

Training Module



“Developing Smart City”

**Regional Centre for Urban &
Environmental Studies, Lucknow**
(Established by the Ministry of Urban Development, Govt.
of India)

Contents

	Page no.
Foreward	ii
Preface	iii
Highlights of National e-Governance Plan	iv-v
Introduction	1
Governance & Development	2-6
Case for Good Urban Governance	6-7
What is Good Governance	7-8
What is SMART City	8
How to Make the City “SMART”	8-12
E-Governance a tool to achieve SMART City	12
Suggestive Road Map for E-governance	13-16
Issues in E-Governance	16-21
Appendix-I	22

Foreword

Urban local bodies are basically responsible for provision and maintenance of basic infrastructure and services in cities. It is a hard fact that municipal bodies of the country are facing a peculiar situation where the demand of the citizens for better services has been rising due to the exposure of citizens to the level of services in mega cities and cities of the developed world, but our cities are unable to match these demands. It is also being realized that the existing arrangements for urban service delivery are inadequate and overstrained.

Good Governance Campaign launched by Government of India emphasizes on adoption of e-governance as one of the measures for building capacity of urban local bodies and for promoting "SMART" (simple, moral, accountable, responsive and transparent) governance.

The Centre has developed this training module on Developing SMART Cities. We are confident it will be of immense help to the City Managers & Policy Makers to achieve the goal of Developing SMART Cities.

**RCUES,
Lucknow**

**(Nishith Rai)
Director**

Preface

As a result of ever increasing demands on the city infrastructure, the city networks are continuously changing with time. This poses an additional challenge for the concerned authorities. Local governments are experiencing increasing pressure from their citizens and civil society organizations to provide accessible and affordable infrastructure and basic services, in fact they want their City to be SMART. A smart city is one whose citizens can effortlessly communicate, interact and conduct businesses with the authorities and with each other.

Hence the need is to develop an Efficient System using the technology and implementing reforms. The main advantage of implementing such a system is obviously reflected in the amount of energy saving and accordingly the reduction in the both operational and capital cost. The smart systems are not only developed to reduce the cost but also designed to facilitate citizens in getting the municipal service, as recommended by the Sixth Report of the 2nd Administrative Reforms Commission (ARC) which lays emphasis on achieving Citizen satisfaction and creating a mechanism to give citizen a voice. According to DTA Ventures Management partner Dr Naim Yunus, citizens in a smart city will also be able to access up-to- date information.

The Regional Centre for Urban & Environmental Studies, Lucknow took up the task of preparing a Training Manual on “Developing SMART City” for the officials of Urban Local Bodies to acquaint them with the concept and the process. I am sure that this training module will come up their expectations.

9th July 2009

Rajeev Narayan
Dy. Director

Highlights of National e-Governance Plan

The National e-Governance Plan (2003-2007) of Indian Government seeks to lay the foundation and provide the impetus for long-term growth of e-Governance within the country. The plan seeks to create the right governance and institutional mechanisms, set up the core infrastructure and policies and implement a number of Mission Mode Projects at the center, state and integrated service levels to create a citizen-centric and business-centric environment for governance.

NeGP vision

Make all Government services accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency & reliability of such services at affordable costs to realise the basic needs of the common man

State Mission Mode Projects for Municipalities

The National Mission Mode Project (NMMP) for Municipalities is one of the Mission Mode Projects that has significant citizen interaction, since municipalities provide a large number of basic services for millions of citizen living in India 's urban centres. It is envisaged that MMP for municipalities would provide a major fillip to the Government of India's Ministry of Urban Development's urban reform agenda. The vision for the National Mission Mode Project for e-Governance in Municipalities is to leverage the ICT opportunities for sustained improvement in efficiency and effectiveness of delivery of municipal service to citizens. The Key Objectives of the MMP include

- Provide Single Window services to citizens on any time , any where basis
- Increase the efficiency and productivity of ULBS
- Develop a single and integrated view of ULB information system across all ULBs in the state
- Provide timely & reliable management information relating to municipal administration for effective decision making
- Adopt a standards-based approach to enable integration with other related applications

The overall structure for the NMMP scheme has been divided into three tiers i.e. Centre, State and Urban Local Body (ULB) level. MMP,

in its current form, envisages covering all ULBs in class 1 cities (423 in total) during the period 2006-07 to 2010-11. Detailed year wise breakup is as under:

- 2007-2008-35 Cities (Million Plus Population)
- 2008-2009-69 Cities
- 2009-2010-106 Cities
- 2010-2011-106 Cities
- 2011-2012-107 Cities

In order to achieve its vision and objectives, NMMP envisages implementation of various application modules covering the following services/management functions within ULBs:

- Registration and issue of birth and death certificate
 - Payment of property tax, Utility Bills and Management of Utilities that come under ULBs
 - Property Tax
 - Water Supply and other Utilities
 - Grievances and suggestions
 - Building plan approvals
 - Procurement and monitoring of projects
 - E-procurement
 - Project/ward works
 - Health program
 - Licenses
 - Solid Waste Management
 - Accounting system
 - Personnel Information System.
 - Grievances Handling, including implementation of the elements of the Right To Information Act, Acknowledgement, Resolution monitoring.
-

DEVELOPING SMART CITY

As India's cities continue to swell, the challenge of improving the urban infrastructure will be magnified. For instance, only 73 per cent of India's urban population has access to improved sanitation facilities. Recent evidence confirms that the rate of growth of urban centres in the country is declining more rapidly than was previously anticipated, though the proportion of people living in urban areas continues to rise. According to the 2001 census, 27.8 per cent of the Indian population resides in cities, compared to 25.5 per cent in 1990. The urban population is expected to rise to around 40 per cent by 2020¹. As India's cities continue to swell, the challenge of improving the urban infrastructure and services will be magnified. Importantly, the recent trends towards concentration of urban population in a small number of large urban centres have been taking shape over a century. While the number of urban centres doubled between 1901 and 1991, the urban population increased eight-fold, resulting in a top-heavy urban hierarchy. Future demographic and economic growth is likely to concentrate in and around 60 to 70 large cities in the country having a population of a million people or more². The demographic trends towards urbanization are accompanied by a change in the management and financing of urban development as a result of liberalization. Decentralization of municipal governance has led to a substantial reduction in budgetary allocations for infrastructural development. The gross inadequacies of infrastructure demand corrective action besides proper management of existing infrastructure and municipal services. Urban development represents one of the great challenges for India over the next two decades. Given the socio-political reality in India, it will be difficult for private sector to bring about changes in the pattern of investment in infrastructure.

Governance and Development:

The India's economic and technological transitions have profound impact on the functioning of government. The main consequences of this transition are likely to³:

- Devolution of power to local bodies will continue at an accelerated rate, Pressure from the grassroots will increasingly supplant governance from the top down.
- Local communities will come to depend less on state and Central government action and more on their own initiative and organizational capacity.
- Financial devolution will give local bodies more authority to levy taxes and greater control over the use of local natural resources. It will also make them increasingly responsible for financing local infrastructure.
- People at the local level will be more directly involved in setting priorities for distribution of resources and managing projects.
- Government agencies of all types at all levels will be more responsive and accountable to the public as customers.
- Mechanism will be evolved to increase transparency and reduce corruption.
- E-governance will prove responsiveness and reduce corruption in some areas. Computerization of information systems coupled with downsizing, higher recruitment standards and stricter discipline will increase administrative efficiency.
- The educational, technical and professional qualifications of political leaders will rise.

In the context of rapid transformation across nation, there is an urgency to hasten the reform process not confined by a minimalist approach of curbing corruption, improving delivery of service and creating a transparent and accountable bureaucracy. In a democratic set up, the sustenance of a bold agenda of reforms requires political will at the highest level of government to with stand the pressures of vested interest and sustained pressure by the people⁴. The nation would improve its capacity to shape the future. Participation and decentralization share a symbolic relationship. However, the process of decentralization and empowerment of people was initiated from the top rather than from the pressures from the grass roots. The role of NGO's in mobilization community and its empowerment for active participation in development process and governance has got momentum in the recent past. This has led to participatory development paradigms and governance in the context of changed policy regime and development paradigms.

The basic aim of any sound policy of development should be to enhance the quality of life and well being of the people. The Approach Paper of India's Tenth Five Year Plan recognizes this fact and emphasizes that economic prosperity measured in terms of per capita GDP does not always ensure enrichment in quality of life as reflected. Development has to be sustainable and should have a long-term perspective. Development has also to give due regard to equality and social justice. During the last decade deteriorating law and order situation, rising graph of crimes, criminalization of politics and politicization of the administrative machinery, mega financial scams and scandals, falling standards, norms and values, all round have eroded public confidence in the government and its entire machinery. Their promises and assurances carry little weight. In the prevailing

situation, private sector in development arena is a welcome development. The financial crisis at the state and Central Government levels also depicts inability to spare funds to enter all sectors of development. The liberalization and globalization have also opened the scope of private sector to play a more prominent role in the economic development of the country.

The role of government is now largely becoming that of 'facilitator' and 'regulator' of development. The changed paradigm of the public sector now is in providing public goods and services without necessarily producing them. The government has now realized the need to release latent energies and stimulate private initiative in various facets of development process. The development now has to be the collective effort of individuals, NGO's, private sector and the public sector. In some areas it could be public-private participatory effort for better and quicker results. Government, however, has to continue playing the major role for development in the social sector, like health care, education and upliftment of the disadvantaged groups of people etc. For infrastructure development, government has also to play a prominent role. The private sector players will require more time to gain financial strength to make any sizeable investments in the infrastructure projects. There is room for public-private partnership in some areas like power generation, transmission and distribution, telecommunication, municipal services etc. There is need to have greater public-private participatory approach for better development results.

Improving the quality of governance for sustainable development has emerged as the most crucial concern among developing nations. Governance encompasses the process of selecting, monitoring and replacing governments. It includes the capacity to formulate and

implement sound policies and it assumes a respect for citizens. Governance can be construed as consisting of six different elements. These are: (i) voice and accountability, which includes civil liberties and freedom of the press; (ii) political stability; (iii) government effectiveness, which includes the quality of policy making and public service delivery; (iv) quality of regulations; (v) rule of law, which includes protection of property rights and an independent judiciary and (vi) control of corruptions. Improving the quality of governance requires a system of checks and balances in society that restrains arbitrary action and harassment by politicians and bureaucrats, promotes voices and participation by the population, reduces incentives for the corporate elite to engage in state capture, and forests the rule of law. Improving governance should be seen as a process integrating three vital components: (a) knowledge, with rigorous data and empirical analysis, information technology tools, (b) leadership in the political, civil society and international arena; and (c) collective action via systematic participatory and consensus building approaches with key stake holders in society⁵. The need of hour at present seems to be adopting a normative model of Good Management Approach incorporating both the politico-administrative as well as the moral dimensions of good governance. This should include (a) a more strategic or result-oriented (efficiency, effectiveness and service quality) orientation to decision-making; (b) replacement of highly centralized organizational structures with decentralized management environment integrating with new urban, rural and municipal institutions, where decisions on resource allocation and service delivery are taken close to the point of delivery; (c) flexibility to explore alternatives to direct public provision which might provide more cost effective policy outcomes; (d) focusing attention on

matching of authority and responsibility as a key to improving performance, including mechanism of explicit performance contracting; (e) creating of competitive environments within and between public service organizations; (g) strengthening of strategies capabilities at the centre to steer government to respond to external changes and diverse entries quickly, flexibly and at least costs; (h) greater accountability and transparency through requirements to support on results and their full costs; (i) service-wide budgeting and management systems to support and encourage these changes; (j) the most important task to break the growing nexus of bureaucrats, politicians and criminals leading not only to a breakdown of the total system but also to a sense of cynicism amongst the citizenry; (k) adopting of innovations and evolving suitable mechanism to eliminate corruption at both political and administrative levels and strengthen citizen's grievance redressal system; (l) improving the system of delivery at the cutting edge of administration through replacement of the existing archaic bureaucratic procedures by absorbing some appropriate percepts inherent in the philosophy of New Management and (m) making improvements in the working atmosphere of the government institutions and offices to reflect a new work culture and a changed administrative behavior incorporating the principles of transparency, responsiveness, accountability, participative and citizen-friendly management⁶.

Case for Good Urban Governance

Urban growth is an inevitable and irreversible process with large base of urban population with substantial number of poor and vulnerable groups. It has a complex, intense and dynamic nature of urban problems. Poverty, shelter less, congestion and crime are increasingly becoming urban. The Urban Local Govt. is facing problems

of limited resource base and limited capacities which has further accelerated drastic deterioration of the urban environment. It may lead to social exclusion of the poor, vulnerable and marginalized groups.

WHAT IS GOOD GOVERNANCE?

Governance, defined traditionally as “the acting or manner of governing” no longer means just that, It extends beyond the conventional law-enforcing, service providing domain of the state to **imply a process of development which is participatory and takes into consideration the interests of all stakeholder groups in society, especially of the most excluded and disadvantaged sections.**

Good governance is seen as **a process that promotes and encourages sustainable socio-economic, human and cultural development of societies and people.**

The 1999 Human Development Report for South Asia goes one step further to introduce the concept of **Human Governance**, conceptualized as “governance... which is dedicated to securing human development”. It is described as being composed of three dimensions of good governance – good political governance, good economic governance, and good civic governance. Hence Good governance is about providing an efficient and effective administration that is committed to improving the quality of life of the people. It is about what people expect from the administration, and the willingness and capacity of the administration to fulfill their expectations. **The main aim of good governance is to develop a SMART City through:**

- i) Improved service delivery systems.
- ii) Simplicity of procedures.

- iii) Accessibility to services.
- iv) Efficient financial management.
- v) Higher levels of accountability and transparency in governance.

WHAT IS SMART CITY?

It recognizes that poor exist inside and outside the formal authority and institutions of Government. It includes Government, the private sector and civil society. It emphasizes process, and it recognizes that decisions are made based on complex relationships between many actors with different priorities.

Thus SMART city promotes a citizen-friendly, citizen-caring, responsive, accountable & transparent administration. SMART stands for:

- S** – Simplify Procedures,
- M** – Moral Governance (Rule of Law),
- A** – Accountable Administration,
- R** – Responsive Government,
- T** - Transparent Systems.

HOW TO MAKE THE CITY "SMART"

In order to make the city SMART one needs to target the internal organizational processes of governments, the information and service delivery, transparency in governance, political credibility and accountability and citizen- government interface. Hence certain reforms are required to be implemented for achieving SMART City as given under:

- 1. Simplify Procedures: For ensuring effectiveness, increasing efficiency and minimizing corruption, there is a**

need to simplify the procedures. This can be done through the following reforms:

- *Implementation of decentralization measures as envisaged in 74th Constitution Amendment Act. States should ensure meaningful association/engagement of ULBs in planning function of parastatals as well as delivery of services to the citizens.*- The reform shall ensure participation through establishment Metropolitan Planning Committee, District Planning Committee & Ward Committees.
- *Assigning or associating elected ULBs with "city planning function".* - Views of the elected representatives will form part in City Planning and ensure participation of the citizens.
- *Enactment of Community Participation Law to institutionalize citizen participation and introducing the concept of Area Sabha in urban areas.*
- *Encouraging Public Private Partnership.*
- *Administrative reforms.* -The administration shall become more effective and efficient through proper manpower planning by creation of specialized posts and abandoning those are obsolete in the present environment.
- *Structural reforms.* - The structure of governance after reform will make the system effective, efficient and more citizen centric.
- *Introduction of system of e-governance using IT applications like, GIS and MIS for various services provided by ULBs/ parastatals.* - Will ensure simplification of

procedures through proper grievance redressal system, easy access to *information and services*, easy and timely communication along with safeguards against tampering of data.

2. Rule of law: For ensuring Rule of law in urban governance the following reform are helpful:

- *Reform of property tax with GIS, so that it becomes major source of revenue for Urban Local Bodies (ULBs) and arrangements for its effective implementation so that collection efficiency reaches at least 85% within next seven years.* - Will ensure 100% coverage with no scope for favours to the privileged and will minimize corruption. Will also ensure dissemination of information to all the citizens through internet etc.
- *Introduction Property Title Certification System in ULBs.* – Will ensure reduction in litigation.
- *Revision of bye-laws to make rain water harvesting mandatory in all buildings and adoption of water conservation measures.* - Will ensure proper enforcement of water conservation measures.

3. Accountability: For making urban governance accountable the following reforms are helpful:

- *Adoption of modern, accrual-based double entry system of accounting in Urban Local Bodies/Parastatals.* - This will ensure financial accountability through generation of balance sheets and listing of assets and liability.
- *Introduction of system of e-governance using IT applications like, GIS and MIS for various services provided by ULBs/*

parastatals. - Will ensure accountability through proper grievance redressal system, easy access to *information*, easy and timely communication along with safeguards against tampering of data.

4. Responsiveness: For making urban governance Responsive, the following reform are helpful:

- *Introduction of system of e-governance using IT applications like, GIS and MIS for various services provided by ULBs/ parastatals.* - Will ensure responsiveness through proper grievance redressal system, easy access to *information*, easy and timely communication.
- *Earmarking at least 20-25% of developed land in all housing projects (both Public and Private Agencies) for EWS/LIG category with a system of cross subsidization.*- Will ensure the responsiveness of the ULB/ parastatals towards the need of shelter for the poor.
- *Structural reforms.* - The structure of governance after reform will help & support the system becoming more responsive towards its citizens.
- *Administrative reforms.* - The administration shall become more responsive towards its citizens through decentralization of authority and responsibility.

5. Transparency: For ensuring Transparency in urban governance the following reform are helpful:

- *Introduction of system of e-governance using IT applications like, GIS and MIS for various services provided by ULBs/ parastatals.*- The availability of information online (through

self service kiosk, internet, e-suvidha kendra, single window system etc.) will increase transparency.

- *Adoption of modern, accrual-based double entry system of accounting in Urban Local Bodies/Parastatals.* - This will ensure financial transparency through balance sheets.
- *Enactment of Public Disclosure Law to ensure preparation of medium-term fiscal plan of ULBs/Parastatals and release of quarterly performance information to all stakeholders.*
- *Structural reforms.* - Will result in openness in functioning and transparent administration.
- *Enactment of Community Participation Law to institutionalize citizen participation and introducing the concept of Area Sabha in urban areas.* - Will introduce transparency through involvement of the community.

E-Governance a tool to achieve SMART City:

E-governance is composed of information technology, people, and governments. E-governance is the application of electronic means to improve the interaction between government and citizens; and to increase the administrative effectiveness and efficiency in the internal government operations. It goes beyond the use of computers, GIS, government websites, e-mails, digital access to government information or electronic payments etc. In fact **E-Governance is a tool which uses all the above & contributes in Governments decision making process & effective delivery of services to achieve Good Governance.** Thus making the city "SMART".

SUGGESTIVE ROAD MAP FOR E- GOVERNANCE

(I) Step I

1. Political will and top management support is essential for implementing e-governance.
2. Feasibility study for interlinking various services of Central & State Govt. departments at a single window.
3. Coordination between various departments of State Govt. i.e. Urban Development, Poverty Alleviation, Housing, Information Technology etc.
4. State Govt. decision for Centralized Architecture, so that a uniform system is implemented throughout the State and it would also ensure participation of national & international firms of repute. Besides this the centralized architecture would be cost effective and easy to service.
5. Decision on financing options for the project could be taken as per the option discussed above.

(II) Step 2

1. **Appointment of a Nodal Agency for** Project Conceptualization and Implementation. The work would include the following:
 - i) Preparation of DPR.
 - ii) Implementation of DPR- tendering & contracting, financial management etc.
2. **Phasing of Implementation-** The implementation of e-governance plan may be done in 3 phases:

➤ **Phase-I - Computerization of Internal Processes**

- i. Municipal Taxes: Property tax , Water tax etc.
- ii. User Charges, Fee & License.
- iii. Billing & Accounting of rental properties like shops, ghumti, thela, hoardings and etc.
- iv. Preparation of birth & death certificate.
- v. Municipal Personnel System: Employees records, pay slip preparation etc.
- vi. Procurement Management: Purchase System of Stores & Workshop.
- vii. Building Permission.
- viii. Social Security Schemes.
- ix. Municipal Budgeting & Accounting System.

➤ **Phase-II - Introduction of Citizen Interfaces**

- i. Citizen Complaints Management.
- ii. GIS for Municipal Services.
- iii. Development of on line calculation of taxes & payment system.
- iv. Development of Website.
- v. RTI.
- vi. Single Windows Systems for various activities.
(eg. E-Seva Kendra)

➤ **Phase-III- Less-Paper office**

- i. Security of Data.

- ii. Secure Processes.
- iii. Digitization of Paper Documents.
- iv. Workflow and Document management Systems.
- v. E-learning.
- vi. Knowledge Management.

3. Project Monitoring and Evaluation: For this work a third party monitoring agency would be a good option.

(III) Step 3

4. Training and Capacity Building

- i. Trainings in Application software.
- ii. Hands on trainings for the employees.
- iii. Interactive Training CDs.
- iv. Trainings modules hosted on web site.
- v. New version trainings.

5. Information Education & Communication

- i. Door-to-door campaigning.
- ii. Distribution of pamphlets etc.

(IV) Step 4

- Project Continuity over a period of time
 - i. Call Center type Help Desk maintained by Service Provider On 24x7 basis.
 - ii. Log of all Help Desk calls maintained.
 - iii. Call disposal tracking system.

- iv. Based on the severity of problem call is escalated up.
- Project Sustainability (Financial and Operational)
 - i. Private sector involvement in operation & maintenance.
 - ii. At E-Suvidha Kendra services of other departments like, ticketing, passport application, driving licenses, ration cards etc. may be added so that the staff at these centres is gainfully employed throughout the year & revenue is generated.

ISSUES IN E-GOVERNANCE

The main issues in E-governance are :

(i) Financing : The major issue in introducing and implementing e-governance at the ULB level is financing which can be dealt through the following options available:

1. Govt. Sector: For procuring funds for implementing e-governance the following options of finance are available:

- **National Urban Information System (NUIS) Scheme-** NUIS Scheme which is Centrally Sponsored Scheme with a funding pattern on the basis of matching grant in the ratio of 75% Central Assistance and 25% State contribution. It broadly comprises of two components:
 - Urban Spatial Information System (USIS): Seamless integration of databases in two scales :: 1:10 000 & 1:2000
 - National Urban Databank and Indicators (NUDBI): Data on periodic basis

- **National e-Governance Plan (NeGP)**- The Government approved the National e-Governance Plan (NeGP), comprising of 27 Mission Mode Projects (MMPs) and 10 components. The National Mission Mode Project (NMMP) for Municipalities as part of JNNURM is one of the Mission Mode Projects (MMP) under NeGP that has significant citizen interaction, since municipalities provide a large number of basic services for millions of citizen living in India's urban centres. It is envisaged that MMP for municipalities would provide a major fillip to the Government of India's Ministry of Urban Development's urban reform agenda. The vision for the National Mission Mode Project for e-Governance in Municipalities is to leverage the ICT opportunities for sustained improvement in efficiency and effectiveness of delivery of municipal service to citizens. The Key Objectives of the MMP includes:
 - Provide Single Window services to citizens on any time, any where basis.
 - Increase the efficiency and productivity of ULBs.
 - Develop a single and integrated view of ULB information system across all ULBs in the state.
 - Provide timely & reliable management information relating to municipal administration for effective decision making.
 - Adopt a standards-based approach to enable integration with other related applications.

The funding patter under NMMP is as under:

- For 4 Million Plus Pop. Cities- Central Share-35%, State Share-15% & ULB/Parastatal Share- 50%.
 - For Cities between 1-4 Million Pop.- Central Share-50%, State Share-20% & ULB/Parastatal Share- 30%.
 - **12th finance Commission-** Funds under 12th Finance Commission are available for Computerization at the ULB level as computerization.
 - **State Govt. funds etc.-** Most of the State Governments have also provided exclusive funds under their budgets for computerization and e-governance at the ULB level which can be tapped.
2. **Private Sector Funding:** - For procuring private sector funds for e-governance by the municipalities the major issue would be the acceptability of the municipality and preparedness for implementing e-governance plan in line with the objectives of private sector. Most of the big MNCs and Corporate Houses have budgets for social development which can be explored and harnessed by the municipalities through innovative ideas for e.g. Microsoft Corporation is funding training of poor on the use of computers in many cities. Such initiatives can be made part of e-governance plan at the municipality level.
3. **Public Private Participation:** - PPP is a strong possibility to fund large projects since it combines accountability with efficiency and helps in augmenting resources. Various models of PPP can be explored depending upon the size of urban local bodies.

4. **Introduction of user charges:** - The municipalities can generate funds for operation and maintenance of the initiatives taken under e-governance plan through introduction of User Charges for e.g. a small amount may be charged for each transaction at the citizen facilitation centres.

(ii) Procedural & legal issues :

1. It would require procedural and legal changes in the decision and delivery making processes.
2. It would require the employees and lower level Institution to be delegated more authority.
3. De-layering of the decision making levels which would lead to re-engineering and appropriate sizing of the decision making machinery.

(iii) Privacy: The privacy of the citizens also needs to be ensured while addressing the issues. One has to ensure that the information flow would pass through reliable channels and seamless network.

(iv) Security of System : Secured ways of Transactions:

1. Access to the system only by authorized person. (e.g.- Login ID & password which cannot be hacked)
2. The identity of the citizens requesting services need to be verified before they access / use the service. (eg.- Digital signature)
3. Secured & reliable channels of online payment & authenticity of online payment receipts. (eg.- Payments through credit/debit cards etc.)

(v) Inter-linkages of various State Govt. Depts./ Agencies :

1. Inter-operation and collaboration of various State Govt. Depts./ Agencies (eg.- Design issue for integrated services.) It would help in self sustainability of the system. There is an urgent need for a better coordination between various departments of State Govt. i.e. Urban Development, Poverty Alleviation, Housing, Information Technology etc.

(vi) Delivery of services: Insufficient E-governance Infrastructure facilities. Massive investment would be required in:

1. Hardware & Software procurement.
2. Training & Capacity Building the employees.
3. IEC and citizens awareness.

(vii) Standardization: Standards need to be worked out for the following:

1. Technologies to be used – Centralized or decentralized architecture.
2. Standard software to bring uniformity in all ULBs.
3. other issues like naming website, email etc.

(viii) Use of Local Language: The access of information should be permitted in the language most comfortable to the citizens e.g. bilingual.

(ix) Knowledge management: Knowledge sharing, creation of Database, replicating best practices.

(x) Change Management: The system may encounter resistance from the Govt. (Political), citizens, but also by the various interest groups (Officials & Employees). Hence it would require involvement of stakeholders from the initial stages.

(xi) Availability of Records:

1. Updated data not readily available in Manual records (e.g.: Arrear Demand Register)
2. Various Databases and missing information

(xii) Manpower:

1. There is a Dearth of skilled personnel (ULB staff) to work on computer; the staff should be trained adequately.
 2. Trained staff should not be transferred frequently.
-

References:

1. **India Vision, 2020**, Planning Commission, Govt. of India, Delhi, 2004, p. 99.
2. Ibid. p. 999.
3. **India Vision 2020**, Opcit pp. 137-138.
4. **Ram Chandran, H.**, Governance And People's Participation, Vision 2020, IN: India Vision 2020, Planning Commission, Govt. of India, Delhi, 2004, p. 937.
5. **Jain, R.B.**, Good Governance For Sustainable Development: Challenges And Strategies In India, *Indian Journal of Public Administration*, Vol. 1 (1), Jan-March, 2004, p. 52.
6. Ibid. pp. 63-64.

Appendix-I

List of identifies cities/urban agglomerations (UA) as per 2001 Census- for the first phase 2007-2008-35Cities (Million plus Population)

City/UA Name of the State Population (in lakh)

a) Mega Cities/UAs

1. Delhi Delhi	128.77
2. Greater Mumbai, Maharashtra	164.34
3. Ahmedabad, Gujarat	45.25
4. Bangalore, Karnataka	57.01
5. Chennai, Tamil Nadu	65.60
6. Kolkata, West Bengal	132.06
7. Hyderabad, Andhra Pradesh	57.42

b) Million-plus Cities/UAs

<table style="width: 100%; border-collapse: collapse;"> <tr><td>1. Patna, Bihar</td><td style="text-align: right;">16.98</td></tr> <tr><td>2. Faridabad, Haryana</td><td style="text-align: right;">10.56</td></tr> <tr><td>3. Bhopal, Madhya Pradesh</td><td style="text-align: right;">14.58</td></tr> <tr><td>4. Ludhiana, Punjab</td><td style="text-align: right;">13.98</td></tr> <tr><td>5. Jaipur, Rajasthan</td><td style="text-align: right;">23.27</td></tr> <tr><td>6. Lucknow, Uttar Pradesh</td><td style="text-align: right;">22.46</td></tr> <tr><td>7. Madurai, Tamil Nadu</td><td style="text-align: right;">12.03</td></tr> <tr><td>8. Nashik, Maharashtra</td><td style="text-align: right;">11.52</td></tr> <tr><td>9. Pune, Maharashtra</td><td style="text-align: right;">37.60</td></tr> <tr><td>10. Cochin, Kerala</td><td style="text-align: right;">13.55</td></tr> <tr><td>11. Varanasi, Uttar Pradesh</td><td style="text-align: right;">12.04</td></tr> <tr><td>12. Agra, Uttar Pradesh</td><td style="text-align: right;">13.31</td></tr> <tr><td>13. Amritsar, Punjab</td><td style="text-align: right;">10.03</td></tr> <tr><td>14. Visakhapatnam, (A P)</td><td style="text-align: right;">13.45</td></tr> </table>	1. Patna, Bihar	16.98	2. Faridabad, Haryana	10.56	3. Bhopal, Madhya Pradesh	14.58	4. Ludhiana, Punjab	13.98	5. Jaipur, Rajasthan	23.27	6. Lucknow, Uttar Pradesh	22.46	7. Madurai, Tamil Nadu	12.03	8. Nashik, Maharashtra	11.52	9. Pune, Maharashtra	37.60	10. Cochin, Kerala	13.55	11. Varanasi, Uttar Pradesh	12.04	12. Agra, Uttar Pradesh	13.31	13. Amritsar, Punjab	10.03	14. Visakhapatnam, (A P)	13.45	<table style="width: 100%; border-collapse: collapse;"> <tr><td>15. Vadodara, Gujarat</td><td style="text-align: right;">14.91</td></tr> <tr><td>16. Surat, Gujarat</td><td style="text-align: right;">28.11</td></tr> <tr><td>17. Kanpur, Uttar Pradesh</td><td style="text-align: right;">27.15</td></tr> <tr><td>18. Nagpur, Maharashtra</td><td style="text-align: right;">21.59</td></tr> <tr><td>19. Coimbatore, Tamil Nadu</td><td style="text-align: right;">14.61</td></tr> <tr><td>20. Meerut, Uttar Pradesh</td><td style="text-align: right;">11.61</td></tr> <tr><td>21. Jabalpur, Madhya Pradesh</td><td style="text-align: right;">10.98</td></tr> <tr><td>22. Jamshedpur, Jharkhand</td><td style="text-align: right;">11.04</td></tr> <tr><td>23. Asansol, West Bengal</td><td style="text-align: right;">10.67</td></tr> <tr><td>24. Allahabad, Uttar Pradesh</td><td style="text-align: right;">10.39</td></tr> <tr><td>25. Vijayawada, Andhra Pradesh</td><td style="text-align: right;">10.39</td></tr> <tr><td>26. Rajkot, Gujarat</td><td style="text-align: right;">10.03</td></tr> <tr><td>27. Dhanbad, Jharkhand</td><td style="text-align: right;">10.65</td></tr> <tr><td>28. Indore, Madhya Pradesh</td><td style="text-align: right;">16.40</td></tr> </table>	15. Vadodara, Gujarat	14.91	16. Surat, Gujarat	28.11	17. Kanpur, Uttar Pradesh	27.15	18. Nagpur, Maharashtra	21.59	19. Coimbatore, Tamil Nadu	14.61	20. Meerut, Uttar Pradesh	11.61	21. Jabalpur, Madhya Pradesh	10.98	22. Jamshedpur, Jharkhand	11.04	23. Asansol, West Bengal	10.67	24. Allahabad, Uttar Pradesh	10.39	25. Vijayawada, Andhra Pradesh	10.39	26. Rajkot, Gujarat	10.03	27. Dhanbad, Jharkhand	10.65	28. Indore, Madhya Pradesh	16.40
1. Patna, Bihar	16.98																																																								
2. Faridabad, Haryana	10.56																																																								
3. Bhopal, Madhya Pradesh	14.58																																																								
4. Ludhiana, Punjab	13.98																																																								
5. Jaipur, Rajasthan	23.27																																																								
6. Lucknow, Uttar Pradesh	22.46																																																								
7. Madurai, Tamil Nadu	12.03																																																								
8. Nashik, Maharashtra	11.52																																																								
9. Pune, Maharashtra	37.60																																																								
10. Cochin, Kerala	13.55																																																								
11. Varanasi, Uttar Pradesh	12.04																																																								
12. Agra, Uttar Pradesh	13.31																																																								
13. Amritsar, Punjab	10.03																																																								
14. Visakhapatnam, (A P)	13.45																																																								
15. Vadodara, Gujarat	14.91																																																								
16. Surat, Gujarat	28.11																																																								
17. Kanpur, Uttar Pradesh	27.15																																																								
18. Nagpur, Maharashtra	21.59																																																								
19. Coimbatore, Tamil Nadu	14.61																																																								
20. Meerut, Uttar Pradesh	11.61																																																								
21. Jabalpur, Madhya Pradesh	10.98																																																								
22. Jamshedpur, Jharkhand	11.04																																																								
23. Asansol, West Bengal	10.67																																																								
24. Allahabad, Uttar Pradesh	10.39																																																								
25. Vijayawada, Andhra Pradesh	10.39																																																								
26. Rajkot, Gujarat	10.03																																																								
27. Dhanbad, Jharkhand	10.65																																																								
28. Indore, Madhya Pradesh	16.40																																																								