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Content

i. BACKGROUND .................................................................
ii. THE CHALLENGES ......................................................
iii. PART I: MAIN ISSUES ..................................................
iv. PART II: RECOMMENDATIONS .................................
   1. Measures that can be implemented in the short term ........
   2. Measures that require greater time horizon ..............
BACKGROUND

1) FICCI reconstituted the Urban Infrastructure Committee under the Chairmanship of Mr. Pradeep Puri, formerly President & CEO, Noida Toll Bridge Co Ltd. and currently, CEO, METCO Project, Infrastructure Leasing & Financial Services Ltd. at its 82nd AGM held on February 27, 2010 in New Delhi. Mr. Sushil Sethi, Managing Director, SPML Infra Limited, was co-opted as the Co-Chairman of the Committee. The list of Committee members is given below:

i. Mr. Pradeep Puri, Chairman, FICCI Urban Infrastructure Committee & CEO, IL&FS - METCO Project
ii. Mr. Sushil Sethi, Co-Chairman, FICCI, Urban Infrastructure Committee & MD, SPML Infra Ltd.
iii. Mr. Ranbir Saran Das, Managing Director, Fairwood India Ltd.
iv. Mr. L Krishnan, MD, IL&FS Urban Infrastructure Managers Ltd
v. Mr. Y R Nagaraja, Managing Director, Ramky Infrastructure Ltd.
vii. Mr. Mahesh Babu, Chief Executive Officer, IL&FS Environmental Infrastructure and Services Ltd.
viii. Mr. Pradeep Sachdeva, Principal Architect, Pradeep Sachdeva & Associates
ix. Mr. Piyush Joshi, Partner, Clarus Law Associates
x. Ms. Ashufta Alam, Senior Infrastructure Advisor, Department for International Development India (DFID)
xii. Mr. Oskar Von Maltzan, Director, KFW India
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Urban Infrastructure in India

1) In 2001, about 286 million persons were living in urban areas of India and it was the second largest urban population in the world. According to the Registrar General & Census Commissioner of India, the urban population in India over the next 25 years is expected to grow 38% and become 534 million in 2026. Furthermore, as per the Census of India, 2001, 640 cities/towns in 26 States/Union territories have reported slum populations. Andhra Pradesh has the largest number of towns (77) reporting slums followed by Uttar Pradesh (69), Tamil Nadu (63) and Maharashtra (61). 42.6 million population lived in slums in 2001. This constitutes 15 percent of the total urban population of the country and 22.6 percent of the urban population of the states/union territories reporting slums. 11.2 million of the total slum population of the country is in Maharashtra followed by Andhra Pradesh 5.2, Uttar Pradesh 4.4 and West Bengal 4.1 million.

2) The need for up-gradation and development of urban infrastructure and urban services cannot be overstated. The present levels of urban infrastructure are grossly inadequate to meet the demand of the existing urban population.

3) To provide some perspective, it is estimated that India's population will grow to 1.7 billion by 2050 and that rapid urbanization will add nearly 900 million people to Indian cities. City capacity will need to grow nearly 400% in less than 50 years.

4) The inexorable demographic surge in urban India is fueled by the growing disparity between rural and urban per capita income. From near parity in 1950, in the 1990's the ratio of urban per capita income to rural per capita income was nearly 4:1. As per the 66th round of National Sample Survey (NSS) for the period July 2009 - June 2010, the divide has accentuated to approx 9:1.

1 Source: Population Projections for India, 2001-26, Registrar General & Census Commissioner of India, 2006

2) The mandate conceived by the Committee was to articulate a realistic agenda for India's urban sector and suggest last mile solutions to enhance private sector participation. The diverse composition and track record of the committee with representation from the private sector, bilateral and multi lateral institutions, Audit, Consultancy and the legal and academic fraternity, provides a unique perspective and experience of infrastructure projects in the urban space.

3) The Committee held its first meeting on June 18, 2010 at Federation House, New Delhi which was followed by further meetings held on December 16, 2010 and April 20, 2011.

4) Prof Utpal Sharma, Dean, Faculty of Planning & Public Policy and Arts & Humanities, CEPT University, Ahmedabad, kindly consented to join the Committee in June, 2011.

5) In its initial deliberations, the Committee was conscious of the voluminous literature and analysis available on the urban sector, the bourgeoning infrastructure deficit and its manifold implications for India’s growth and prosperity. An excellent report by the McKinsey Global Institute - “India's Urban Awakening: Building inclusive cities, sustaining economic growth”, published in April, 2010, reinforced and rearticulated the enormity of the task.


7) The Committee was unanimous that it should not tread where others have trod but to compile, at the risk of over simplification, a list of to do things which cumulatively would enhance the delivery and quality of urban infrastructure services. The Committee's agenda was modest: highlight some of the obvious deficiencies in the urban infrastructure procurement process, suggest remedies and in the process articulate a blue print of immediate or short term measures as well as longer term goals.
THE CHALLENGES

1) In 2001, about 286 million persons were living in urban areas of India and it was the second largest urban population in the world. According to the Registrar General & Census Commissioner of India, the urban population in India over the next 25 years is expected to grow 38% and become 534 million in 2026. Furthermore, as per the Census of India, 2001, 640 cities/towns in 26 States/Union territories have reported slum populations. Andhra Pradesh has the largest number of towns (77) reporting slums followed by Uttar Pradesh (69), Tamil Nadu (63) and Maharashtra (61). 42.6 million population lived in slums in 2001. This constitutes 15 percent of the total urban population of the country and 22.6 percent of the urban population of the states/union territories reporting slums. 11.2 million of the total slum population of the country is in Maharashtra followed by Andhra Pradesh 5.2, Uttar Pradesh 4.4 and West Bengal 4.1 million.

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Source: Population Projections for India, 2001-26, Registrar General & Census Commissioner of India, 2006
5) It has been estimated that by 2025 i.e. in 14 years, nearly half a billion Indians will need new, urban homes. This is equal to the needs of China, North America and Western Europe put together. In this context, the rationale for an aggressive and ambitious policy of affordable housing cannot be over emphasized. This aspect is elaborated elsewhere in the report.

6) There is a tremendous pressure on civic infrastructure systems like water supply, sewerage and drainage, solid waste management, etc. Recent data suggest that water supply is available for 2.9 hours per day across cities and towns. The non-revenue water that includes physical and revenue losses, accounts for 40-60 percent of total water supply. About 30 to 50 percent households do not have sewerage connections and less than 20 percent of total waste water is treated. Solid waste systems are severely stressed. The state of services reflects the deterioration in the quality of city environments. As per 54th round of National Sample Survey, 70% of urban households are being served by tap and 21% by Tube well or hand pump. 66% of urban households reported having their principal source of water within their premises while 32% had it within 0.2 Km. 41% had sole access to their principal source of drinking water and 59% were sharing a public source. As per the 54th round of NSS, 26% of households had no latrines, 35% were using septic tank and 22% were using sewerage system. Sewerage connections varied from 48% to 70%. It is estimated that about 1,15,000 MT of Municipal Solid Waste is generated daily in the country. Per capita waste generation in cities varies between 0.2 - 0.6 kg per day and it is increasing by 13% per annum. In contrast, per capita waste generation in the OECD is approximately 1.5 kg per day. The current waste generation in Delhi is approximately 8000 MT/day and on current trends will reach 15000 MT/day by 2020. It is estimated that Delhi will have scientific waste management facilities for only 6000 MT by 2012.

7) In addition to the gap in available infrastructure to meet the requirements of urban centers in India, there is a daunting shortfall in available funds for improving and maintaining basic urban infrastructure.

8) The traditional paradigm for financing urban infrastructure consisted of internal accruals of local bodies and loans and grants from the State Government. This was augmented by directed credit from institutions such as HUDCO and LIC linked to State Government guarantees. A small component of bilateral and multilateral assistance was also available.

9) The drawbacks in the traditional institutional framework led to a severe back log in investments given the inadequacy of government budgetary support. Implementation of projects within this framework has led to poor utilization of resources on account of
lack of project development and management skills. This was compounded by lack of adequate financial management skills.

10) According to the Economic Survey of India 2011, The Eleventh Five Year Plan had estimated the total fund requirement for implementation of the target for urban water supply, sewerage and sanitation, drainage, and solid waste management to be Rs. 1,29,237 crore and that for urban transport to be Rs. 1,32,590 crore. According to estimates based on the City Development Plans (CDPs) prepared by the States under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) launched in 2005-06, the requirements for both urban infrastructure services and urban transport were estimated to be as high as Rs. 8,00,000 crore.

11) While the conception and implementation of projects under JNNURM has led to significant capacity augmentation and efficiency gains particularly in respect of urban transport, the JNNURM project has highlighted several issues and challenges. These range from capacity building at the ULB level to the need for ULBs to become financially self-sustaining - it is a moot point whether the huge dollops of credit under JNNURM enhance the financial status of the tier II and III ULBs or create a dependence syndrome.

12) Global experience, particularly in the US, suggests that the capital markets can have an important role in financing urban infrastructure. In India, for a variety of reasons elaborated elsewhere in the report, the contribution of the capital market to urban infrastructure has been miniscule. As against a total Bond Market size in India of USD 40 billion\(^2\), the entire quantum of borrowings by ULBs from the capital market is less than Rs 200 crores per year. Against this backdrop, the Committee is of the firm view that the creation of a vibrant market for Municipal Bonds is intrinsic to improving the financial health of the ULBs. The report explores possible options whereby JNNURM and other State/Central Government financial flows can be used as leverage thereby significantly enhancing the overall quantum of resources available to the ULBs.

\(^2\text{Source: India’s Bond Market – Development and Challenges ahead by ADB dated December 2008}\)
The Report is divided into two broad parts:

Part I - Identification of Issues

Part II - Recommendations
The Report is divided into two broad parts:

**Part I -**
Identification of Issues

**Part II -**
Recommendations
A large number of issues have been identified as being the key drivers for the malaise of the urban infrastructure sector. Certain issues are considered by the Committee as being critical issues, which if addressed directly, can have a multiplier and immediate impact on the urban sector and the delivery of urban services. It should, perhaps, be clarified that the issues are listed in the random order of the Committees’ deliberations and the sequential order does not signify or detract from the relative importance of the issue.

The key areas of intervention for the improvement of urban infrastructure are:

- Improved planning at regional, city and area level
- Transportation infrastructure for better mobility through public transport, improved walkability and most importantly a policy on parking
- Urban services: sewerage, drainage and water supply, power distribution
- Solid waste management
- Housing including affordable housing
- Social infrastructure such as parks, playgrounds and leisure spaces
- Preservation of heritage precincts

1) Unbalanced Emphasis on Construction Contracts by Authorities

a) There is extensive international experience and global good practice that demonstrates the inefficiency of the traditional procurement processes pursued by the State PWDs and the ULBs in India. Typically, quotations are invited for EPC (Engineering, Procurement and Construction) contracts and the tender is awarded to the lowest quote (L1). A significant drawback of this approach is the total absence of any O&M component.

b) A more prudent approach which is both cost effective in terms of total life cycle cost and superior levels of service is available in terms of "Performance Based Maintenance Contracts" (PBMC). In this approach, instead of bidding a lump sum...
amount, for example, building/rehabilitating a road, the L1 contractor would be required to both build and maintain the road for a specified duration, say 7 years or so. Accordingly, payments to the contractor are staggered over the 7 year period with an initial lumpy payment linked to the completion of the road building/rehabilitation project. Specific performance standards in terms of surface riding quality and other qualitative and quantitative tests are specified. The performance parameters over the duration of the PBMC are independently monitored/audited by a third party.

c) The efficacy of the above approach is underscored by the contrasting experience of PWD roads in Delhi with the DND Flyway. The latter since its commissioning in 2001 has carried approximately 250 million vehicles in 10 years without an overlay to the DND Flyway. The climatic rainfall and vehicular loads for PWD roads in Delhi are near identical and yet they are subject to periodic/repeated overlays.

2) Antediluvian Planning Norms

Indian cities compare favorably with their global counterparts in terms of macro planning norms. It is accepted practice that the global FSI (Floor Space Index) or FAR (Floor Area Ratio) for cities or towns is 1.0 or 0.9. The Indian experience, however, marks a radical departure from global practice in adopting the global city wide FSI or FAR for individual plots. In Cities such as New York or Singapore, the FSI/FAR for individual plots can extend to 5 or 7. Given the scarcity and high value of urban land, the accepted international solution is to go vertical. A sprawling urban spread comprising flat low rise structures usually G+5 i.e. ground plus five floors, is more appropriate for an era of horse drawn carriages than high volume modern transport systems based on the internal combustion engine and beyond.

a) The social and economic consequence of persisting with archaic planning norms is profound and significant. It is well established that the per capita and per unit cost of utilities is invariably lower in a high rise conurbation than in a flat low rise sprawl with a large footprint. Apart from the issue of infrastructure provisioning, the low density planning norms have manifold implications for creating slums and urban impoverishment. Flat low rise urban sprawls spread over a large geographic area compound the need for efficient urban transport. Ironically, the low density low rise model was perhaps motivated by cost considerations i.e. the per sq ft assumed cost in a low rise being lower than a high rise, leads to lumpy public investment in transport systems. In other words, the private dweller/owner of the low rise unit is being massively subsidized by public expenditure. As an illustration, the metro system built in Delhi at huge public cost can only yield sub optimal benefits in a flat low rise environment. There is a cogent case for significantly relaxing the planning norms of FSI/FAR of 1, along and adjacent to the metro corridor etc.

b) Admittedly, the pernicious consequences of a flat low rise planning norm are more
readily visible in dense urban conurbations than in low population towns/urban centers. This should not, however, mask the fact that these norms also act as barriers to growth that constrain the development of smaller towns/urban centers.

c) The Committee makes far reaching recommendations both in respect of rationalizing the planning/building norms commensurate with advances in technology and growth in urban transport as also arguing the case for a more socially equitable utilization of state owned property/space. The latter with illustrations drawn from a case study of Delhi (Annexure 1).

3) Creating fiscal and financially self sustaining Urban Local Bodies (ULBs)

a) At the core of the urban mess in India is the fiscal and financial un-sustainability of ULBs which, paradoxically, is often at variance with the economic growth and prosperity visible in their catchment areas. To cite some examples which are, perhaps, not wholly inappropriate; the growth of Property Taxes in Delhi vis-à-vis the increase in value of the underlying property as well as the Municipal Corporation of Delhi's (MCD) revenue realization from advertising as a percentage of the total advertising spend in its catchment area.

b) The argument that a weak economic base leads to weak and fragile institutions may, perhaps, have had some relevance at a certain stage of the development cycle. To posit the same argument in the context of urban Mumbai or New Delhi with real estate prices on par with Manhattan or Tokyo, is no longer tenable.

   In Part II, the Committee rearticulates several initiatives, culled from global best practice in financing the urban story.

4) Lack of Focus on Operation & Maintenance of Facilities and Service Standards

a) As a corollary to the pure “construction mentality” of the ULBs is the neglect or complete lack of emphasis to the operation and maintenance of services and service standards. The ULB/Government procurement in relation to urban infrastructure focuses more on construction of the facility rather than on the long term operation and maintenance of the facility and ensuring service of specified standards is provided. The Urban Authorities generally seek to procure a constructed facility and look at operation and maintenance as either to be undertaken by the authority itself or through short term sub-contracts.
b) There is no conscious and discernable attempt by ULB/Government Agencies to focus on operation and maintenance of urban infrastructure facilities or ensure that the facilities achieve a specific minimum service standard.

c) The traditional argument for poor quality of service and service standards is the incapacity or unwillingness to pay. Given the relative success in privatizing some ULB services in the larger metros, this argument is beginning to wear thin and a more probable explanation lies in a mindset incapable or unwilling to charge.

5) Lack of Focus on Common Spaces

a) There is no framework governing or providing for maintenance of common spaces particularly in areas such as markets, housing colonies, bridges, footpaths, street lighting, play-grounds, common green and open areas etc.

b) Global best practice clearly suggests, particularly in cities such as Barcelona, Chicago and many others worthy of emulation, that rapid urbanization need not be a synonym for ugliness or proliferation of slums. A fairly common though suspect argument that is often touted is that urban aesthetics cannot take precedence over provision of basic services and amenities. The Committee is of the view that this "either/or" view is misplaced and an over simplification. It should be incumbent on all ULBs to promote and create public spaces which enhance the quality of urban life.

c) Specifically, the Committee notes that in Delhi, the open spaces in markets such as Vasant Vilhar, Lajpat Nagar or even Sarojini Nagar in Delhi are poorly maintained or as is more usually the case, there is no maintenance at all despite some sporadic measures during the Commonwealth Games, 2010. What is true of Delhi is true for lesser endowed ULBs across India. There is a multiplier economic advantage in terms of increased foot falls, per capita spend and overall investment that can emanate from aesthetic and artistic maintenance of market areas etc. The Committee spells out several initiatives, based on global best practice, whereby commercially sustainable initiatives can be taken by the ULBs.

6) Presence of Multiple Authorities Having Overlapping Jurisdictions

Urban Infrastructure, more than any other sector, faces the drag of multiple authorities having jurisdiction over different aspects of the same infrastructure facility. For example, in a large urban infrastructure project it is usual to require approval for the implementation of the relevant project, depending on the city, of the municipality, the urban town and country planning department, a development authority, State Government public works department, state government irrigation department, city police, city fire department and the State Government (particularly where the levy of a user fee by the municipality may be
required). At times the same service may have multiple authorities having jurisdiction over it, for example the supply of water may be governed by the municipal corporation.

7) Lack of Integrated Approach

In light of the multiple agencies involved, most urban infrastructure projects are conceived as standalone projects without due planning or impact assessment on how to best derive or gain efficiencies from such projects. The simplest example of this is the perennial digging of city roads by various agencies to lay utility infrastructure. The same road could, at different times within a short span of time, be excavated upon by telephone utility providers, city gas distribution providers, sewerage utility, water supply utility, public transport corporation and electricity utility as a result of which stretches of city roads may not be available for large section of time continuously.

8) Lack of Capacity in Urban Bodies to develop and implement PPP based projects

a) The experience of the urban bodies is confined to works contracts and managing contractors and sub-contractors. The technical capability to develop and implement turnkey PPP projects where the revenue streams for the Project are what would sustain the Project and provide payment to the PPP developer are not concepts that are well entrenched.

b) Given the perilous financial condition of the ULBs, it is infeasible to attract the requisite talent to implement not only PPP projects but the general reform agenda envisaged in the JNNURM program. To cite an example, the Nanded Municipality in Maharashtra had an annual budget of approximately Rs 30 crores against which the capital expenditure per annum was approximately Rs 8 crore. Under the JNNURM program, the Nanded Municipality implemented urban infrastructure projects of Rs 500 crores over a 3-4 years period. This was possible on account of the handholding and capacity building assistance provided by IL&FS.

c) Unless critical steps are initiated to address the capacity constraints in the ULBs, it will not be possible to mobilize significant financial resources from outside the State sector; equally, the conception and implementation of reforms and up-gradation of urban services will be sub-optimal.

The Committee deliberated the aspect of capacity building and suggests, in Part II, a mechanism to address the issue.
The committee felt that while a serious effort is required to improve the urban infrastructure it is important that a vision be developed for our cities. The vision should emerge out of public debates on the matter using the highly developed media in the country comprising of television, print, radio and social media.

The debate would find out from the citizens about the kind of city they would like to live in.

The committee felt that the focus of all improvements in urban infrastructure should lead to a better quality of life and improved livability.

The hundreds of small settlements becoming minor cities need to be addressed with care as they are going to be the large cities of tomorrow.

Infrastructure development should precede land development and not the other way round as is being seen across the country.

The creation of JNNURM has brought about some improvement in the urban infrastructure in the country. It may be considered that a similar "Mission on Urban Planning", is established so that an efficient delivery of contextual and advanced planning guidelines for development of cities is put in place. A key role of the "Mission", should also be capacity building in city management.

All urban infrastructure improvements should be environmentally sustainable and contextual.

In light of the multiple level of issues that are involved in attempting to address the requirements of urban infrastructure sector in India, the recommendations of this committee are divided into two broad categories:

1. Measures that can be implemented in the short term, and
2. Measures that require a greater time horizon
1. Measures that can be implemented in the short term

This chapter addresses the short term solutions which, prime facie, do not entail any change in legislation and can be implemented within a short span of time with minimal intervention to existing systems:

1.1. Creation of a framework for capacity building in ULBs: Appointment of Transaction Advisors

a) It is recommended that in respect of all JNNURM cities and ULBs receiving project assistance from the Central Government, the appointment of Transaction Advisors (TA) should be actively encouraged or made mandatory for the duration of the JNNURM/other Central Government assistance. To simplify matters, it is further recommended:

i. The Central Government maintains a panel of TAs akin to the panel maintained by the Department of Economic Affairs (DEA) for viability gap funding. The size of the TA panel would need to be commensurate with the number of ULBs.

ii. The TAs should be funded by the Central Government as part of the JNNURM/other Central Government Project, on a flat market fee basis. In other words, transparent norms should be evolved whereby the TA fee structure is a fixed percentage of project cost linked to project milestones etc.

iii. The role of the TA should be:

- To prepare a financial road map for the ULB such that the ULB achieves some measure of self sustenance. This is unlike the current City Development Plan (CDP) which is more often than not used by ULBs to become eligible for JNNURM assistance and is, thereafter, forgotten

- The TA would undertake all project development work including feasibility, DPRs etc. for upgrading infrastructure projects and other services

- To provide the requisite oversight for project implementation including Project Management and Consultancy (PMC) skills

1.2. Shift from Construction Contracts to Performance Based Maintenance Contracts

a) Presently the focus of overwhelming majority of works commissioned by
government authorities is only ensuring construction of the identified work/facility. The contracts issues are essentially based on established standard works contracts that are structured only to provide a framework for completion of construction of the relevant works with the obligations of the contractor coming to an end after a short defects liability period.

b) It is recommended that government authorities be directed to shift the focus of their contracts for new facilities from merely construction works contracts to performance based maintenance contracts under which the scope and obligations of the contractor would be to:

i. Undertake the construction of the relevant facility,

ii. Undertake the maintenance of the facility for a minimum number of years (usually five or more years) and

iii. Link disbursement of monies evenly over the period of the construction/maintenance etc.

c) The performance based maintenance contracts shift the risk of defects liability to the contractor comprehensively and also dissuades contractors from attempting to undertake construction of lesser quality as they are aware that the liability of defective construction or failure of constructed facilities will be their own.

d) In this regard it is important that Municipalities should have well defined Standard Model Concession Agreements (MCA) for urban infrastructure services on the lines of MCA for roads sector. The standard MCA can have specific templates for different urban sectors like water, solid waste, sewage etc. The following needs to be considered:

i. Government should clearly define the infrastructure areas available for the private sector.

ii. A mechanism to quantify environmental impact of projects needs to be mandatory. Energy efficiency should be given importance while planning new projects.

iii. The Govt. should allocate a specific sum under the JNNURM for O&M in projects.

iv. For ensuring adherence to contractual obligations, a part of the project
outlay should be escrowed for payment to private players subject to meeting milestones and third party verification. This is particularly relevant given the general risk aversion of private players to the credit worthiness of ULBs.

v. In Public Private Partnership (PPP) projects, availability of land and environment clearance of the project should be in place before inviting private sector companies to bid for the project.

1.3. Provide for Creation of Regional Self Sustaining Infrastructure Funds

a) The State Governments/Government of India should provide for the creation of specific regional, self sustaining, professionally managed infrastructure funds that would receive contributions from the Government of India, State Governments, and the participating municipalities and then leverage the seed amounts through bonds and other instruments for creating a self sustaining fund.

b) In the Indian context, the best known example of a municipal fund is the Tamil Nadu Urban Development Fund (TNUDF), which was established as a trust under the Indian Trust Act 1882 in November 1996. TNUDF manages lines of credit from the World Bank, JICA and KfW. Recently, the Ministry of Urban Development has begun the process of setting up a PPP-Urban Infrastructure Fund at a central level. Also, the Government of Orissa is in the process of setting up a fund similar to TNUDF in Orissa with the support of KfW.

c) Internationally such funds have been used to finance large regional projects. For example the Clean Water State Revolving Fund (CWSRF) in the USA provides attractive low cost funding for projects that improve water quality, renew infrastructure and support local economies. It had started with a seed capital from the Federal Government, through the Environment Protection Agency, together with contributions from participating state governments in 1987. The CWSRF now comprises of 51 independent revolving loan funds in all states of the USA. The CWSRF issues bonds that leverage the seed funds and then provide low interest loans to identified recipients and the revenues from the projects implemented through the loans from the funds are then used to repay the loans adding to the fund. For example, in the year 2008, the total funds that were available under the CWSRF was US$ 5 billion that comprised of the following:
i. US$ 1.2 billion of Federal Capital Grants;

ii. US$ 0.3 billion as equivalent State Government Contribution to the Federal Grant;

iii. US$ 1.8 billion were raised from leveraged bonds;

iv. US$ 1.3 billion were received from repayment of loan principal;

v. US$ 0.5 billion were obtained from interest earnings. The number of loans given in 2008 was 2,030 at an interest rate of 2.2% (against the prevailing market interest rate of 4.6%).

d) The creation of such funds would not require any amendment to the existing legal regime and the same can be undertaken through executive directions and contractual documentation.

1.4. Monetization of Land and Land Based Revenues

a) A review of the applicable legal framework has indicated that most state municipal laws already provide an adequate legal basis for imposition of land based revenues such as development charges, betterment levies, improvement charges, cess, and other levies linked to benefits that land owners or land developers derive from implementation of planning schemes. However, such levies when levied generally go into the fund of the relevant authority and are, at times, not used optimally.

b) Adequate directions and systems can be established under the existing laws through rules and regulations that could enable creation of funds or use of funds for identified purposes already authorized by the existing laws.

c) The increasing population and related development activities, have given rise to competing demands for urban land. Available land on the other hand, is limited and unevenly distributed - physically, administratively and economically. As a result, economic potentials of such available lands vary creating imbalances and inequalities through the manner in which these lands are managed, further complicating the situation of an ever-increasing land scarcity and related conflicts among land users.

Broadly two approaches to managing new urban growth in India are currently in practice:
Urban Infrastructure in India

provides basic infrastructure like access, water, drainage, waste collection etc for the plot for Gross FSI (Base FSI+ premium FSI) for which betterment charges may be levied. The base FSI is available to the owner of the plot whereas the premium FSI has to be purchased from the ULB by the owner or developer at market prices. Again, the bigger plots or plots with frontage on wider roads can be given higher ADR. This will encourage and facilitate plot amalgamation and lead to optimization of use of land and development will be proportional to intensity of land use and carrying capacity of infrastructure. These concepts have been tried in Cyberabad, Kalyan-Dombivali and Hyderabad.

ii. Transfer of Development Rights (TDR): In case of land acquisition for creation of public infrastructure the owner of the land can be issued development rights in form of FSI which can be used in the predefined destination zone which may or may not be at the same location as the original plot. This mechanism is popularly known as TDR (Transfer of Development Rights). This has been tried in Mumbai.

1.5. Development and Implementation of Greater Regional Projects

a) In order to mitigate the political risks associated with urban infrastructure projects, State Governments can develop regional infrastructure projects that benefit more than one municipality. This would take the authority to grant concession and thereby authority to terminate or suspend such projects out of the jurisdiction of a single municipality and place it with the State Governments and the State Government could issue policy directives requiring prior approval of the State Government before any municipality/local authority can exit a regional project.

b) A policy framework for Regional Projects could be formulated by the State Governments without the need for any change in existing law or regulations and can also be implemented contractually and through government policy directions. For example: with a view to ease traffic problems in Delhi, NCR an overall traffic plan be made under a single Authority i.e. the Metropolitan Transport Authority. Examples abound as in the Chicago Regional Transport Authority, Philadelphia Regional Transport Authority etc.

1.6. Require Land Developers to Contribute towards Development of Infrastructure

In relation to certain large scale infrastructure investments e.g. development of a...
provides basic infrastructure like access, water, drainage, waste collection etc for the plot for Gross FSI (Base FSI + premium FSI) for which betterment charges may be levied. The base FSI is available to the owner of the plot whereas the premium FSI has to be purchased from the ULB by the owner or developer at market prices. Again, the bigger plots or plots with frontage on wider roads can be given higher ADR. This will encourage and facilitate plot amalgamation and lead to optimization of use of land and development will be proportional to intensity of landuse and carrying capacity of infrastructure. These concepts have been tried in Cyberabad, Kalyan-Dombivali and Hyderabad.

ii. Transfer of Development Rights (TDR): In case of land acquisition for creation of public infrastructure the owner of the land can be issued development rights in form of FSI which can be used in the predefined destination zone which may or may not be at the same location as the original plot. This mechanism is popularly known as TDR (Transfer of Development Rights). This has been tried in Mumbai.

1.5. Development and Implementation of Greater Regional Projects

a) In order to mitigate the political risks associated with urban infrastructure projects, State Governments can develop regional infrastructure projects that benefit more than one municipality. This would take the authority to grant concession and thereby authority to terminate or suspend such projects out of the jurisdiction of a single municipality and place it with the State Governments and the State Government could issue policy directives requiring prior approval of the State Government before any municipality/local authority can exit a regional project.

b) A policy framework for Regional Projects could be formulated by the State Governments without the need for any change in existing law or regulations and can also be implemented contractually and through government policy directions. For example: with a view to ease traffic problems in Delhi, NCR an overall traffic plan be made under a single Authority i.e. the Metropolitan Transport Authority. Examples abound as in the Chicago Regional Transport Authority, Philadelphia Regional Transport Authority etc.

1.6. Require Land Developers to Contribute towards Development of Infrastructure

In relation to certain large scale infrastructure investments e.g. development of a
suburb or new area of a city/urban region, some jurisdictions require the landowners and land developers to contribute upfront and in stages, towards the development of or extension of existing infrastructure to make the area attractive to new residents and enable a shift from existing congested areas. For example, the expansion of the Hong Kong Metro Railway to new areas that were to be developed, required the developers to contribute upfront as well as over a period of time towards the extension of the metro railways to the new areas as well as their continued operations.

2. Measures that require greater time horizon

2.1. Review of Planning Norms

The planning norms and guidelines currently in use in India have been mainly borrowed from the western context and need important modifications. The norms for provision of social infrastructure, amenities and open spaces are too high and are practically not affordable by the local planning and implementation authorities due to high land values, acquisition costs and development pressure on land. As a result these remain on paper and seldom get implemented. Provision of social infrastructure and amenities can be optimized by encouraging utility complexes rather than one plot for each amenity. This will lead to effective utilization of scarce and expensive land resource. Also, adoption of proper land development tool (eg. T P Scheme) can facilitate private provision of some of the amenities. The planning norms should be efficient for large cities and small towns due to land price variation and availability of land. Integrated large scale development should be encouraged to internally provide social facilities open spaces to reduce burden on the civic authorities.

2.2. Re-evaluating and Amending the Framework Regulating Urban Finance

a) The State laws governing municipalities clearly stipulate the financial resources available to a municipality. Broadly stated, the financial resources available to municipalities under the applicable State laws can be classified as:

i. Property Tax: This is the tax on ownership of land or buildings or immovable property within the municipal jurisdiction. Property tax is based on the valuation of the property. Each State municipal law provides for a mechanism to calculate the value of properties for the purposes of property tax;

ii. Other Taxes Imposed by Municipality: In addition to the ability to impose property tax, State municipal laws do empower municipalities to impose
other specified categories of taxes, generally after obtaining the prior approval of the State Government, etc. These other taxes can include:

- Water tax for supply of water to a premise;
- General sanitary cess for the construction and maintenance of public latrines and removal and disposal of garbage;
- General lighting tax in areas where public street lighting has been developed by the municipality;
- General fire tax for conduct and management of fire services;
- Drainage tax in areas where drainage systems have been established;
- Tax on persons exercising any profession or carrying on any trade;
- Entertainment tax on theatres and other public amusements;
- Tax on outdoor advertisements; and
- Octroi (general local body tax on entry of such goods as may be notified by the State Government). However, in light of the implementation of VAT (value added tax), most States have revoked the imposition of octroi and municipalities now obtain a compensatory share in tax revenues from the State Government

iii. **Fees**: Municipalities are authorised to levy fees in respect of certain services that it provides such as:

- License fees from persons who take shops in a municipal market;
- Fees for registration of cattle;
- Tolls on bridges and roads within the municipality;
- Revenue share/fees from outdoor advertisements;
- Parking fees; and
- Fees from licenses and permits issued by the municipality

iv. **Additional Stamp Duty**: Certain State municipal laws provide for the State Government to notify levy of additional stamp duty in relation to execution of documents that it may identify, if such documents are executed within the municipal jurisdiction. Such additional stamp duty levy is then provided to the municipality;
v. **Revenue Share from certain taxes as per the recommendation of the State Finance Commission**: State municipal law provides for the creation of a State finance commission that provides recommendations on sharing of receipts of certain State taxes between the State Government and municipalities;

vi. **State Grants**: The State may from time to time, provide grants to municipalities to support the functioning of the municipalities. It should be noted that in light of the general poor financial conditions of smaller municipalities, State grants is the main source of revenue for most of the smaller municipalities. It has been observed that the payment of salaries constitutes nearly 40% to 80% of the ULBs revenues.

b) The common underlying link between all these sources is the overwhelming lack of flexibility to a municipal authority to control its finances and implement measures such as increasing borrowing or user charges or taxes, without the consent and approval of the State Government. The underlying principle regulating municipal finance is that all the revenue goes into the common municipal fund and then is used only in accordance with the annual budget passed by the municipal corporation. However, in cases of emergency, the state government can permit use of funds otherwise not provided in the annual budget.

c) Generally, municipalities are allowed to borrow only for the purposes of:

i. Construction of permanent works authorised under the relevant municipal law; or

ii. Land acquisition; or

iii. Repayment of loans validly taken by the municipality; or

iv. Slum clearance and construction of tenements; or

v. Defraying any costs incurred in the implementation of the relevant municipal law. Some laws provide a general authorisation to raise loans for carrying out the purposes of the relevant law under which the relevant municipal bodies are created.

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2. See Chennai City Municipal Corporation Act, 1919; Coimbatore City Municipal Corporation Act, 1981
4. See Madhya Pradesh Municipalities Act, 1961
d) A few laws do not provide any indication or limitation on the purpose for which the municipal body may borrow money. However, if such laws are of a State where the Local Authorities Loans Act, 1914 is applicable then the municipal bodies regulated by such laws will automatically be governed by the limitations specified in the Local Authorities Loans Act, 1914. The limitations specified in the Local Authorities Loans Act, 1914 are as follows: (a) carrying out of any work which it is legally authorised to carry out; (b) giving relief and the establishment and maintenance of relief works in times of famine or scarcity; (c) the prevention of outbreak or spread of any dangerous epidemic disease; (d) any measures which may be connected with or ancillary to any purposes specified in (b) and (c) hereof; and (e) the repayment of money previously borrowed in accordance with the law.

e) The gap between the Property Tax and other specific tax related income of a municipality and the various other levies/charges and fees that it can impose is also highlighted by the Annual Budget of the Municipal Corporation of Greater Mumbai (“MCGM”). In the consolidated Annual Budget of the MCGM for the financial year 2010-11: (i) the actual tax income for the year 2008-09 from Tax Revenue is Rs. 5484 Crores and the estimated tax income for the year 2010-11 is estimated at Rs. 5841 Crores; (ii) the actual income from Fees and User Charges for the year 2008-09 was Rs. 1210 Crores and the estimated income in 2010-11 from Fees and User Charges is estimated at Rs. 1616 Crores and (iii) "Other Income" that was actually received in 2008-09 was Rs. 456.6 Crores and the amounts estimated to be received under "Other Income" in the year 2010-11 is estimated to be Rs. 729.8 Crores. As per the MCGM Annual Budget estimates for the Financial year 2010-11, its main sources of income would be as follows:

i. Octroi receipts are estimated at Rs. 4,650.21 crores and would amount to 36% of total income;

ii. Property Tax receipts are estimated at Rs. 2,647.49 crores and would amount to 21% of total income;

iii. Water & Sewerage Charges are estimated at Rs. 763.91 crores and would amount to 6% of total income;

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5S. 3 Local Authorities Loans Act, 1914
iv. Receipts from Development Plan Department would be Rs. 1278 crores amounting to 10% of the total income. However, again the breakup of the receipts of the Development Plan Department are not made clear and it is not possible to presently ascertain whether development charges or conversion charges are forming any part of the same; and

v. Income from "Other Receipts" would be Rs. 1767.03 crores amounting to only 13% of the total income. It is not possible to ascertain the details of the "Other receipts" and to what extent the receipts constitute levies and charges relating to land and buildings.

f) This framework requires modification and is in dire need for being updated in order to enable urban authorities to raise resources and take advantage of private capital and private participation.

g) Presently, a number of state municipal laws do not provide flexibility for private sector involvement in infrastructure development. The major legal anomaly is the requirement that all revenues be notified and deposited into the common fund of the municipality/authority. Most state municipal/urban laws only contemplate private sector participation as contractors for undertaking specific works and do not support vesting of rights for development, operation, maintenance and revenue collection and appropriation independently of the municipal authority.

The lacuna, drawbacks and limitations of the extant means and sources of finance have been detailed in the preceding section.

a) It is the considered view of the Committee that unless and until there is a major augmentation in the resource base of the ULBs, little or no meaningful improvement in the quality of urban infrastructure and services is possible. There is enough empirical evidence garnered from multi lateral studies that even a modest or token user fee can have a multiplier effect in terms of improvement/augmentation of services. As has been briefly mentioned elsewhere in this report, it is not the capacity or unwillingness to pay but the unwillingness to charge that is a major deterrent.

b) Notwithstanding the above, there are specific issues and measures that need to be addressed to enable financing of urban infrastructure projects. There is a crucial need to access long term funding.
i. Typically, projects in urban sector have construction periods ranging from 2-5 years

ii. Initial resistance towards paying user charges

iii. Accordingly paybacks vary from 15 to 30 years

iv. Hence the financial structure for these projects necessitates a substantial component of long tenor financing

v. Therefore a strong need to create layered payment structures to permit debt servicing requirements staggered over time and manageable within bounds set by project cash flows

c) In the immediate and foreseeable future, if, consistent with international practice, the capital markets are to play an active role in India’s urban story, two broad issues need to be addressed to galvanize capital market access for ULBs:

i. The highly restrictive covenants that severely restrict capital market exposure by banks/financial institutions;

ii. The absence of adequate security structures given the credit worthiness of ULBs

d) A more liberal RBI dispensation in respect of (I) above is necessary even to kick start the corporate debt market, let alone the municipal bond market.

e) In respect of imperfect security structures, currently, the only security available is a contract on ULBs cash flows. Given the inherent limitations and fragile nature of ULB finances this is a major estoppel for fresh asset creation. A guarantee facility provided by the Insurance Companies has been successfully employed in the US. A possible template could be crafted based on the Credit Guarantee Insurance Corporation of India.

f) Apart from SEBI and RBI regulatory issues which would allow banks/Financial Institutions to participate in a Municipal Bond Market or a Municipal Fund, there are other critical issues:

i. Borrowing costs: Given precarious finances, most ULBs are not in a position to service debt at commercial terms despite huge capital subsidies (80% to 50%) under JNNURM and UIDSSMT. An interest subsidy on the analogy of the Textile sector which provides 5% subsidy to SMEs in a phased manner
can be mooted linked to reform milestones/asset creation.

ii. Leverage: Ideally, the State Governments could leverage the JNNURM grants on a 2:1 or 3:1 basis such that the incremental debt service is matched by fresh income streams for the ULBs.

g) In concluding the section on municipal finance it is perhaps worth recounting the enormous contribution of the US capital markets and municipal bond markets in creating and sustaining the growth of urban centers in USA:

i. The US Municipal Bond Market increased by 90% between 2000 and 2005, whereas Indian Bond Markets witnessed a negligible growth rate

ii. Fresh bond issuance of $459 Bn in 2005 vs Rs 300 crore in India in the same year

iii. Market capitalization of $2.23 Tn as on December 31, 2005 vs Rs 1800 crore of outstanding municipal bonds in India

iv. Investor base in the US comprises households (38%) and Mutual funds (37%) vs mainly institutional investors (LIC) in India

v. More than 50% of municipal bonds in the US are AAA rated based on financial guarantees.

h) It is generally acknowledged that in a mature economy there is a rough correspondence of 1:1 between GDP and market capitalization. India achieved this threshold a while back. On current reckoning, it is anticipated that India's GDP is likely to be US$ 4 trillion in 2020 and US$ 8 trillion in 2030 and per capita income at constant US$ prices will be US$ 5000 in 2030. The point in mentioning these statistics is to provide a broad measure of the size of the Indian capital market prospectively and the fact that it is estimated (Mckinsey Global Institute - Report on Emerging Markets, September, 2010) that the market capitalization in India may increase from US$ 1 trillion to US$ 8 trillion over the next 2 decades. The challenge for policy planners and practitioners is to enable the potentially large savings pool that the capital markets can mobilize to be deployed to create and sustain growth in urban India.

2.3. Augmenting the stock of affordable housing

a) As elaborated in the earlier part of the report, the sheer quantum of new urban tenements required in India in the next 3 to 4 decades is without
The traditional paradigm of Government owned/controlled agencies e.g. DDA, BDA etc. acting as the dominant providers for housing is untenable given their track record and the magnitudes involved. This is aptly illustrated by the DDA Scheme, 2011, wherein 7.5 lakh applications were received for 16000 flats.

b) The housing market in India has become increasingly skewed against the poor. Apart from the sporadic success of some EWS schemes, the bulk of the housing market caters to middle income groups. Given the supply side constraints on availability of land and the attendant high/unrealistic land price, the housing market is driven by high margins and low volumes. The acute scarcity of affordable housing (i.e. in the range of Rs 1200/- to Rs 1600/- per sq. ft.) in towns and cities or urban centers with transport connectivity, is a key driver for urban impoverishment: from the creation of slums, increase in criminalization, suboptimal land use, and the environmental and economic costs of transporting a large work force etc.

c) In the light of recent controversies, prospectively it may not be feasible for the State to acquire large chunks of private land for housing projects particularly when the promoters/developers of such projects are private persons. The current land acquisition law and process in India is a colonial anachronism whereby change in land use is effected after the legal title of the original owner i.e. the farmer, is expunged. In the process, the farmer is effectively short changed in the wealth creation process. A more equitable and just land acquisition law would make the declaration and enforcement of change in land use mandatory prior to a State mandated acquisition process. Until such time as a more "equitable" Land Acquisition Act comes into force, the creation of fresh housing stock will be a largely private sector activity with minimal contribution to affordable housing.

d) In a scenario where neither the State Housing Agencies nor private players are in a position to meaningfully address the housing needs of persons with low or limited income (i.e. Rs 15,000/- or below per month) it is incumbent on the State to address the issue. It is fairly clear that high land prices act as the major deterrent for low or affordable housing.

e) Ironically, in all major metros, particularly in Delhi, the State is in possession of large tracts of land which, needless to say, are grossly under utilized. Government and quasi Government Agencies in Delhi take up almost 30% of
the land space in the Capital with a population density that is 90% lower than comparable private residential or other mixed land use. Examples abound of Government colonies in Delhi e.g. RK Puram, Sarojini Nagar, Kidwai Nagar, Moti Bagh, Lodi colony.

f) Imagine a situation where large tracts of low density, poor quality Government housing were selectively replaced by high quality housing with a plot FSI/FAR of 5 or 7, at no cost to the Government. In the scenario of a modern day Delhi this would imply, for instance, that a Government housing colony like RK Puram could be replaced by efficient eco friendly modern tower blocks, financed by the private sector, with the availability and quality of Government housing improving dramatically. In effect, it would imply that the State leverages its stock of land to augment the housing stock, creating quality housing for Government employees and the balance for private developers focused on affordable housing/EWS. The economic upside would be significant from a dramatic lowering of house prices, to the boost in economic activity from a surge in housing activity etc. The model that is recommended is the Singapore HDB (Housing Development Board) which encompasses housing for all categories in the same complex, thereby, precluding the creation of ghettos, slums etc.

g) The scenario outlined above will remain fiction so long as the State and our bureaucracy are unable and unwilling to imaginatively craft solutions for public procurement on the ostensive plea "that questions will be asked". As a consequence our State and bureaucracy remain obsessed with a "process centric" rather than an "outcome centric" approach. The argument that transparency impedes socially useful outcomes lacks conviction as international practice illustrates. Are we as a society and a polity to sacrifice the collective good of the many on the incapacity/ unwillingness of our bureaucracy/State to craft an imaginative solution within the framework of law?

2.4. A planning/legal framework for common areas

a) There are a variety of examples pursued by ULBs internationally for maintenance of common spaces. Typically, in a green field development the whole area is planned holistically. The problem is acute in the Indian context
whereby building permissions have historically been provided on a plot by plot basis with a result that the common spaces are "orphaned". Hence there is no "Mai Baap" for these spaces which end up being encroached etc.

b) In respect of the existing markets etc there is a need to evolve either legislation or byelaws which would make it mandatory for every market place etc. to create an association which would need to do an O&M of the surrounding space including beautification. The cost could be recouped from a variety of sources e.g. parking fees levied in the area to be appropriated by the Market Association, contribution by the association etc., advertising rights, sponsorship etc. The beautification of the market areas should also be eligible for grants from the Tourism Ministry and the Tourism Departments of the State Governments.

c) The attempts in the context of the Commonwealth Games to beautify Connaught Place in New Delhi are a pointer in the right direction. Similar efforts aimed at the Darya Ganj area in New Delhi would yield enormous upsides in terms of consumer footfalls and boost tourism revenues well in excess of the capital and O&M expenditure. To cite some well known examples, the uniform white and blue painting scheme for all houses/buildings in Tunis, capital of Tunisia as well as the Dempsey Road area in Singapore.

d) There is a need to formulate a suitable law for development and maintenance of common infrastructure and common areas including providing for creation of maintenance funds from developers and commercial establishments that benefit from the common area and common infrastructure. Existence of the following is important for a city:

   i. Land Fill Sites Redevelopment - Redevelopment of land fill sites by creating landscaped parks and green areas with basic amenities

   ii. Parks & Playgrounds - Up-gradation and maintenance of parks and playgrounds should be undertaken on a regular basis for maintaining greenery and also for having well maintained play grounds.

2.5. Restructuring of legal framework governing land use and urban land development

a) The present legal framework governing land development in most of the States does not provide for a clear framework for private participation in township development nor does it provide for an efficient process for ensuring change in land use. The present framework is essentially for individual building
regulation and ensuring change in land use for identified parcels of land and does really allow or enable or seek to regulate development of larger townships by private developers. The existing framework governing land use is also a hindrance for the relevant authorities and state government to derive optimal benefits from development of land etc.

b) It should also be noted that, unlike the case of China, the bulk of the ULBs revenue is derived from lease rentals as:

i. the legal framework governing municipal authorities does not allow municipalities to sell or otherwise alienate land vested with them without the prior approval of State Government;

ii. the legal framework governing development authorities imposes functions on the development authorities that require the authority to formulate and implement its own development schemes resulting in lopsided, sub optimal schemes. Such schemes require the development authorities to raise resources and incur expenditure etc. This has several obvious drawbacks as it limits the extent of land revenue based proceeds available with it to implement other projects;

iii. the legal framework only empowers certain authorities such as development authorities to obtain income from leasing of land on commercial basis. A vast majority of the authorities do not have the authority or jurisdiction to undertake commercial dealings in their land resources, thereby limiting the scope of land based financing for their other social/non-revenue functions

c) There is a complete absence of a regulatory framework that could reduce or manage the risks relating to land financing structures or provide incentives for better management of land as a resource by the relevant authorities. There is no clear framework in Indian law that:

i. prescribes actions that would reduce risks or improve economic efficiency of land based financing mechanisms or

ii. establish incentives for authorities to better align their functioning to achieve desirable common economic and development goals.

Thus, simply stated the present statutory framework governing the various
land based levies are framed to achieve a limited purpose of enabling the availability, under state government control, of an immediate revenue base for a particular authority.

2.6. Shift Towards Common Framework Governing Urban Sector

a) One of the main hindrances in urban development and planning is that the regulatory framework governing the sector not only varies from state to state but also within the state may vary from town to town. This only increases legal and regulatory risks and also increases uncertainty.

b) This can be remedied, more readily, at the state level by the state government developing a clear land asset management strategy applicable to all authorities having jurisdiction in relation to urban development. At the Government of India level, this can be sought to be achieved through creating a regulatory framework for regional urban development and by exercising the residual legislative power vested under List I of Schedule VII of the Constitution of India and formulate a national law relating to urban infrastructure development.

For example: Delhi’s development into a world-class destination requires Co-ordination among several authorities, co-ordination among NCR states, co-ordination between Delhi State and Central Governments.

c) Existing planning bodies (like NCRPB) lack an execution mandate resulting in severe bottlenecks at execution stage as compared to planning stage. Major issues in execution are non-availability of land at reasonable prices, procedural cobwebs and viability gaps for private participation.

d) There is need to have an empowered body. This body should have a Chairman and members (equal numbers from the govt. and private sector). The body should run through a Secretary General who will be its CEO appointed by the Board through a transparent process. It should also have requisite officers and staff from government and private sector. The body should have, inter-alia, the following powers:

i. Approval for any social infrastructure project above a pre-determined size in the NCT of Delhi

ii. Final approval for any deviation in land use from the approved master plan in Delhi
Annexure 1
Case Study of Delhi

In Delhi there exist exclusive zones for the rulers, away from natives which is an outdated concept for modern India. Vast areas of the city have sub-optimal and inappropriate usage. Development in the city is lopsided and needs to be rationalised to accommodate the needs and aspirations of the rapidly growing number of Delhi’s citizens. There is no space for essential social infrastructure, despite very large land area. Even where land is available, the “created shortage” has driven prices so high that social-need projects cannot be viable.

50% of Lutyens Bungalows Zone (LBZ) would be enough to provide 3,500 acres of new parks, sporting and recreation areas for citizens of Delhi without impacting quality of life of residents, or character, or environment of LBZ. Though difficult to quantify, for every VIP user of a Lutyens bungalow, 10 others conduct petty business or trade.

Heritage lies in the Lutyens layout, and in signature structures and not in barracks and bungalows. Disfiguring of the real treasures in Lutyens Delhi - Baroda House by the Railways, Patiala House by the District Court, Bikaner House by Rajasthan Govt. and many others is difficult to justify. If “chabutras” built in 1912 can be demolished in Chandni Chowk, more recent disfiguring can certainly be corrected.

Delhi needs an urgent re-think about area optimization. The real misuse of LBZ is done by the Government itself:

- It is difficult to understand why the Pusa Institute needs to conduct agriculture research on hundreds of acres in the heart of Delhi?
- No reason why the Railways keep over a hundred acres in State Entry Road, next to Connaught Place for virtually zero utility?

The body should have an Integrated City Level Approach for:

i. Focused infrastructure creation which is required by a city for its efficient functioning
ii. Creating pleasant ambience and environment
iii. Better movement management and security
iv. Efficient information dissemination
Annexure 1

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- No reason why the Railways keep over a hundred acres in State Entry Road, next to Connaught Place for virtually zero utility?
Why the Air Force is keeping an exclusive golf course and club in 200 acres next to PM's house?

Why a defunct Safdarjung airport should not be a place for Delhi's citizens?

No reason why the seldom used National Stadium, last used optimally in 1951, should occupy pride of place in Lutyens Delhi, when the same was not originally planned?

Why World War 2 barracks should occupy prime Delhi?

In view of the above, a land use audit is necessary to release the prime locations for social / public use such as hospitality developments, health services, exposition developments etc.

**Master Plan Delhi 2021 (MPD 2021)** - There exist huge potential for creating space for social infrastructure in Delhi. MPD 2021 calls for 100 acres city parks for every 1 million population which is grossly inadequate. It is suggested to have at least 500 acres which will have the effect of creating more than 10,000 acres of city parks by the year 2021. The State has to rethink its social spaces as London has over 2,000 acres of parks in the city centre which is over 55% of the area of London city and Singapore which has the second highest population density in world in a very small area has 15,000 acres of parks and 35 golf courses, for only 4.5 million citizens.

Delhi needs to be very careful in its planning of “complete needs” for citizens and visitors, and not lock up huge prime land resources for the exclusive use of the very few. In recent times, most new residential developments, office developments, retail developments, recreational developments, and industrial developments have happened outside Delhi. An exclusionary shift of fresh economic activity outside Delhi could, if unchecked, transfer its core economic catalysts to Gurgaon, Noida and others and it is worth to consider that what Delhi will have in 2021. Delhi has the space to be much more, but it must make over, must build new while preserving the worthwhile old.

Moreover, land being the vital factor for development, the land acquisition procedure must be made less cumbersome to meet the demand and avoid location of heavy industries in non-conforming areas as well as encroachments on public and private land. A dispensation of the DMRC type from the Parliament for land acquisition / optimization would be ideal.