing ideas, knowledge, designs, and local culture.⁵⁶ In some American and European cities, innovation clusters have been developed, leading to economic, infrastructure, employment, cultural, and social benefits.⁵⁷ Certain areas within the city can be earmarked for market forces to operate.⁵⁸

Conclusion

Rumi Aijaz is a Senior Fellow at ORF.

9. *Connected*: Mobility at all levels (walking, cycling, vehicular, first- and last-mile connectivity, commuting areas uncovered by public transport) should be improved.
10. *Prosperous*: Planning and development agencies should be financially strong, and poor communities should be brought above the poverty line.
11. *Resilient*: There should be action plans and institutional preparedness for addressing various forms of disasters (floods, fire, earthquakes) and pandemics.
12. *Sustainable*: Natural resources (land, water, forests, hills) should be protected and utilised with care.
13. *Accountable*: Citizens and governments should have a responsive approach towards cities, with greater awareness on civic rules and regulations. [ORF](#)

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20, Rouse Avenue Institutional Area,
New Delhi - 110 002, INDIA
Ph. : +91-11-35332000. Fax : +91-11-35332005
E-mail: contactus@orfonline.org
Website: www.orfonline.org