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Municipal Accounting Reforms in India

An Implementation Guide

C.T. Abraham

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The author wishes to acknowledge the inputs and suggestions given by chartered accountants Pradeep Tyagi and Alok Shiromany, whose specializations include municipal accounting, public finance management, and capacity building of urban local bodies.

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ABSTRACT

India's first generation of economic reforms made a significant change in the perception of the role of local self-government bodies in the Indian public governance system. One of the important reforms introduced during this period was the Constitution (Seventy-fourth Amendment) Act, 1992. This reform empowered the urban local bodies in India to function as local self-governments as the third tier of governance. With the view to further strengthen these urban local bodies in their financial management the central government also developed guidelines for moving to a double entry accrual-based accounting system through the introduction of a National Municipal Accounts Manual.

This working paper provides guidance for implementing municipal accounting reforms in ADB's urban projects in India. The objectives of this paper are to highlight the importance of implementing accounting reforms in the urban local bodies, to inform the processes involved in the implementation, and thus to provide the way forward to improve urban local bodies' financial status and overall management.

ABBREVIATIONS

ADB	–	Asian Development Bank
BHMC	–	Bhopal Municipal Corporation
BMC	–	Bhubaneswar Municipal Corporation
C&AG	–	Comptroller and Auditor General of India
CFO	–	Chief financial officer
DEAS	–	Double entry accrual-based accounting system
ICT	–	Information and communication technology
IT	–	Information technology
MAR	–	Municipal accounting reforms
MAS	–	Municipal administrative system
MIS	–	Management information systems
MoUD	–	Ministry of Urban Development
MRC	–	Municipal Reform Cell
NMAM	–	National Municipal Accounts Manual
NMATM	–	National Municipal Accounts Training Manual
NMAVM	–	National Municipal Asset Valuation Methodology Manual
TSP	–	Total solution provider
ULB	–	urban local bodies

I. INTRODUCTION

1. The primary duty of urban local bodies (ULBs) is the efficient provision of urban services through an optimum level of revenue maximization. Citizens regard themselves as consumers of ULBs' services and demand greater accountability. ULBs are accountable to citizens for operational and fiscal performance to all stakeholders, as accountability is the most relevant and overarching theme in a democracy.

2. The Constitution (Seventy-fourth Amendment) Act, 1992 has redefined the role, power, and functions of ULBs in India and has included these in the Twelfth Schedule of the Constitution. This requires the state governments to initiate the process of reforms in ULBs, as the local government institutions form part of the State List of the Constitution.

3. Along with the devolution of powers, the accounting systems followed by ULBs were also subjected to reviews and directions for reforms. In 2001, the Supreme Court of India, while deciding on a public interest litigation, recognized the defects of cash-based accounting and directed the Government of India to develop guidelines for an accrual-based accounting system that could capture the full costs of services. Consequently, the Ministry of Finance issued *Guidelines for the Utilization of Local Bodies' Grants* in June 2001. In these guidelines, the Comptroller and Auditor General (C&AG) of India prescribed formats for budgets and accounts for ULBs, accounting policies, and costing of utilities and services. Based on the C&AG task force's recommendations, the Ministry of Urban Development (MoUD) began to prepare the National Municipal Accounts Manual (NMAM). Subsequently, C&AG oversaw the development of the National Municipal Accounts Training Manual (NMATM) and the National Municipal Asset Valuation Methodology Manual (NMAVM). Based on these, state governments are required to prepare state-level accounting manuals and state-level training manuals according to their requirements.

4. The central government makes it mandatory for each ULB to adopt a double entry accrual-based accounting system (DEAS) in order to receive various development funds. The Thirteenth Central Finance Commission introduced a performance-linked system of devolution of funds from the central divisible pool of taxes. The conditions for providing performance-linked funds relate to improvements in auditing and implementation of DEAS. The government has made improving the financial management systems one of the mandatory conditions to be fulfilled by ULBs in order to be eligible for funds under the Jawaharlal Nehru National Urban Renewal Mission.

A. Cash-Based Accounting

5. Most ULBs in India follow a cash basis of accounting wherein cognizance is not given to the timing of event and no distinction is made between revenue and capital items. Revenue items are recognized only when cash is actually received, irrespective of the timing when the revenue was accrued. As a result, accounting consideration is not given to the timing of the event of the transaction. Similarly, expenditure items are recognized only when cash is actually paid, irrespective of the timing when the expenditure is accrued. As a result, accounting consideration is again not given to the timing of the transaction. The whole focus is on cash management to comply with budgetary and legislative guidelines. Cash-basis accounting, as followed by India's ULBs, has the following inherent limitations:

- (i) Financial statements do not reflect the complete and comprehensive financial position of the ULB with relation to fixed assets, capital work-in-progress, current assets, current liabilities, depreciation for replacement of assets, etc.
- (ii) Separate revenue and cost allocations are not ascertainable for the different utilities and services provided by the ULBs.
- (iii) No weight is given to the concept of “matching,” i.e., the idea that expenses from a specific period should be set against the revenues from the same period.
- (iv) No disclosure is made about contingent assets and liabilities that may turn into committed ones on account of guarantees given or letter of comfort issued by the ULB.
- (v) It provides room for fiscal opportunism i.e. tax revenues may be collected in excess during a particular period followed by high incidence of refunds after interest has been accrued.

6. Therefore there is a strong need to move toward a double entry accrual-based system of accounting to overcome the above problems and to present the financial status of the ULBs in more comprehensive and consolidated manner.

B. Double Entry Accrual-Based Accounting Systems (DEAS)

7. Accrual-based accounting is a method of recording transactions in which revenues, costs, assets, and liabilities are reflected in the books of accounts of the period in which they accrue and arise, irrespective of actual receipt or payment taking place during the period. The basic feature of a double entry accrual-based accounting system is that it considers timing of each event and also makes a distinction between capital and revenue items. Therefore accrual-based accounting helps in accurately determining the financial performance and financial status of a ULB for any period and on any date. This system of accounts provides the following benefits:

- (i) Under the accrual system, revenue is recognized when it is earned and the claim of the entity in respect of which such revenue is recognized becomes reasonably enforceable. Thus, an item of income constitutes revenue even if cash was not received against it.
- (ii) Expenditure is recognized when the liability for payment arises even if the payment is not made at that time.
- (iii) The system matches expenditures for a particular year with the income earned in that year, thus providing a basis for a correct understanding of the true operating performance of a ULB in a particular year.
- (iv) Accrual-based accounting clearly distinguishes between items of a revenue nature and items of a capital nature, which helps in the correct presentation of financial statements of income and expenditure account and balance sheet.
- (v) Under the accrual system of accounting, costs, which are not charged to income and expenditure account, are carried forward and kept under continuous review. Any cost that appears to have lost its utility or its power to generate future revenue is written off.
- (vi) The surplus or deficit as shown at the year-end under the accrual accounting system represents the true and correct financial position of the ULB, which is based on the transactions of the year.
- (vii) Information available through accrual-based accounting assists in proper financial analysis and reporting and better financial management.

- (viii) The statement of assets and liabilities prepared by a ULB under the accrual system of accounting presents a proper picture of what it owns and what it owes.
- (ix) Accrual-based accounting facilitates better knowledge of the “full” cost of services and helps in identifying the financial viability of rendering services. With accrual-based accounting, the cost incurred for providing specified services is more readily available and ascertainable, thereby enabling decision makers to identify the subsidy granted and the extent of recovery of cost.

8. The benefits of accrual-based accounting promise a superior method of tracking the resources of ULBs as compared to cash-based accounting. The relevance, objectivity, timeliness, completeness, and comparability of the accounting records and statements are enhanced in an accrual-based accounting system because records of transactions and events takes place whenever a transaction occurs, even if no cash is received or disbursed.

9. A double entry accrual-based accounting system is the foundation of good urban management as it provides decision makers with a complete financial picture of the city, rather than the simple cash flow balances of a cash-based accounting system. Under this system, the municipal assets and financial transactions can be verified and managed more efficiently. The true cost of services can be determined, cost-recovery tariffs can be set, and realistic budgets can be created and monitored. The introduction of a new system requires in-depth training for accounting staff and for other departments that need to utilize the improved information. The new accounting and financial reporting systems also require legislative changes at the state and city levels.

II. MUNICIPAL ACCOUNTING REFORM: LESSONS LEARNED

10. Different models have been adopted by ULBs in the rollout of accounting reforms, including centralized, decentralized, and independent approaches. In the case of ULBs that are independently managing their own accounts without any centralized supervision or monitoring by the department of urban affairs, there can be a risk of losing continuity with the transfer of staff, change in supervisor, etc. Bigger corporations might be able to sustain staff capacity and function without interruptions. There are models of independent state institutions playing a major role in maintaining the software and providing training for ULB staff. In some ULBs the state’s independent institutions manage and control the ULBs by using their own staff. This runs the risk of the ULB staff being not fully involved in the accounting activities, as they don’t fully own the system. Some of the lessons learned from the municipal accounting reforms in some ULBs have been reviewed and are reported below.

A. Centralized Supervision and Records Monitoring of Municipal Reform Cell, Karnataka

11. In the model followed by Karnataka’s Municipal Reform Cell (MRC), one of the main features of the accounting system is that all 213 ULBs within the State of Karnataka are centrally monitored by the MRC. All the ULBs share the same software, and accounting data is stored on a central server maintained by the MRC. At any point in time, the accounts of the ULBs can be reviewed by MRC staff. This special feature of the accounting system has the following distinct advantages:

- (i) A single set of accounting policies and guidelines is followed by all the ULBs in the state, leading to unified system of accounting across the ULBs.

- (ii) Computer software and information technology (IT) systems can be maintained and monitored by a centralized team located at the MRC office.
- (iii) Centralized training facilities are available to all ULB staff, and their knowledge can be utilized in any other ULB in case of staff transfers.
- (iv) All the ULBs have a similar set of records, which could lead to the consolidation of information and data for policy reviews and accounting reforms.
- (v) The centralized database can be subjected to analysis and reviews for management information and overall statewide monitoring and benchmarking.

B. Improved Financial Management of Bhubaneswar Municipal Corporation

12. Bhubaneswar Municipal Corporation (BMC) faced the challenge of generating and mobilizing more financial resources internally to finance the growing demand for infrastructure and services in the city. Further, the cost of delivery of urban services was not determinable, which in turn led to a lack of reliable information for the various users. BMC was following a cash-based single entry accounting system for maintaining the municipal accounts and all the limitations of the single entry accounting system were prevailing. Budgeting was done on an incremental basis and there was no scientific approach to forecasting revenue and expenditure. There was no proper system of budget encumbrances for works done at the sanction stage. Hence, there was a regular problem of overshooting the budget cap, and requests for re-appropriation of funds were normal. To overcome these challenges BMC implemented a municipal accounting reform program with the following action plans and strategies:

- (i) The existing financial management system including financial records and statements were reviewed and analyzed in order to understand past revenue and expenditure trends of BMC.
- (ii) Potential short-term interventions required to strengthen revenue base and expenditure management of BMC were identified through consultative process with administrative and elected officials of BMC and other stakeholders, including the community.
- (iii) The Orissa Municipal Accounting Manual was developed in accordance with the stipulations of NMAM.
- (iv) External support was provided to BMS for a period of 12 months to implement the action plan, and also to provide training to staff on DEAS.
- (v) A provisional opening balance sheet as of 1 April 2006, as well as financial statements for the years 2006–07 and 2007–08, were prepared and published. The accounting system is currently maintained with the help of Tally software and is managed by the ULB without the support of consultants.

C. Municipal Administration System of Bhopal Municipal Corporation

13. Bhopal Municipal Corporation (BHMC) is in the process of developing a comprehensive and fully integrated e-governance solution called the Municipal Administration System (MAS) under the Department for International Development (DFID)-funded Madhya Pradesh Urban Services for the Poor program. The Municipal Administration System is based on a Systems Analysis and Program Development application of integrated enterprise resource planning software. This is conceptualized as a central online integrated information system that includes all the functions and services of the ULB. The overall concept of MAS is based on a centralized system architecture approach. MAS will help in all processes relating to different functions and activities of BHMC and facilitate in establishing a single source of information, i.e., all reports and information would be based on common, validated, and authenticated data. The main

objective of MAS is the creation of citizen friendly services, thus improving transparency and efficiency in municipal services. This would include the following municipal systems:

- (i) **Municipal Transaction Processing System:** This will provide an online transaction-processing interface for all the functions and services of BHMC.
- (ii) **Municipal Management Information System:** This will generate all the analytical and exception reports required by the senior management of BHMC for decision making.
- (iii) **Citizens Interface System:** This will provide information and services to the external users of MAS, including citizens, government, financial institutions, donor agencies, contractors, etc.
- (iv) **Municipal Monitoring and Evaluation System:** This will integrate the baseline data (selected information from the other initiatives and surveys such as UN Habitat data, Census Survey, GIS, etc.) with the MAS data for tracking progress of municipal reforms and programs.

14. MAS will provide comprehensive coverage of all processes (citizen-centered processes as well as internal back office processes) of BHMC and facilitate development of focused plans to ensure effective and efficient utilization of resources.

D. Total Solution Provider System of Rajasthan

15. The Rajasthan Urban Infrastructure Development Project appointed a total solution provider (TSP) from the private sector for development and implementation of an integrated computerized system for service delivery to citizens, proper management of municipal accounting functions, revenue improvement, and capacity building of municipal personnel in the use and maintenance of all the systems in six of its project ULBs (Ajmer, Bikaner, Jaipur, Jodhpur, Kota and Udaipur). The terms of reference of the TSP included: design of all accounting modules (budget, revenue, expenses, inventory, fixed assets, salaries, and some internal administrative control systems); procurement of computers; development of software; maintenance of hardware and software; compilation of opening balances; feeding of accounts data throughout the year from April 2007 to March 2012; and production of accounts-related reports. The complete data entry of the accounting activities of the ULBs has been outsourced to the TSPs, who are stationed at the ULBs. This includes updating all the records and providing accounting-related services and maintenance of the computers systems. Financial statements are prepared regularly using the new system and are submitted to ULB staff. In addition to the accounts, various e-governance modules, like marriage, birth, and death registration, trade licenses, online cash collection, etc. are also integrated with the accounting modules. As the systems are maintained on an outsourced model, the ULBs have not developed in-house capacity and therefore the sustainability of the outsourced functions need reassessment. The records generated have not been fully utilized by ULB staff to improve efficiencies of the accounting systems.

16. Generation of accounting records through a TSP is an alternate solution in cases where staff resources are not adequate or available. This enables the ULBs to complete the work on a daily basis, with the assistance of qualified TSP staff. Further, TSP staff would also be in a position to inform the ULB staff about the status of the accounts and finances of the ULBs. This meets the overall daily routine accounting requirements of the ULBs. All the same, the absence of adequate monitoring and supervisory skills in the ULBs and at the state level remains a huge gap, as the ULBs would not be able to fully utilize the information and data

generated by the system for resolving outstanding reconciliation issues, improving recovery of dues, for clearing outstanding items in bank reconciliation statements, etc.

E. Information Kerala Mission: Supported Accounting in Kerala

17. In seven pilot ULBs in Kerala, a common DEAS module was rolled out, effective 2007–2008. These accounts were maintained based on the new system for four years, through 2010–2011. The accounts were also uploaded into the public domain. It was noted that there was a lack of institutionalized arrangements for the ULBs to own and maintain the system and to provide continuous support. This created certain disruptions in the smooth running of the software. These systems were transitioned to a new Information Kerala Mission system, effective 2011–2012. The transition process from an existing system to a new process could have been planned more thoroughly to ensure preparedness, meet staff training requirements, and ensure readiness for rollout without disruption of accounting activities. Further, the new software should have been reviewed by accounting experts to ensure adequacy of the design of the modules to provide internal controls and detailed analysis. The ULBs have not enhanced staff capacity to analyze and improve the quality of Management Information System (MIS) reports. The absence of a state-level body to monitor and supervise the functioning of the ULB accounts can affect the quality of the accounting records. The presence of an external institution like Information Kerala Mission in the ULBs would provide support but would reduce the independence of the ULBs and staff capacity. It is important that the ULBs own the accounting systems, build up staff capacity, and be supervised and monitored by the department of urban affairs for a sustainable system. The absence of quality MIS reports leads to dissatisfaction at the senior levels of management for decision making.

F. Initiatives on Staff Capacity Building

18. The Municipal Reform Cell (MRC) of Karnataka had taken the initiative to adopt a municipal staff cadre and amend the recruitment rules to create new posts for accountants with commerce degree qualifications. Other staff members of the accounts department are also given training in the new accounting system. This has resulted in staff capacity development in operating the accounting and software modules. External agencies also provide additional capacity building support to the municipal staff. After the functions of MRC are transferred to Karnataka Municipal Data Society, there will be greater flexibility for Karnataka Municipal Data Society to hire professionals at market rate and improve the staff capacity in the accounting functions.

19. The Kolkata Municipal Corporation has also taken the initiative to involve staff in the development of accounting software and also in the implementation of accounting reforms. This has resulted in staff capacity development in operating the accounting and software modules. To supplement the requirements external agencies provide additional capacity building support to municipal staff. Kolkata Municipal Corporation supports continuous training programs organized by the Institute of Urban Management in Kolkata. Consequently, there is a structured training program in place through which adequate training is provided to the staff.

20. There is a major capacity constraint among the staff of many ULBs. This is mainly due to inadequacy of staff caused by the state's restrictions on recruitment to positions and due to the staff's insufficient qualifications and capacity. Also, in many ULBs the staff is liable to be transferred to and from the accounts department without due consideration for qualifications and skill requirements. In some ULBs, the staff is not transferable, which can lead to permanency among the staff, who could then provide long-term support if adequate capacity was built.

G. Summary of Lessons Learned

21. The lessons learned from the above cases provide guidance for the direction in which the municipal accounting reform should be taken in order to be effective and useful for the management of ULBs. These lessons are summarized in the Box.

Box: Summary of Lessons Learned

Positive

- A centralized model is the most successful model, and this requires a champion institution at the state level. This increases the chances of success due to central monitoring, maintenance, reviews, and feedback at the state level.
- A total service provider model is suitable at the initial stage in urban local bodies (ULBs) where staff capacity is low, with the condition to transfer responsibilities to the ULB after building its capacity.
- State institutions can assume the role of catalyst in the reform in the initial stages but should have definite plans to build ULB staff capacity and exit at an appropriate time so the ULB can function as the monitoring body.
- Elaborate enterprise resource planning models could be introduced gradually after the ULBs have gained capacity through less elaborate modules.
- Staff capacity building institutions at the state level would provide great impetus to the process.
- Developing a cadre of municipal accounting staff would provide sustainability to the accounting reform.

Negative

- The absence of a standardized software module leads to the development of individual modules with varying degree of completeness and usefulness.
- The implementation process has generally stopped after establishing only basic accounting processes as the ULBs do not move on to higher levels of reforms like implementing management and cost accounting and then further to the e-governance phase.

ULB = urban local body.

22. The lessons learned from the various case studies indicate the varied ways in which the accounting reform process is being carried in various ULBs. As ULBs are independent in their mode of self-governance, the methods adopted by the ULBs are bound to vary. Further, in the absence of a central monitoring body to supervise the accounting reform activities of the ULBs, there is lack of uniformity in the accounting modules being used and also in the reports created. The ultimate result is the absence of an efficient and sustainable effort to improve the financial performance of the ULBs. This leads to the conclusion that there is an urgent need to bring about greater uniformity and standardization in municipal accounting reforms.

III. FOUNDATIONS OF MUNICIPAL ACCOUNTING REFORM

23. A municipal accounting reform (MAR) is the basic tool required for overall financial and management reforms in ULBs. The MAR primarily aims at three major fundamental financial reforms: (i) improved asset–liability management; (ii) improved expenditure management; and

(iii) maximization of revenue collections. This can be achieved through a gradual process of activities that can be broadly categorized into three major phases of financial management:

- (i) **Phase 1:** Basic accounting and budgeting reforms;
- (ii) **Phase 2:** Financial management reforms, through the introduction of management accounting techniques and tools; and
- (iii) **Phase 3:** Implementation of e-governance and integration of all processes with the finance and accounting functions.

24. The success of a MAR depends on the robustness of the supervision and monitoring structure, and the inclusion of a comprehensive accounting system architecture capable of extensive recording and intensive analysis, auditing, and review.

A. Supervision and Monitoring Structure for Municipal Accounting Reform

1. Institutional and Legal Arrangements

25. An appropriate institutional arrangement is the most crucial requirement for the rollout of a MAR. The arrangements required for efficient implementation of a MAR include the following institutional setup prior to launching the MAR:

- (i) a state-level body to monitor and supervise the functioning of the accounting systems in the ULBs;
- (ii) an information technology (IT) support system to run and maintain the accounting software;
- (iii) a formal and regular training and capacity-building program for the accounting staff;
- (iv) an effective audit system including arrangements with external accountants to conduct the balance sheet audit and review; and
- (v) establishment of a municipal accounting cadre at the state level for continuous and sustainable capacity in the ULBs for accounting functions.

26. The change of policies at the state level is generally outside the control of local governments, but is intrinsic to the decentralization process. For this reason, MoUD has advised all the states to revise their respective Municipal Acts in accordance with the Model Municipal Law. ULBs have the authority to make decisions about human resources, financial mobilization, private sector participation, and organizational restructuring, which can improve the chances of a successful MAR.

2. Staff Capacity

27. Overall, there is a major staff capacity constraint in most ULBs. This is mainly due to inadequacy of staff strength caused by state restrictions on recruitment to positions and due to inadequate qualifications and capacity of the staff. Also, in many ULBs, the staff is liable to be transferred to and from the accounts department without consideration for their qualifications and skills. In some ULBs, the staff is not transferable, which leads to continuity and provides long-term support if adequate capacity is built by providing appropriate training to the staff. States and ULBs, with help from the MoUD, should review their current staffing practices to build capacity of municipal staff through the creation of a state municipal cadre of accountants, introduction of a certification program for ULB accountants, and provision of continuing training

programs. An ideal staffing structure would be as follows with the relevant qualifications and staffing numbers:

Function	Staff Position	Staff Count	Qualification
Revenue	Chief Revenue Officer Zonal Revenue Officer Accounting Assistants	1 1 each per Zone Based on volume	Accountants Graduate in Accounts Graduate in Accounts
Expenditure	Chief Accounts Officer Zonal Accounts Officer Accounting Assistants	1 1 each per Zone Based on volume	Accountants Graduate in Accounts Graduate in Accounts

3. Auditing Arrangements and Finalization of Accounts

28. Audits of ULBs' accounts are conducted on a regular basis by the local fund auditor, state performance auditor, and state auditor general. The Comptroller and Auditor General (C&AG) is also involved and supports ULB audits in line with the recommendations of the Eleventh Finance Commission. The C&AG is entrusted with technical guidance and supervision for the maintenance of accounts and the audit of local bodies, including providing technical guidance to the Director of the Local Fund Audit. These audits highlight performance issues and the quality of decentralization. With the adoption of the double entry accounting system, the auditor's capacity also needs to be enhanced.

29. In some cases, a separate external audit is carried out by an independent firm of chartered accountants to certify the true and fair view of the financial statements. This is usually insisted upon by financial institutions and development agencies for an independent professional opinion of the financial position and performance of the ULB. The system of using external chartered accountants to review the accounts has been adopted in some ULBs. This external assistance was found to be very useful wherever this process has been adopted, as it supplements the ULB staff's capacity.

30. Many states have set up steering committees to oversee the transition from the existing cash-based accounting system to an accrual-based system. The steering committee is well positioned to take on some of the actions to strengthen the audit system such as:

- (i) strengthening the role of the local fun auditor by reviewing the existing audit processes, methodology, roles, mandate, capacity constraints, and backlog of audits;
- (ii) collaborating with the C&AG office to reinforce training efforts for the double entry accrual system, risk-based audit, use of computer-aided audit techniques, and sampling;
- (iii) examining the scope of cost audits in selected areas;
- (iv) assuming the role of Municipal Audit and Accounts Committees to ensure that audit reports are examined and there is accountability of the councilors for public funds; and
- (v) examining the efficacy of independent attestation through a panel of professional auditors.

31. The audit recommendations should be implemented in a time-bound manner to strengthen the role and function of auditing in urban local bodies. Further, there should be a simultaneous effort to encourage public disclosure and improve public oversight of ULB's

accounts. Some ULBs publish their accounts either in the newspapers in an abridged format or on the ULB's website.

B. Robust Accounting System Architecture

1. Comprehensive Accounting Modules

32. ULBs' accounting module should be comprehensive and include all aspects of the accounting functions. The accounting modules should also encompass sub-modules such as budgeting, fixed assets, current assets, inventory, payroll, projects under implementation, liabilities, etc. In addition, administrative modules, such as building permissions, project monitoring, a birth and death registration system, a marriage registration system, a grievance addressing system, legal cases to follow up, a project/ program database, slum data management, a solid waste management system, a wastewater management system, a streetlight management system, an advertisement revenue system, and the ULB's website should also be included. The accounting modules should have sub-modules to provide more detailed information wherever required. This would facilitate better analysis of accounting records and data.

33. The revenue module of ULBs should function as an integral part of the accounting system and be connected to the accounting module to capture revenue collections on a real-time basis. The revenue module also should provide for:

- (i) a database of the taxpayers under the various revenue heads of the ULB;
- (ii) generation of demand automatically on the due date;
- (iii) collection of taxes and other user charges at multiple points with an option to up-scale it to alternate methods of collecting such as credit cards;
- (iv) provision for online printing of receipts;
- (v) provision for the citizens to view their dues online or at payment counters; and
- (vi) a facility to generate the revenue-related MIS reports.

2. Ring Fencing of Utilities and Services

34. The accounting system also should have modules to capture expenditures under various grant funds and for various services and utilities of the ULB, including the following:

- (i) water supply, sewage, and drainage;
- (ii) solid waste management;
- (iii) roads development and maintenance;
- (iv) slum service;
- (v) commercial projects like hospitals and schools; and
- (vi) general administrative services.

35. The objective of service-based accounting is to arrive at the income and expenditures for services separately and to assess the service delivery viabilities. This is possible through the adoption of cost-accounting principles of direct expenses and the capturing of indirect and overhead expenses through allocation and apportionment procedures. As a result of the ring-fenced accounting procedure adopted, the accounting system should be able to provide the overall cost of a service and revenue for a period and per unit of service.

3. Reports and Management Information Systems

36. The strength of any MAR lies in the quality and type of reports and information that can be generated from the accounting system, which can provide data for management and decision making by ULB management. The reports generated should be capable of capturing updated information with details for review and analysis to aid in decision making. Some of the important reports generated include:

- (i) aging analysis of demand collection balances of revenue items;
- (ii) categorized analysis of revenue arrears;
- (iii) status reports on fixed assets, inventories, projects under implementation, cash, bank, and treasury; and
- (iv) aging analysis of receivables and payables.

C. Computerization and Information Technology

37. An essential part of any MAR is the decision about the use of IT and the design and development of software. The scope of computerization can range from a small system to an elaborate system. The decision would be based on the state policy and the ULB's choice. An ideal choice would be to decide on centrally managed computer software and IT infrastructure. The extent of centralization could be at the ULB level, district level, or State level. The decision about the extent of centralization or decentralization depends on the ULB's management and the extent of control exercisable by the state system based on the institutional infrastructure available to monitor and supervise the system. Data should be centralized at the ULB level, district level, or state level for greater supervision, monitoring, and maintenance.

38. The software should essentially include modules, which are required in a full-fledged accounting system of a ULB. The modules should be able to interface with each other and be able to produce required reports and analysis in a structured and streamlined manner.

1. Applications Based on Client Server Technology

39. With this technology the systems are located in a single location only and are not dependent on any external agency for data transfer or communication. By following this system, the processing and communication of the data is fast. The disadvantages are the high cost difficulty of using the same application software by multiple ULBs, and the costly and time-consuming generation of MIS from multiple ULBs. It is also difficult to maintain application software at different ULB locations.

2. Web-Based e-Governance Application Modules

40. With high-speed hardware and Internet access available throughout the country, this is a convenient and relatively inexpensive solution. The application is hosted on a central server. No costly hardware needs to be deployed at all the locations. The compilation of different ULBs' data is automatic and no additional processing is required. The system software needs to be deployed only at the central server. The software should be expandable to connect to different terminals within the ULB through wireless systems. It may also be possible that the ULB would adopt the various modules in a phased manner. The software should be flexible and be able to accommodate such an approach to the development of modules.

3. Information Technology Installation and Maintenance

41. The selection of hardware when implementing computerization in the ULB is also very important. The hardware selected should be best available with the latest technology to avoid redundancy in the near future so that the ULB is able to get maximum benefit out of it over the years. Hardware and system software requirements include the following:

- (i) a server and an adequate number of desktop machines with adequate capacity;
- (ii) internal networking;
- (iii) Windows operating system;
- (iv) Visual Studio Professional software;
- (v) Structured Query Language (SQL)/Oracle database;
- (vi) Internet connection; and
- (vii) antivirus software.

42. Data storage and management is another important aspect that needs to be taken care of when moving a ULB to a computerized accounting system. There should be a written policy on the data storage that covers all aspects, including where the data will be stored, who will have access to the data, when the backup of the data will be made, who will be responsible for the backup, where the backup will be stored, which media will be used to store the data and the backup, etc. A small mistake in data storage could lead to the loss of data as well as blockage of the ULB's services.

43. The ULB should also clearly document a business continuity plan and a disaster recovery plan so that in case of any casualty, the operations of the ULB do not get halted and the data is restored as soon as possible. It is also important to have sustainable arrangements in place for maintenance of both hardware and software to avoid any kind of disruptions.

IV. COMPREHENSIVE MUNICIPAL ACCOUNTING REFORM MODULE

44. Accounting reforms provide a vehicle for better financial management and governance through double entry accrual-based accounting, which increases the transparency of municipal finances. It also allows easier outside scrutiny, accurate accounting for revenue and expenditures, and realistic budgetary planning. The introduction of a double entry accrual-based accounting module is the foundation of an improved and modern local government system. This accounting module should enable the maintenance of correct and complete accounts of the ULB and provide timely, relevant information to stakeholders and regulatory agencies.

45. The accounting module of ULBs should be comprehensive and include all aspects of the ULBs' accounting functions. The accounting module should invariably include sub-modules such as budgeting, fixed assets, inventory, payroll, and projects under implementation. In addition, administrative modules could also be incorporated, including building permissions, project monitoring, a birth and death registration system, a marriage registration system, an advertisement revenue system, and the ULB's website. The following could be the major modules, which should form an integral part of the main accounting module:

Table 1: Main Modules Forming Part of the Major Accounting Module

Expenditure Accounting Modules	Revenue Modules	Administrative Modules
<ul style="list-style-type: none"> • Accounting system • Budget system • Payroll system • Fixed assets and depreciation system • Inventory system • Sub-ledger systems for receivables and payables • Projects under implementation • Accounting systems under different funds/grants • Accounting systems including cost accounting for different services and utilities • Management information reports 	<ul style="list-style-type: none"> • Tax payers' database for all revenue items (property tax, leases, trade license, rental, etc.) • Demand raising systems for various revenue items • Accounting for revenue collections including online and counter collections in multiple centers • Analysis tools for demand collection balances • Accounting systems including cost accounting for different services and utilities • Hoarding system • Management information reports 	<ul style="list-style-type: none"> • Building permission • Birth and death registration system • Marriage registration system • Grievance addressing system • Legal cases to follow up • Project/program database • Slum data management • Solid waste management system • Wastewater management system • Streetlight management system • Management information reports • Contingent liabilities and notes to accounts • Website of the ULB

A. Budgeting Module

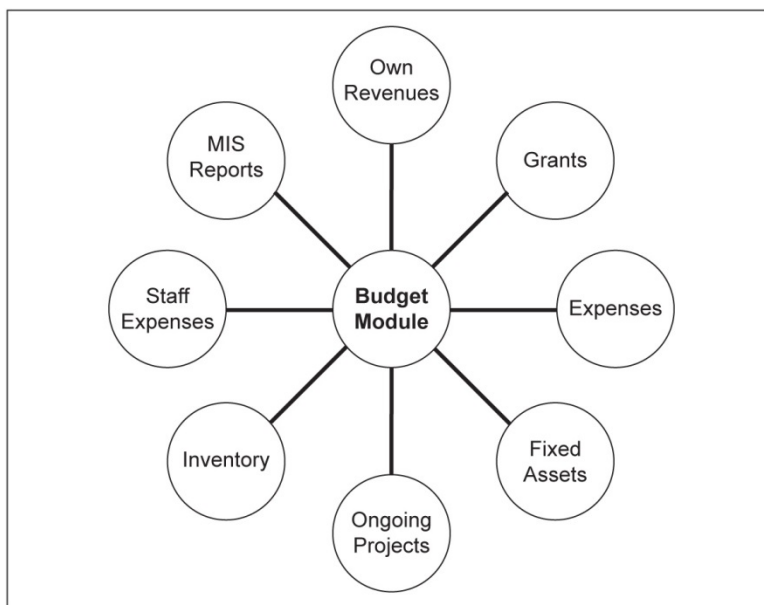
46. ULBs prepare annual budgets that are adopted by the legislature. The budget is a financial plan and an expression of financial intent and it sets forth the expenditures that the ULB expects to incur during the year for various programs and the means of financing them. At the same time, the budget is the principal means of control, having the force of law. A budget thus provides both the authorization of, and limitations on, the amounts that may be spent for particular purposes.

47. The objective of a ULB's budgeting system is to arrive at a logical and systematic basis for building linkage between the nature of receipts or payments with the functions and services or other budget control centers. The budget reflects the principles and programs of the ULB. It also enables ULBs to measure and promote accountability in respect to service delivery. The basis for preparing the budget will be the inputs from various departments and units. Budget preparation is based on a bottom-up approach. The estimates are made from the lowest unit and then consolidated. These estimates reflect the estimated inflows, outflows, and surplus or deficit under the various receipts and payment categories, as well as opening and closing balances. The receipts and payments are classified into four broad categories: revenue receipts, revenue expenditure, capital receipts, and capital expenditure. The receipts and payments are estimated for each of the accounting categories under every budgeting center.

48. Budgetary accounting is a management control tool used to assist in controlling expenditures and enforcing revenue provisions. The budget module should enable staff to prepare more detailed and accurate budget estimates, monitor budget balances, and provide utilization efficiencies and variance analysis. The budget module should provide a comprehensive as well as detailed status of the budget at any point of time to enable better decision making on each budget line item.

49. The budget module needs to be linked to all other modules to be able to capture full information relating to all transactions and to provide the budget utilization, balance, and variance-related information for each budget line item.

Figure 1: Integration of Budgeting Module with Other Accounting Modules



B. Revenue Accounting Module

50. Revenue is the gross inflow of cash, receivables, or other considerations arising in the course of the ordinary activities of a ULB from its different activities and from the use of the ULB's resources by others that yield interest, royalties, service charges, etc.

51. Revenue accounting is the process of invoicing, receiving, organizing, recording receipts, and tracking receivables. Revenue accounting also provides essential tools for determining and keeping track of the revenue generated. Data capturing, accounting, reconciliation, and management reporting are the main processes involved in revenue accounting. An ideal revenue accounting module will enable a ULB to determine all of its revenue at any given point of time on real-time basis. Revenue of a ULB shall largely consist of property tax, octroi, cess, and renting out assets like community centers, grounds, water supply, etc. The accounting principles that govern the recording, accounting, and treatment of transactions relating to various activities of revenue items are given in Chapter 3 of the NMAM, titled "Significant Accounting Principles."

C. Expenditure Accounting Module

52. Expenditure is any cost that is charged to an expense account as soon as it is incurred. By doing this, the matching principle—linking the expense incurred to revenue generated in the same accounting period—is applied. Data capture, organization, accounting, reconciliation, and management reporting are the main processes involved in expenditure accounting. When doing expenditure accounting it must be ensured that all the expenditures that have been incurred

during the period are identified and recognized in the account books. For example, salaries of staff for the month of March must be entered in the account books at the end of month of March, whether paid or not. Every ULB must have an accounting module in place to capture expenditures correctly. All the expenditures remaining unaccounted at the end of the year must be calculated and entered in the account books. The expenditure accounting module should be designed in such a way that all expenditures related to those activities for which revenue have been booked, must be identified and booked in the books of account. The accounting principles that govern the recording, accounting, and treatment of transactions relating to various expenditure items are also given in Chapter 3 of NMAM.

D. Fixed Assets Accounting Module

53. A fixed asset is an asset held with the intention of using it for the purpose of producing or providing goods or services, and not held for sale in the normal course of business. Fixed assets often comprise a significant portion of the total assets of a ULB and therefore are important in the presentation of its financial position. Furthermore, the determination of whether expenditure represents an asset or an expense can have a material effect on a ULB's reported results of operations.

54. The fixed asset accounting module should be designed in such a way that once a decision is taken to acquire/purchase an asset, the purchase order for it is processed through this module only. From then onwards, till the disposal, all the information related to that asset can be tracked through this module, e.g., date of receipt of the asset, person who did the inspection of the asset, place where the asset is located/positioned, its depreciation, recorded value, and amount spent on the repair of that asset.

55. The cost of an item of fixed asset comprises its purchase price, including import duties, other non-refundable taxes or levies, and any directly attributable cost of bringing the asset to its working condition for its intended use; any discounts or rebates are deducted in arriving at the purchase price. Examples of directly attributable costs include site preparation, initial delivery and handling costs, installation cost, such as special foundations for a plant, and professional fees. It is very important that all the costs related to an asset are captured in the fixed assets accounting module. At the end of an accounting period, the reports generated from this module should enable the users to match the actual assets with the related costs. Provisions also should be made for recording the results of verification of assets at various intervals.

56. Fixed assets are written off over their anticipated life by charging depreciation expense (with the exception of land assets). Accumulated depreciation is shown on the balance sheet. Hence, this module should enable the ULB to provide depreciation on fixed assets at a rate determined by the ULB, through a technical evaluation of the useful lives of the assets. The accounting principles that govern the recording, accounting, and treatment of transactions relating to fixed assets are also given in Chapter 3, paragraph 3.21, titled "Significant Accounting Principles," of NMAM.

E. Inventory Management Module

57. A comprehensive inventory module should be able to capture all information and activities related to purchases other than fixed assets, which are recorded separately. Such purchased items should be managed through the inventory module. The inventory module includes the various processes of inventory management including the following:

- (i) purchase requisition from user;
- (ii) tendering or receipt of quotations;
- (iii) comparison of quotations;
- (iv) issue of purchase order;
- (v) receipt of goods and generation of material receipt voucher;
- (vi) issue of goods through issue and receipt vouchers; and
- (vii) recording of disposal or return of inventories.

58. The inventory module should include MIS reports relating to commitments to budgets for purchase orders issued, items that are pending receipt, stock status of inventory, aging of items in stock, quantity and value based accounting, unserviceable stock, etc. This will provide analytical information for decision makers about the management controls to be exercised for inventory management.

F. Staff Management Module

59. The staff management module in municipal accounting reforms covers all activities that have financial implications on a ULB's staff-related matters. A comprehensive module should be capable of managing all the issues related to staff of the ULB and would include all the following information:

- (i) total number of staff employed by the ULB at any point of time;
- (ii) place/department of work of each staff member;
- (iii) account of leave taken by each staff member in a year;
- (iv) capturing and accounting for advances and deductions
- (v) preparation of pay slips and disbursement of salary every month;
- (vi) management of statutory deductions from salary of each staff;
- (vii) calculation of retirement benefits of each staff member; and
- (viii) monitoring of pension-related accounting.

60. The staff module should be interactive with the main accounting module and be able to import and export staff-related financial transactions on a real-time basis. The module also should be designed to create reports for MIS and analytical purposes.

G. Administrative Systems Module

61. This is a module that may not be directly identified with any accounting module but is very important for the accurate functioning of any of the accounting modules. The administrative module enables managing all the functions of a ULB and allow stakeholders to have information readily available related to the services of the ULB. The administrative module must be designed in such a way that it can work in sync with other accounting modules. For example, revenue collected on issue of birth or death certificates or building approvals should be linked to the revenue accounting module so that the income is directly captured by the main accounting system. The administrative module will not only help the ULB manage its services more efficiently, but will also help the ULB showcase its services to all stakeholders.

H. Cost Accounting Module

62. Determining the costs of municipal services provided by a ULB is an important area that needs to be addressed. Most ULBs provide certain services at subsidized rates to their citizens. This is particularly so with water supply, sewer, education, medical care, etc. In the absence of

a cost accounting system it would not be possible to determine the costs incurred and consequently no particular action could be taken for reducing deficits. Costing of services would enable ULBs to fix the price for any service it renders to its citizens. For example, the costs for providing water consist of the following, which need to be identified for this cost center:

- (i) purchase cost of raw water paid to external suppliers;
- (ii) a proportion of the capital cost of supply lines from the point at which water is supplied by external agencies to the reservoirs where water is stored;
- (iii) cost of processing the water to make it potable including cost of treatment chemicals, filters, and consumables;
- (iv) a portion of the capital cost for distribution lines from reservoirs to users;
- (v) salary and other staff-related costs of staff exclusively engaged in water supply activities (i.e., direct staff costs);
- (vi) a proportion of staff salary not directly involved in water supply but involved in supervision and support direct staff;
- (vii) cost of repair and maintenance of reservoirs;
- (viii) cost of repair and maintenance of incoming supply lines;
- (ix) cost of repair and maintenance of distribution lines;
- (x) cost of electricity;
- (xi) repair and maintenance of equipment involved at all stages including for pumping, processing, etc.;
- (xii) administrative costs of the water department including vehicle fuel, vehicle repairs and maintenance, office expenses, stationery;
- (xiii) depreciation of all civil works;
- (xiv) depreciation of all pipelines and equipment used; and
- (xv) interest on loans taken specifically for water supply projects, etc.

63. ULBs need information about expenses incurred in order to assess their revenue requirement, the sustainability of existing services and the likely cost of proposed activities and services. Accrual accounting provides ULBs with information on the full costs of the activities and services provided by the ULB, with details on how much of the cost is borne by taxpayer and by specific users of the ULB's service. Costing of services is an important accounting and management tool as ULBs can:

- (i) consider the cost consequences of a particular policy objective and compare with the cost of alternatives for meeting the objective;
- (ii) decide whether to fund the production of services within ULB sub-entities or whether to purchase goods and services directly from a nongovernment organization;
- (iii) decide whether user fees should cover the costs associated with a service; and
- (iv) allocate responsibility to cost centers for managing costs.

64. Appropriate coding of accounts is necessary to allocate costs at the time of initial transaction among the services. The system of coding accounts should be steered by a unique system of coding as per the chart of accounts based on NMAM. The coding structure should include the following components:

- (i) **Fund:** Amounts set aside for a general or specific purpose, whether represented by specifically earmarked assets or not;
- (ii) **Function:** Various services or specific activities performed by the ULB;
- (iii) **Functionary:** The offices that perform the services or specific activities; and

- (iv) **Chart of Accounts:** The account codes that will be used for recording transactions.

I. Reports for the Management Information System

65. The strength of a MAR lies in the quality and type of reports and information systems that can be generated from the accounting systems, which provide data for management and decision making by the ULB management. The reports generated should be capable of capturing updated information on need and periodical basis. Some of the important reports generated should include (i) aging analysis of demand collection balances of revenue items, (ii) Priority analysis of revenue arrears, (iii) status reports on fixed assets, inventories, projects under implementation, cash, bank, and treasury, and (iv) aging analysis of receivables and payables.

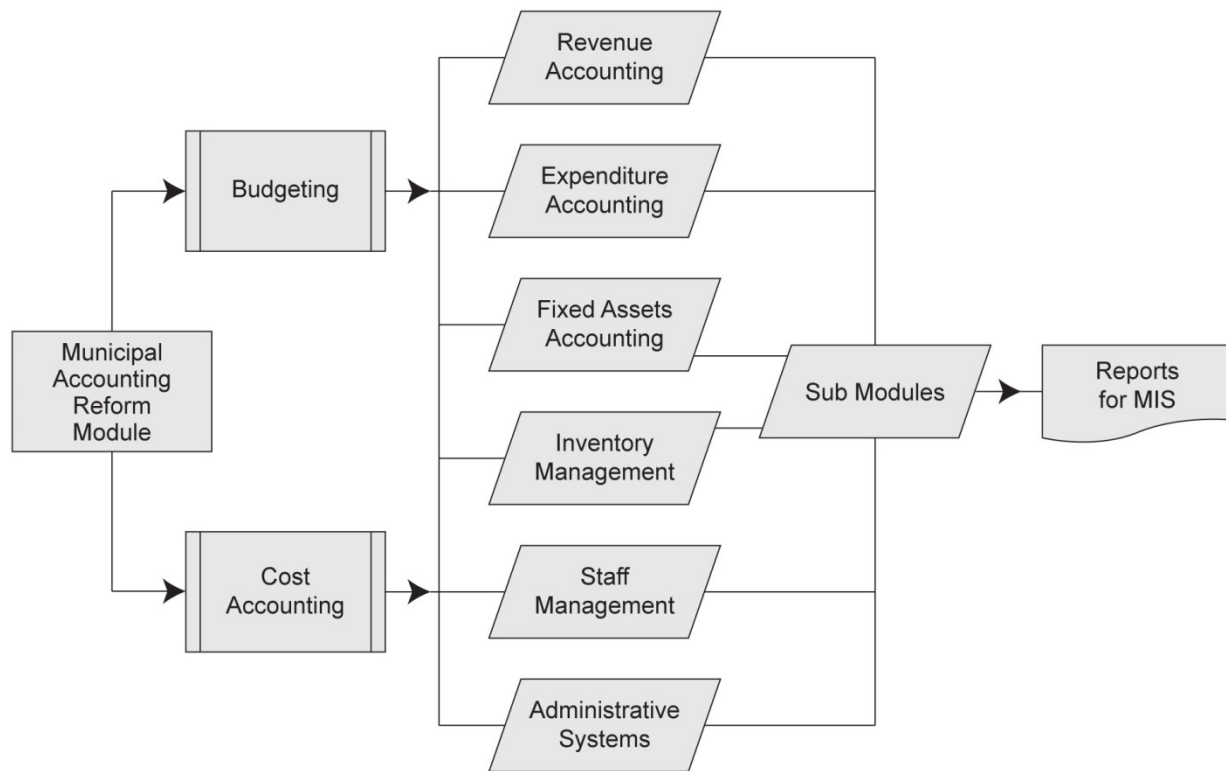
66. The formats for the reports and management information systems should be incorporated at the design stage of software development. The software should also facilitate development and alteration of the reports as required by the ULB. Some of the important reports that should be generated by the system are included in Appendix 1.

67. The reports for municipal MIS could also cover non-financial aspects of the activities of the ULB in addition to the financial information to substantiate the information. For example, the data on schools under the ULB should include number of schools under the ULB, the number of teachers, the number of students, and the pass percentage of the students. This data, when used integrally with financial aspects, assists in the preparation of various analytical reports including cost of service delivery, etc.

68. The reports and municipal MIS should provide the following information to various stakeholders:

- (i) **Management:** Annual financial statements, analytical reports to facilitate decisions on working capital management, budget utilization, revenue collection efficiencies, expenditure management efficiencies, costing of services, debt financing, status of ongoing projects, etc.;
- (ii) **Operational Staff:** Reports for checking the accuracy and completeness of the accounts maintained, reports showing daily cash position, liability position, control reports, bank reconciliation, reconciliation with suppliers' accounts, etc.; and
- (iii) **Citizens:** Abridged financial statements with options to go into geographical details of revenue and expenditure reports with various analytical data.

69. A comprehensive municipal accounting module would be controlled and monitored by budget and cost accounting modules. This ensures the updating of budget status and incorporation of cost allocations to the various services and utilities. The transactions are then sent to the specific expenditure module for updating the various accounting categories through the predetermined coding system. These accounts are further updated with more details which are captured through the predesigned sub-modules of expenditure category. This process is capable of generating reports and results that enable the management information system to provide adequate information and details for analysis and decision making. This process flow is outlined below.

Figure 2: Interface of the Various Accounting Modules in Municipal Accounting Reform

70. Development and installation of a comprehensive municipal accounting module would ensure detailed accounting procedures capable of capturing adequate data, which will enable detailed analysis and review. This can lead to improved municipal finances and better urban governance.

V. MUNICIPAL ACCOUNTING REFORM IMPLEMENTATION

71. Municipal accounting reform is rolled out in three phases. Phase 1 consists of establishment of a double entry accrual-based accounting system, which forms the foundation for creating the architecture of a robust accounting system. Phase 2 consists of a financial management improvement program based on the data available from the Phase 1 stage. This phase gives the scope for management reforms in achieving efficiencies both in revenues and expenditures. Phase 3 involves participation of the citizens and customers, both internal and external, for interface with the municipal system through electronic governance mode. It is generally seen that most ULBs are satisfied with Phase 1 and do not take further steps to pass through Phase 2 and Phase 3.

A. Phase 1: Establishment of Double Entry Accrual-Based Accounting

72. This initial phase ensures the robustness of the systems and adequacy of policy framework; it aims at sustainability in terms of both institutional supervision and human capacity. This phase is likely to confront the toughest challenges in the whole process of accounting reforms in ULBs. It requires strong leadership both at state and ULB levels. As internal capacity

for accounting is mostly nil or at a very low level at this initial stage, effective and sustained external professional support is essential.

73. **Diagnostic Study of Institutional and Legal Framework and Staffing:** This phase of implementation of accounting reforms in a ULB is very crucial and deals with obstructions in matters relating to legal framework, institutional arrangements for supervision and monitoring, and staff cooperation. The arrangements in Table 2 need to be established by the state department as the first step before embarking on the reform process.

Table 2: Prior Actions Required for Implementation of Municipal Accounting Reform

Area	Activities
Institutional arrangements	<ul style="list-style-type: none"> • Constitute a state-level steering committee, which should be vested with the authority to manage the project and to promulgate accounting standards, formats for budgeting and costing, financial statements and audit reports; and • Establish a state-level project management unit under the guidance of the steering committee to oversee the implementation of the new system and conduct capacity building and training of the municipal officials.
Legal notifications	<ul style="list-style-type: none"> • Issue necessary initial government official orders for the rollout of the MAR; • Review the legislative framework to identify the changes necessary to implement the improved financial management system. The implementation of the improved financial management system for all ULBs and urban civic services providers may require amendments to relevant legislation, bylaws, rules, regulations, etc.; • Amend the legislature governing the ULB to incorporate the provisions to enable accounting on the basis of double entry accrual-based accounting system. • Develop a state-level accrual-based accounting manual based on NMAM detailing the accounting system, policies and procedures, the records and documents to be maintained, and the form, contents and periodicity of various accounting reports; and • Based on NMAVM, devise accounting policies and valuation norms for assets and liabilities.
Staffing and support arrangements	<ul style="list-style-type: none"> • Appoint a consultant for development of a state-level municipal financial accounting manual; • Identify capable staff from the ULB and the state government who will enable smooth implementation of the accounting reforms; • Formulate appropriate policies for handholding assistance and get the internal audit done from chartered accounting firms; • Evolve a suitable recruitment and transfer policy for municipal officials to ensure reasonable stability of the tenure of finance personnel; and • Develop state-level policies and guidelines based on NMATM on training and handholding.

74. **Assessment of work requirements:** As the second step, once the institutional and legal arrangements are in place, the project management unit with the assistance of the ULB accounting staff should start assessment of work to be done for the implementation of accounting reforms. The following steps will be included in the assessment of work:

- (i) identify the departments and areas that will form part of the reform process;
- (ii) determine the volume of data of each department and the work requirements;
- (iii) prepare the extent and size of inventory of assets and liabilities of the ULB;
- (iv) estimate the quantity of backlog of work in arrears to be completed;
- (v) determine the computer and IT architecture requirements; and
- (vi) set the goals of and time frame for the accounting reform programs to be implemented.

75. **Engagement of Consultants:** The third step is to engage consultants based on the estimations of work requirements as above. The consultancy assignment will be to provide technical support to the ULB in legal, accounting, and computerization related matters. They will also facilitate the preparation of the opening balance sheet, monitor transition to the new system, help in maintenance of accounts, and help with preparation of financial statements for one full year. Subsequently they would help with the beginning of the second year account and handhold for a short period. The basic team of consultants should consist of the following for a medium size (population of about 500,000) ULB:

Table 3: Team Structure of Consultants for Implementation of Municipal Accounting Reform

Team Leader		
Institutional and Legal Team	Accounting Team (Revenue, Expenditure, Assets and Liabilities)	Computerization and Information Technology Team
Legal and institutional supervisor (1)	Accountant supervisor (1) per ULB	Computer and information technology supervisor (1)
Legal Assistants (1) for review, drafting, and implementation of legal documentations.	Assistant accountants (3) per ULB, one each for expenditure, revenue and assets, and liabilities accounting.	Software developer (1) Hardware and maintenance expert (1)
	Data entry operator team (6), with at least 2 under each assistant accountant	

76. The team of consultants should carry out the following specific tasks based on the terms of reference draft, which is given in Appendix 2:

77. **Preparation of Policy Framework:** Establishment of appropriate policies, issue of government orders and notifications, and passing of laws as required is an important action to be taken as soon as the consultants are engaged. The following are the various steps to be taken to complete policy-related matters.

(i) Step One: Review of Policies

78. The consultants should review and analyze the existing policy requirements for the implementation of the accounting reforms. This review should invariably include (i) the relevant municipal act, (ii) the C&AG task force recommendations, (iii) policies prescribed by the NMAM, (iv) internal policies and procedures of the ULB's existing accounting system, and (v) the linkages of obligatory and discretionary functions for accounting. This analytical review will form the base for recommendations for suggested policy reviews.

(ii) Step Two: Preparation of Comparative Chart of Existing Policies, Recommended Policies, and the Policies Practiced in Other ULBs

79. The team should carry out this step by preparing a comparative chart of accounting practices and policies in the ULB vis-à-vis other ULBs that have successfully implemented good practices. This will help understand the strengths and weaknesses of the ULB's various existing accounting policies and procedures. This will also help with the design of the draft accounting policies and the logic for the chart of accounts.

(iii) Step Three: Preparation of Draft Accounting Policies

80. Accounting policies are the backbone of any accounting system. The team should prepare the draft accounting policies for each type of accounting transaction relating to income, expenditure, assets, and liabilities of the ULB.

(iv) Step Four: Organization of Consultative Workshops

81. In a series of consultative workshops involving various stakeholders, including officials from C&AG, the ULB, the state government, and other domain experts, the consultant team should discuss the draft policies for finalization. The final policy document should take into account all the relevant suggestions made by the various stakeholders.

(v) Step Five: Review of Changes Required in the Legislation

82. Once the local government officially adopts the final accounting policies, the next step will be an in-depth study of the relevant provisions in the existing ULB act. The team may review other similar legislations and rules as found in other states and in the Model Municipal Law developed by the MoUD. Thereafter, the team will prepare comparative matrixes showing the provisions in these different laws. This will help in suggesting legislative changes required in the existing municipal laws for refurbishing the ULB's accounting system.

(vi) Step Six: Issue of Official Policies

83. The final output in the activities related to the preparation of policy framework is to formalize the policies through appropriate governmental orders, notifications, and enactments as required.

84. **Design Computerization and Information Technology:** The ULB will have to carry out an internal review of all its manual systems by itself or with the help of consultants. This is required to streamline internal processes for successful computerization and delivery of results on a sustainable and effective basis. A committee should be formed for proper monitoring of IT implementation. The application software should preferably be web-based and should be such that it meets scalable norms. The software selected should also be able to run independently and when required it can run as a single e-Governance module. The hardware should also be selected in such a way that it also supports such an environment.

85. The ULB should finalize all MIS reports required at different levels within the organization that are required to be sent to state and national-level authorities. Any duplication of work being done should be eliminated. The agency supplying or developing software should be made responsible for its successful implementation. There should be a single agency doing the complete work of implementing the computer applications. Further, the employees of the ULB should also be given intensive training at this stage. Broadly, training is required in the areas of (i) basics of computer operations and (ii) use of application software. While selecting the said computer program, due consideration should be given to a cost–benefit analysis of the module selected, a user-friendly environment in the software, availability of engineers for providing support, and successful use of similar software in other ULBs.

86. **Transition to the New Accounting System:** The transition to the new accounting system should ideally be done at the beginning of a financial year, which is in April. The transition process should follow certain steps:

(i) Step One: Preparation of Guidelines for Opening Balance Sheet

87. The accounting manual will lay down guidelines for preparation of the opening balance sheet for the ULB. The opening balance sheet forms the base for switching over from single entry accounting to DEAS. The preparation of the opening balance sheet will provide information on fixed assets, current assets and liabilities. Valuation of fixed assets will also form a part of the process for which guidelines are available. This is usually a long and tedious task in which significant support is required from the ULB staff. The accuracy of the opening balances will be an important issue as there could potentially be many cases of un-reconciled and un-verified balances affecting the quality, timeliness, and accuracy of the opening balance sheet.

(ii) Step Two: Parallel Run of the Accounting

88. This step should be undertaken for at least three months prior to starting the full run from April of the year. During the parallel run, accounting takes place in the old and the new system. This provides the opportunity to make changes and corrections prior to the full run. It also builds the confidence of the staff and the ULB's activities are not disrupted due to the transition process.

(iii) Step Three: Full Run of the New Accounting System on a Handholding Basis

89. The full run of the new accounting system should begin on a full-fledged basis from a new accounting year running from April to March. During this period the consultants should provide full handholding support. This provides a full year to make all changes, corrections, improvements, etc. under the guidance of the consultants and to build capacity of the ULB staff and provides opportunities to appreciate the changes.

(iv) Step Four: Closure of Accounts and Transition to the Next Year for Independent Handling

90. After the accounts have been maintained in the new system for one full year, the annual financial statements should be prepared including the notes to the accounts, etc. From these records the opening balances for the next year should be prepared and the accounting system should be continued with the help of the consultants for about three months, after which the consultants should be able to withdraw, giving full independence to ULB staff.

91. **Activity Timelines:** The implementation and sequencing of the financial management reforms will have to take into account the administrative capacity, political will, and financial constraints of the individual state, ULB, and all urban civic service providers. The various activities required in a MAR program and the timeline for each activity can be summarized as shown in Table 4 (based on the accounting year period of April–March for the ULBs):

Table 4: Timeline for Implementing Municipal Accounting Reforms

Activities Time frame	Year 1 April–March				Year 2 April–March				Year 3 April–March			
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Establish a committee to implement improved financial management reforms	■											
Appoint consultants for helping the ULB undergo the reform process		■										
Formulate accounting policies and prepare guidelines		■	■									
Provide staffing arrangements	■	■	■									
Prepare inventory of assets and liabilities for the opening balance sheet	■	■	■	■								
Value all assets and liabilities and finalize the opening balance sheet		■	■	■								
Design and prepare software and install computer hardware		■	■	■								
Provide continuous training to ULB staff	■	■	■	■	■	■	■	■	■			
Reengineer transaction processes to align with an accrual-based accounting system			■	■								
Parallel run of the new accounting system				■								
Adopt and implement an accrual-based accounting system					■	■	■	■	■			
Prepare financial statements for the first year along with relevant schedules									■			
Start the second year accounts and provide handholding									■			

92. **Training Program:** Providing training for the key municipal stakeholders constitutes an important aspect of the implementation and sustainability strategy. Based on the National Municipal Accounts Training Manual (NMATM), capacity building at the ULB level should be done to improve the ULB's capacity to implement and institutionalize accounting reforms initiated by the ULB, which will enable improved decision making, as well as improved urban services, especially for the poor. The capacity building has to be a continuous, flexible, and responsive process involving all officials.

93. The ULB should also organize orientation and a training program for elected representatives, municipal officials, and auditors. Appropriate city- and district-level training institutions may be used as venues for conducting the training modules and for developing the content of the training modules and training materials.

94. The ULB should create a dedicated team to oversee the implementation of the training program, to identify the required training institutes, to appoint good trainers, to prepare training program, training modules, evaluations, and monitoring plans, to measure the impact of the training program, and to continuously update the training program.

95. The salient features of the training program shall include:

- (i) city-level sensitization workshop for elected representatives on municipal accounting and budgeting reforms; and
- (ii) three (or more) rounds of city-level workshops and handholding implementation support for municipal officials in ULB through a local chartered accountant firm. The training should include the details of the implementation of the new accounting manuals, the conversion from a cash-based accounting system to a double entry accrual-based accounting system, the audit procedures, and the various steps involved for the preparation of opening balance sheet.

96. The following steps should be undertaken by the ULB before the commencement of the training program on improved accounting system:

- (i) constitute a dedicated team to oversee the implementation of the training program;
- (ii) identify and appoint the required training institutes within the city, with the required infrastructure;
- (iii) identify and appoint trainers at the city level;
- (iv) prepare detailed training program agenda and training schedules;
- (v) prepare training modules;
- (vi) prepare an evaluation and monitoring plan to measure the impact of the training program; and
- (vii) continuously update the training program in accordance with the progress.

97. The tentative training program for the implementation of municipal accounting reforms is included as Appendix 3.

B. Phase 2: Establishment of a Financial Management Improvement Program

98. The successful conversion or full implementation to a double entry accrual-based accounting system is not an end in itself, but rather a beginning in the process of reforming the financial management of ULBs. Certain reforms can be undertaken only after the successful conversion from single entry cash-based accounting system to a double entry accrual-based accounting system. Public financial management is concerned with effective and efficient management of all public revenue, expenditures, assets, and liabilities. The financial management of a ULB usually includes all the components of public financial management. The accountability cycle starts with preparation and programming and ends at execution, accounting, control, reporting, monitoring, and evaluation. The entire process includes:

- (i) evaluation of the legal and organizational framework and arrangements for forecasting revenues and expenditures;
- (ii) formulating medium and long-term capital expenditure plans;
- (iii) managing cash flows and planning for funds management;
- (iv) improving management of assets and liabilities; and

- (v) assessing performance, conducting external audits, and ensuring oversight by the legislature and other bodies.

99. The broad objectives of financial management in a municipal setup are to achieve fiscal discipline, allocate resources to uses that reflect government policy priorities, and deliver public services efficiently and effectively. In the case of a ULB, the stakeholders are primarily the citizens under that ULB. Therefore, their satisfaction towards civic and urban basic services is the primary objective of any ULB. The focus of financial management in a ULB should be on efficient and judicious use of resources to attain the desired objectives.

100. **Maximization of Revenues:** Some of the areas where ULBs may intervene concerning receivables management are as follows:

- (i) The first step in maximization of revenues is to establish a robust database of the assessees for all types of revenues of the ULB.
- (ii) This would lead to strengthening its enforcement machinery in order to widen its tax net. As seen in various cities, only about 50% of properties are assessed for property tax and the rest are un-assessed.
- (iii) Having a proper system of receivables management should be one of the primary focuses of a ULB, as that would ensure steady collections and provide a scope of expending for the purpose of development.
- (iv) The aging schedule would provide useful information for assessing a ULB's liquidity position, efficiency of the collection department, etc. The age analysis would also help to decide on the provisioning requirement and would pave the way for firming up a policy for monitoring old receivables.
- (v) To achieve a growth in the collection, ULB may consider introducing a staggering rebate policy broken into various periods of payment. This will ensure a faster collection. In addition, the policy may include a condition of losing the rebate and imposition of a penalty beyond the normal period of collection.
- (vi) The ULB must start calculating the carrying costs of the receivables, i.e., the cost of interest on receivables that the ULB could have earned if all the receivables were realized in a normal course.
- (vii) There are also costs associated with the risk of default, i.e., a certain percentage of receivables may not come at all and will become bad debts. Such "defaulting costs" will include legal charges, costs of filing suit, etc. The ULB must frame its policy in such a manner that such "defaulting costs" are recovered from assessee.
- (viii) At the same time the administration costs of receivables, including the costs of sending teams for demanding taxes and collection thereof, need serious consideration. It is recommended that arrangements with some banks for entrusting the responsibility to do the collections on ULB's behalf be made.
- (ix) For better financial management, the aging schedule of receivables should be prepared based on the collection pattern and classifying the total receivables according to their age, i.e., the outstanding period for which the amount is uncollected.
- (x) Similarly, ULBs must conduct public-awareness campaigns to apprise the public of the need for paying the government dues in time.
- (xi) Finally, each ULB needs to draw up a receivables management policy, which records decisions relating to the credit policy specifying the length of the credit period staggered with the rebate allowed, reports on credit control, procedures against delinquent citizens, etc. The ULB must establish its own credit policy for proper and better management of the receivables.

101. **Improved Expenditure Management:** Expenditure management in a ULB involves choosing how to allocate resources between major outputs in terms of services and infrastructure, i.e., to decide what the ULB can hope to achieve for the benefit of its citizens. Expenditure management includes allocating resources to particular agencies (departments or sections) and estimating the inputs (personnel, equipment, buildings, etc.) required to achieve the specified outputs. The area of expenditure management also gives authority to collect and spend money, and prescribes exactly who can spend how much and on what. Traditionally, expenditure management comes from the manner in which budgeting is done and usually budgets consist of separate estimates of capital and revenue/operating expenditures.

102. Keeping in mind the concerns of the expenditure management needs in ULBs, the following interventions are required:

- (i) Consider including, within the new financial and accounting system, a procedure for recording all financial and non-financial information, i.e., information related to the vision for the city under which the budget has been prepared, important decisions that will require expenditure, etc. This will help ULBs make structured decisions concerning expenditure controls.
- (ii) Within the policy, the ULB needs to develop a vision plan for expanding in the future—maybe a five-year vision plan. The plan will be composed of plans for capital investment program, capital budgets, and operating budgets.
- (iii) The ULB will then need to break down the vision plan into annual plans. This will help the ULB develop a budgeting system, which will act as a control tool for expenditure management.
- (iv) To achieve the best expenditure management, it is necessary to align the expenditure pattern with the pattern of the cash flows, especially from the various sources.

103. **Asset Management:** In an ideal situation, a ULB will follow a systematic approach to increase the effective use of real property it owns or operates. The first step is to create a comprehensive inventory of all assets, followed by an evaluation of each property to determine the best use for a local government. Upon completion of these steps, the approach addresses other property management issues by introducing methodologies related to property valuation, analysis of direct and indirect subsidies, introduction of operating statements for each property, and so on. By using a multidisciplinary approach to managing assets, the asset management approach results in improving local finances and service delivery, and facilitates local economic development.

104. **Capital Improvement Program and Capital Budgeting:** A capital improvement program is a multiyear planning instrument used by governments to identify the requirements of capital projects and to coordinate the financing and timing of improvements in a way that maximizes benefits to citizens. This may include financing and engineering costs, preparation costs, land acquisitions, and other costs necessary to complete the capital project. Large capital projects may take several years to plan, engineer, and construct, meaning that they will affect a number of annual budgets. In summary, capital improvements are expensive, do not recur annually, and are long lasting. Thus, capital improvement plans consist of the creation of fixed assets, infrastructure assets such as streets, water and sewer systems, public buildings, and expensive pieces of equipment. A number of benefits result from capital programming and capital budgeting, including:

- (i) It serves as a major tool for linking physical development to a local government's urban development, strategic, transportation, parks and recreation, solid waste, water, sewer, and other plans.
- (ii) It helps focus attention on community objectives and financial capabilities.
- (iii) It assists in coordinating the activities of other public and private agencies in project planning, scheduling, financing, and construction, thereby reducing duplication, conflict, and costs.
- (iv) It helps in identifying the most efficient and economical means of financing capital projects.
- (v) It helps to increase opportunities for obtaining funding from other governments and private sources.
- (vi) It facilitates coordination with the operating budget.

105. **Debt Management:** Another objective of implementing and practicing financial management in a ULB is to examine how debt management is developed and implemented. Simply stated, debt is an obligation to pay or return something at a future date. The term "debt" refers to all local government debt regardless of length, type, instrument, or lender. Short-term debt is to be paid off in one year or less and long-term debt in more than one year. Bank or central government loans, bonds, and leasing are examples of types of debt. One major responsibility for local elected representatives is making decisions about borrowing money. Long-term debt places a claim against future governmental revenues or assets that may reach far into the future. A ULB must establish an effective debt management program to help preserve its long-term fiscal viability.

106. **Cash Management:** A ULB's cash asset management involves ensuring that all process-generated revenues are effectively controlled and utilized in the best possible manner to result in gains for the organization. The management of cash resources holds the central position in the area of short-term financing decisions. Holding of cash carries the opportunity cost of earning, which is determinable if the cash is either under use within the organization or is under investment elsewhere. The basic objectives of cash asset management are (i) to ensure availability of cash according to a payment schedule; and (ii) to minimize the amount of idle cash. Effective cash asset management encompasses proper management of cash inflows and outflows, including:

- (i) improving forecast of cash flows;
- (ii) synchronizing or aligning cash inflows and cash outflows;
- (iii) using floats, wherever necessary;
- (iv) accelerating collections;
- (v) getting available funds from the required sources; and
- (vi) controlling disbursements.

107. Keeping in mind the concerns of cash asset management, the following interventions are suggested:

- (i) insisting on realistic forecasts when forecasting for revenues;
- (ii) aligning the cash outflows with the cash inflows, so as to minimize situations of liquidity crunches;
- (iii) preparing proper cash flow projections, which will ensure determination of cash surplus or cash deficit;

- (iv) allowing the Chief Financial Officer (CFO) of the ULB to decide to invest the surplus balance of cash suitably in liquid, short-term, and long-term investments as per the requirements of the ULB;
- (v) ensuring that the CFO takes care to minimize holding of assets in the form of cash and convert it into cash equivalents (short-term fixed deposits, etc.) as early as possible, to earn returns for the ULB;
- (vi) investing in short-term sources initially and then, as the expenditure pattern are known investments can be made in mid-term and long-term sources; and
- (vii) training the officers of the finance and accounts section, so that they are able to analyze the reasons for any cash flow problems.

108. **Costing and Ring-Fencing Of Services:** The cost accounting system records the cost of services, depending on the objectives, and is designed to provide critical information to decision makers. Therefore, an important first step in setting up a cost accounting system is to compile a list of the types of management decisions and the objectives. The objectives identified could include:

- (i) plan and forecast;
- (ii) control costs;
- (iii) fix tariffs;
- (iv) ascertain the subsidies for each class of consumers;
- (v) assess cost effectiveness and monitor efficiency level; and
- (vi) estimate losses/deficit.

109. The recommended costing system:

- (i) is detailed but simple and flexible;
- (ii) is based on full cost (total cost) accounting principles which assume accrual-based of accounting;
- (iii) follows process costing to enable ascertainment of cost at each stage of the process;
- (iv) is integrated with the financial accounting system and uses the data from the accounting system; and
- (v) addresses the requirements of the existing and the proposed operations models.

110. The effectiveness of the costing system depends on the definition of cost centers. As an example, if a costing system is established for the water and sanitation services of a ULB, the proposed costing system should define broad categories of cost centers based on the activities ranging from sourcing to consumption of the water and sanitation service. The costing system should use the account codes defined under the financial accounting system. The costing reports are primarily for management decision making. These reports include cost sheets for each stage in the process and at an overall level. The key benefits of the proposed costing system include:

- (i) provides cost-effective ways to reduce system costs, optimizes resource allocation, and prioritizes activities towards achieving goals;
- (ii) justifies increases in charges to particular customers or classes of consumers and decreased charges to others;
- (iii) identifies areas of poor resource utilization within the ULB and helps to rationalize system capacity;
- (iv) provides the information needed to negotiate terms for expansion; and

- (v) helps senior officials evaluate alternative mechanisms of service provision.

111. **Improved Budgeting and Budget Monitoring System:** The enabling laws that guide ULBs in India require local governments to prepare an annual budget for the fiscal year. Beyond simply meeting the requirements of the law, the budget is important as a statement of policy about the allocation of limited resources among local government service areas. A budget is a local government's plan for its financial resources: a plan of financial activities for a specified period including all planned revenues and expenses for the budget period. The budget is an operating plan and serves as the basis for financial reporting to all stakeholders. It is a powerful tool for allocating limited resources among competing priorities within the community, because needs always exceed available funds. Funds that the ULB allots for one activity must be denied to another activity. Thus, the ULB measures the value of the funds it spends not only by the benefits it gains, but also by what it has to give up. Therefore, budgeting means making choices among many alternatives, monitoring them effectively on periodical basis, and reallocating and changing priorities based on requirements.

112. **Improving Internal Controls and Audits:** The crux of an internal control mechanism revolves around the distribution of duties. Management needs to allocate duties in such a manner that no single person has exclusive control over any transaction. The work of one person should be complementary to the work of another. In ULBs, it is seen that internal controls in areas of payments and collections are especially weak. Further, it is very difficult to ensure that all internal controls are rigorously followed. To improve overall financial management practices, it is important to improve the internal audit function. It has been observed that oversight in ULBs is very weak. To improve the oversight concerning ULBs, the following interventions may be considered:

- (i) ULBs must consider strengthening their internal audit section, entrusting them with the duty of regular internal audits and internal checks. ULBs need to strengthen the internal audit department by providing with sufficient number of skilled staff to carry out the function of monthly audits as envisaged within the legislation. This will directly help to improve the internal control mechanism and make the whole system more transparent and effective.
- (ii) State governments must also think of introducing external independent auditors, who would be carrying out audits of both the financial transactions and the evaluation of the internal control mechanism.
- (iii) State governments may also consider taking assistance from the Office of Comptroller & Auditor General of India when carrying out external audits.

113. For state governments and the central government, improved financial management will provide a basis for performance-linked grants. For financial institutions and investors, adoption of the guidelines will allow more accurate and timely financial evaluation of infrastructure projects. For local governments, improved financial information and reporting will facilitate more efficient operations and help identify better urban programs to pursue. Most importantly, improved financial reporting and financial management will strengthen governance at the local level, by providing information that will help citizens hold local governments accountable for their performance.

C. Phase 3: Establishment of E-Governance System

114. The recent advances in information and communication technology (ICT) and improvement in Internet access provide opportunities to transform the relationship between

governments and citizens, as well as contribute to the achievement of good governance goals. E-governance will ensure that the interface between citizens and ULBs is made smooth and resolves the problems encountered by people at present. The use of ICT can help greatly in improved service delivery, decentralization, better information management and transparency, citizen involvement in government, and overall improvement in urban governance across departments and at all levels. E-governance is a form of public administration making use of information and communication technologies (ICT) to enhance the access and delivery of government services to benefit citizens, employees and management of urban local bodies. E-governance in municipalities is expected to result in improved service delivery by local governments for the citizens.

115. The services and facilities that could be covered under the e-governance program include the following:

Table 5: E-Governance Program Services

Areas	Activities and Services
Citizen services	Registrations for birth, death, marriage, grievances, etc.
Revenue	Payment of property taxes, license fees, electricity and water charges, etc.
Service deliveries	Building plan approvals, service delivery approvals, tenders, bidding, payments to contractors, etc.
Office efficiencies	Electronic transfer of payments, salaries, online approvals of vouchers and payments, etc.

116. The main objectives and benefits that would be achieved through the e-governance initiatives would include the following:

Table 6: Benefits of E-Governance Initiatives

Beneficiaries	Service Improvements and Benefits
Citizens	<ul style="list-style-type: none"> • Provides single-window system for delivery of services and information to citizens, which improves accessibility and citizen satisfaction • Provides integrated and simplified services to citizens on an anytime, anywhere basis • Simplified procedures streamline the approval process, which reduces human interface with the administrative system of the ULB • Tracks the performance of ULBs due to the visibility and transparency and accountability in the ULB's functioning
Internal staff and departments	<ul style="list-style-type: none"> • Integrates data and information for better service delivery, which in turn increases efficiency and productivity of staff and departments • Enhances efficient inter-departmental coordination, providing timely and reliable management information • Adopts a standards-based approach to enable integration with other related applications • Provides common and similar MIS reports leading better decision making • Increases revenue collection and improves administrative efficiencies

117. **E-Governance Roadmap:** It is important to define a clear roadmap and implementation plan to avoid duplication, waste of effort, and chances of mistakes. This therefore should aim at the creation of an integrated system, if possible for the entire state. The roadmap should be in line with the state's objectives and be made after assessing the gaps in the current IT environment. The roadmap should include the e-governance strategy, and the required IT architecture. The technology infrastructure should provide information with respect to applications, databases, infrastructure (IT and physical infrastructure), connectivity, etc. The various issues that should be given adequate importance are the adaptability and robustness of the computer application platform to meet the varying requirements of ULBs, a user-friendly interface to reduce the impact of change management, the scalability of the IT infrastructure to address future requirements of ULBs, and the appropriateness of the disaster recovery and business continuity plan.

118. **E-Governance Security and Business Continuity Plan:** When venturing into e-governance adequate importance should be given to security and privacy of information to increase citizen confidence in the system. Strong and adequate security tools should be installed in the system so that fraud and sabotage of systems can be avoided. The mechanisms and responsibilities to access information should be clearly defined, and proper backup of information should be available at any given point in time. This should include information on security management, system security, and access control and it should address issues relating to information systems auditing and security auditing. Data protection, privacy, and security are integral parts of e-governance and a challenge for ULBs in electronic enabling delivery of services.

119. **A Generic Module for E-Governance in Municipalities:** It is important to develop a generic model clearly spelling out common minimum citizen services and interfaces with a fixed time frame. In the first phase the focus should be on building citizens' confidence on minimum services at the front end. The back-end services can be taken up during later phases. An important requirement for e-governance is to develop a ULB's data infrastructure, including spatial data infrastructure and a ULB-level urban data hub for setting up data standards and accessing and storing information. The next step would be to formulate technology acceptance standardization for benchmarking and certification.

120. **Process Re-Engineering for Implementing E-Governance in Municipalities:** The first step before starting e-governance in urban local bodies should be to support and promote e-readiness among ULBs. In order to bring ULBs to the stage of e-readiness, strong awareness campaigns with examples of successful experiences should be launched. Standardized guidelines are to be prepared for initiating of process re-engineering. To be sustainable, the e-governance initiative should be able to generate its own resources. The project should assess chargeability issues of e-services. Front-end services that are mostly chargeable like registrations, trade licenses, advertisement permissions, and house building permissions should be given priority, whereas the back-end services which that not chargeable can be phased out. A generic open source software should be developed and made available in the public domain for ULBs to adopt. As software is dynamic in nature, a small core group at the ministry level should be formed to maintain and update the software.

121. The various steps to be followed for implementation of e-governance in ULBs can be summarized as follows:

Table 7: Steps in Implementation of E-Governance

E-Governance Process	Activity
Identification of core implementation group	The group would be responsible for managing the implementation and dealing with technology, process and change management-related issues internally. The main activities would include the following: <ul style="list-style-type: none"> • Select project management consultant • Finalize the roadmap • Finalize institutional framework • Define service-level agreements • Monitor projects across the ULB • Finalize the capacity building and change management plan for the ULB • Finalize business model
Engagement of project management consultant	The core group should finalize the terms of reference for engagement of the consultants and on selection the consultants would implement the following: <ul style="list-style-type: none"> • Prepare the appropriate roadmap and business model • Design software and hardware configurations and installations • Prepare the implementation guidelines, security policies, and compliance standards • Develop strategies for the rollout of the program
Rollout of software and handholding for sustainability	The rollout process is implemented in stages for least resistance and for demonstration of success models. This should be done after adequate training has been provided for various stakeholders, both at the front and back end. The consultants should handhold during the implementation for a period adequate enough to build internal capacities.

122. The municipal accounting reform implementation needs to be rolled out in three phases by accomplishing the various activities that will pave way to the successive phases. The different phases require outside support with different skill sets and different time frames. This will be a continuous improvement process. The whole process is summarized in Table 9.

Table 8: Municipal Accounting Reform Phases

Implementation Phases	Activities	Outside Support (with number of personnel)	Time frame
Phase 1: Establish a double entry accrual-based accounting system	<ol style="list-style-type: none"> 1. Assess ULB's readiness 2. Establish an institutional monitoring system 3. Finalize the required policies and legal requirements 4. Update accounts in arrears 5. Prepare opening balances 6. Design and migrate to a comprehensive IT system 7. Train and handhold ULB staff for one fiscal year 	<ol style="list-style-type: none"> 1. Team leader (1) 2. Supervisors for legal, accounting and IT matters (3) 3. Legal assistants (1) 4. Assistant accountants (3) 5. Hardware and software experts (2) 6. Data entry operators (6) 	<ol style="list-style-type: none"> 1. Prior period activities: 6 to 9 months 2. Full accounting year :12 months 3. Closure of accounts and handholding for next year plus 3–6 months <p>The whole process could be completed in a 2-year period.</p>

Implementation Phases	Activities	Outside Support (with number of personnel)	Time frame
Phase 2: Establish a financial management improvement program	<ol style="list-style-type: none"> 1. Prepare management information systems reports on all matters 2. Analyze the reports for various results 3. Establish parameters and benchmarks for efficiencies 4. Measure improvements 	<ol style="list-style-type: none"> 1. Team leader (1) 2. Management accountants (2) 	The whole process could be conducted for a period of 2 years
Phase 3: Establish an e-governance system	<ol style="list-style-type: none"> 1. Create digital interface systems in the accounting process 2. Process transactions through electronic mode 3. Process tendering, bidding, etc. electronically 4. Preparations and approvals of vouchers to be done electronically within the office system. 	<ol style="list-style-type: none"> 1. Team leader (1) 2. Management accountants (2) 3. Software engineers (2) 	<ol style="list-style-type: none"> 1. Development of software: 12 months 2. Handholding and training: 6–12 months <p>The whole process could be completed in a period of 2 years</p>

IT = information technology, ULB = urban local body.

Table 9: Engagement Period of Consultants for Overall Municipal Reform Activities

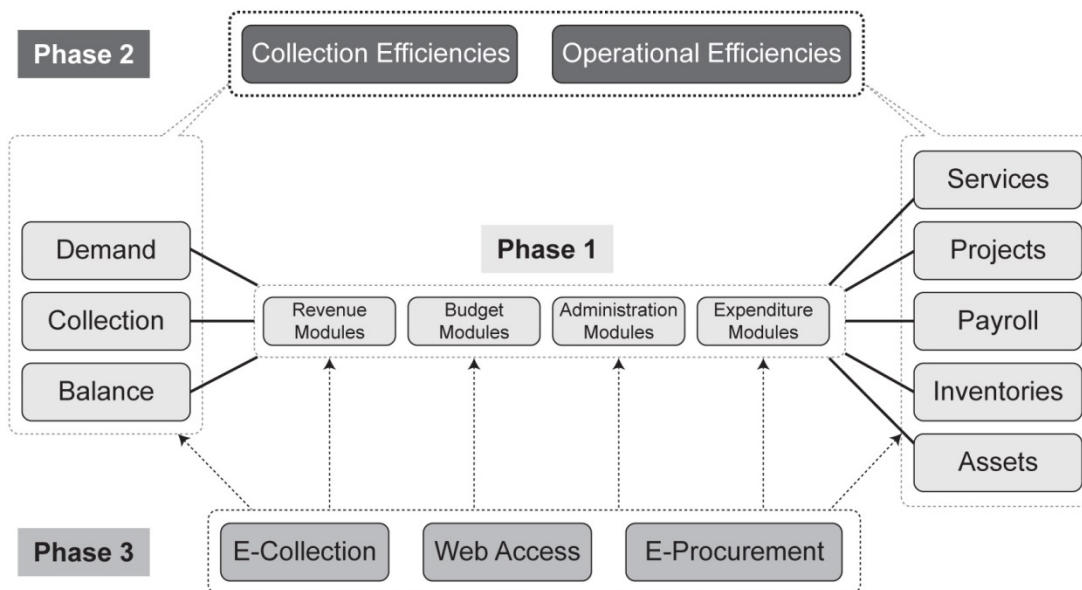
Implementation Phases	Consultants	Count	Person Months
Phase 1: Establish double entry accrual-based accounting system	Team leader	1	6
	Supervisor—Legal	1	3
	Supervisor—IT	1	3
	Supervisor—Accounting	1	18
	Assistant—Legal	1	6
	Assistant—IT	2	48 (24 months each)
	Assistant—Accounting	3	72 (24 months each)
	Data entry operators	6	54 (9 months each)
	Total	16	210
Phase 2: Establish financial management improvement program	Team leader	1	6
	Management accountants	2	24 (12 months each)
	Total	3	30
Phase 3: Establish e-governance system	Team leader	1	6
	Management accountants	2	24 (12 months each)
	Software engineers	2	36 (18 months each)
	Total	5	66

IT = information technology.

123. The following analysis gives an indicative list of consultants and their engagement period in person months required to complete each phase of municipal accounting reform. These figures are arrived at by engaging the consultants specifically for a medium-size ULB of 500,000 people. The period of engagement would increase marginally in the case of senior-level consultants and proportionately for junior-level accountants and data entry operators if more ULBs are simultaneously included in the reform project or if a ULB is sizably larger. The economies of scale and the ULB staff capacity would have some impact on the number of consultants to be engaged and consequent person months.

124. The implementation process of municipal accounting reforms requires concerted and continuous effort from both the state and the ULB. It would be useful to take external assistance to ensure that the process is continuous, which would also help in capacity building of the ULB's staff. ULBs tend to stay only at Phase 1, as it meets the minimum requirements. On the other hand, migration to phases 2 and 3 would help ULBs in achieving greater financial reforms and efficiencies.

Figure 3: Interface Between Various Phases of Municipal Accounting Reform



VI. MUNICIPAL ACCOUNTING REFORM: THE WAY FORWARD

125. The provisional figures of Census 2011 indicate that the number of towns in India has increased from 5,161 in 2001 to 7,935 in 2011, out of which more than 468 municipal bodies manage a population above 0.1 million. Fifty-three municipal bodies manage a city with more than 1.0 million residents. Out of the total number of towns, presently, less than 10 percent have undertaken any sort of accounting reforms. However, one may predict that various external and internal factors will compel the remaining municipalities to undertake accounting reforms during this decade. Reforming urban accounting and financial reporting systems throughout India is an ongoing process that requires the involvement of various institutions. The ULBs' financial viability is central to the urban reform agenda. The Government of India has taken an important step with the introduction of the Jawaharlal Nehru National Urban Renewal Mission, but

significant details on the implementation of the accounting reforms are yet to be worked out and implemented.

126. Municipal accounting reform is one of the fundamental basic reforms required in the decentralization process of urban local bodies. Central and state governments and specific ULBs have made efforts for the rollout of accounting reforms. It can be seen that the accounting reform activities are being undertaken in different directions, resulting in varying efficiencies and results. Although the reforms undertaken are an improvement from the earlier version of manually maintained single entry-based accounts, there is need for greater guidance and better direction.

127. **Common Standard Accounting Modules and Reports:** The accounting packages prepared by various ULBs are not comprehensive and do not include all the required modules relating to accounting for budget monitoring, fixed assets, inventory management, projects under construction, payroll, ring-fenced accounting for services, an elaborate revenue module, etc. It is therefore appropriate that ADB assists in the preparation of such a module. This would establish a certain level of standardization in the accounting packages. Further, all ULBs could use a standard package without incurring additional costs for the preparation of separate accounting packages.

128. **Capacity Building in Municipal Accounting Reform:** Municipal accounting reform is a new system created by adopting commercial accounting systems, standards, and principles. As many have not been formally trained in the new system in India, there is shortage of capacity both within the municipal staff as well as in the accountants' fraternity outside. Therefore there is a need to develop a formal capacity-building program nationwide to sensitize and train aspirants. This would gradually provide qualified and trained personnel for rolling out the municipal accounting reform in a sustained manner.

129. **Conclusions:** Municipal accounting reform is a necessary tool for improving urban finances and governance. However, urban bodies lack the internal capacity, knowledge, and experience to undertake this reform process. Hence ULBs are bound to depend on external expertise for initiating the process, implementing the project, and sustaining and improving the process. The success of the reform depends on the planning ability and the inclusion of a comprehensive computer software module that is capable of meeting all the data requirements, satisfying analytical needs, and providing adequate reports and information to enable the municipal management to make informed decisions. This emphasizes the need for standardized modules capable of providing for narrow as well as wide networked systems and meeting the demands of various local conditions. The implementation needs to be done in a phased manner: establishing a robust double entry accrual-based accounting system initially, improving this in the second phase through a financial management improvement program, and then attaining an e-governance system in the final phase.

130. Because urban local bodies are independent in their functioning there is the danger that they will undertake the accounting process without really knowing how they should go about the reform-related activities. Development institutions could play a great role in partnering with the government to provide support for the process through standardization of computer software modules and the implementation processes. Further, they could also develop and implement capacity-building programs in municipal accounting reform both for the municipal staff as well for private sector aspirants in order to build external capacity, which is required on a large scale considering the large number of Indian towns. This partnership would make a huge improvement in the startup stage as well as in the implementation process in terms of quality,

cost, and sustainability. An urban body with a strong accounting base would be able to provide better governance for its citizens.

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Appendix 1: Municipal Accounting Management Information Systems: Indicative List of Reports

Sl. No.	Modules and Reports	Details of Requirements
1.	Assessee database with various groupings along with demand collection balances with various groupings	The groupings would include various categories like zone, revenue amount, aging of arrears, etc. for the various revenue items. The reports also should support web-based applications and payment of revenues.
2.	Final accounts (trial balance, income and expenditure account, etc.)	This should be available anytime, daily, monthly, quarterly, half yearly, yearly or from any period to period, etc. with previous year adjustments.
3.	Notes to the accounts	This should include financial items and items that are of a contingent nature, which would have financial implications in a well-tabulated form. This would help in administration of these issues in a sustainable manner.
4.	Budget reports	This should include current budget status and budget variance, including the line items that constitute the variations.
5.	Fixed assets	The reports should be capable of providing information relating to various classification of assets, age of assets, accumulated depreciation, location of assets, etc.
6.	Bank and cash balances	In addition to bank reconciliation reports, a summary report of all bank and cash should be available on a daily basis for management decision making.
7.	Inventory systems	This should provide reports relating to the status of purchases, issues, stocks, valuations, aging of stock, etc. This should also account for procurements under process on a commitment basis.
8.	Receivables and payables	Aging analysis of these items is important for decision making.
9.	Ring-fenced services and utilities	Reports should be generated for services and utilities for measurement of efficiencies of the services. The reports should include costs such as direct, indirect, overhead, and unit costs.
10.	Financial ratios and efficiencies	<ul style="list-style-type: none"> • Tax revenue to total income ratio (%) • Property and other taxes to total income ratio (%) • Octroi/Cess to total income ratio (%) • Assigned revenues and compensations to total income ratio (%) • Rental income from municipal properties to total income ratio (%) • Fees and user charges to total income ratio (%) • Revenue grants, contributions, and subsidies to total income ratio (%) • Operations and maintenance to total income ratio (%) • Interest expenditure to total income ratio (%)

Sl. No.	Modules and Reports	Details of Requirements
		<ul style="list-style-type: none"> • Cash surplus/deficit to total income ratio (%) • Gross property tax receivables ratio (No. of days) • Gross cess receivables ratio (No. of days) • Property tax receivable to property tax income ratio (%) • Cess receivable to cess income ratio (%) • Operations and maintenance to gross fixed assets ratio (%) • Interest expenditure to loans ratio (%) • Establishment expenditures to total income ratio (%) • Administrative expenditures to total income ratio (%)
11.	Financial ratios—capacity	<ul style="list-style-type: none"> • Loans to reserves ratio or debt-equity ratio (times) • Interest coverage ratio (times) • Debt service coverage ratio (times) • Earmarked fund investments to earmarked funds ratio (%) • Interest on investments ratio (%) • Current assets to current liabilities ratio (times) • Fixed assets to total assets ratio (%)
12.	Financial ratios—performance	<ul style="list-style-type: none"> • Income per employee • Expenditure per employee • Income per citizen (total/ward basis) • Expenditure per citizen (total/ward basis)

Appendix 2: Terms of Reference of Consultants

Phase 1. Establishment of Accrual Based Double Entry Accounting – Model

A. Tasks to be Performed

- (i) **Preparation of Policy Framework**
 - review of the corporations' accounting policies and practices;
 - review of National Municipal Accounting Manual (NMAM) and generally accepted accounting practices in India;
 - identify municipal representatives to assist in transition and implementation; and
 - decide on need for issue of notifications and circulars for approvals departmental decisions.
- (ii) **Preparation of a Common Accounting Manual for the following:**
 - accounting records, procedures, and transactions to be prepared based on background of the transactions and accounting policies;
 - prepare transaction flow chart;
 - internal controls and procedures;
 - financial statements presentation;
 - chart of accounts and document for coding system and standard list of accounts based on numeric codes, as recommended in the NMAM;
 - account codes also to be linked to fund, function, and source of financing;
 - prepare municipal management information system for planning, decision making, and monitoring of municipal functions; and
 - identify linkages between various municipal activities across various functional departments.
- (iii) **Software Development and Support to:**
 - study hardware requirements to handle database management, municipal transactions, and local/wide area networking (for departments, central, and zone offices) to facilitate access to information and decision making, preferably a web-enabled software system;
 - decide on software requirements for priority municipal activities to enhance performance regarding citizen service operations, revenue and expenditure management, and transaction recording and reporting;
 - finalize the software that supports double entry bookkeeping and accrual-based accounting;
 - build in checks, controls, and reports for management information system requirements;
 - decide on a centralized or decentralized model; and
 - assist in developing software through co-ordination with software development agency, if any, in the state or ULB.
- (iv) **Computerization of Key Municipal Activities:**
 - (a) **Revenue Module**
 - review systems and procedures for assessment, levy, and collection of municipal taxes and charges (property tax, water charges, birth and death registration, building permission, etc.);
 - evaluate the existing software developed (for example, software developed by the state or ULB) for the aforesaid activities and if necessary modify the software to enable it to perform the contemplated functions;

- evaluate the existing database on assessment properties for municipal tax and charge attributes, and develop a module to reconcile attributes for the properties and assign a permanent assessment number for future usage;
- assist the ULB in updating all relevant databases, based on available data; and
- design, develop, and implement software for assessment, levy, and collection of municipal taxes and charges by integrating the existing software and making provisions for any future upgrading of the same.

(b) Expenditure Module

- design, develop, and implement a software package for addressing all payments: salaries, statutory payments, and general expenditures;
- prepare a liability register indicating debt and non-debt liability;
- design, develop, and implement a software package for monitoring works (this should be linked with the municipal management information system (to inform decision-making authorities on capital works/maintenance/infrastructure provision, progress, and status) and contractor payments; and
- help municipal corporation(s) reconcile all adjustment entries (regarding bank transactions, transactions with major institutions, loans, etc.), thereby identifying outstanding liabilities (debt and non-debt).

(c) Budget Module

- evaluate current budgeting procedures and identify mechanisms to integrate a bottom-up approach for planning service delivery and urban governance;
- design budget information data sheets to standardize inputs for the budget document;
- design and develop a budget document for future use; and
- ensure the system can update the budget utilization and be able to produce status reports.

(d) Staff Salary Module

- module should capture staff details regarding attendance, leave, and other service conditions for preparation of salaries;
- module should repair reports on salary-related matters and provides necessary management information system; and
- module should capture account categories and transfers expenses to the appropriate account category.

(e) Inventory Module

- all procurements of material should be captured in an inventory module;
- the module captures materials, quantities, prices, etc. from the procurement voucher; and
- the module should manage issue of materials and be capable of inventory planning and management.

(f) Fixed Assets Module

- develop modules for capturing the various assets as per NMAM requirements;
- develop the system to simultaneously update procurements; and
- the system should be able to calculate depreciation at point of time.

(g) Project Accounts Module

- All project-related expenses and fund transfers/allocations, should be captured through a separate project accounting module and be transferred to the asset account on completion.

- (h) **Administrative Modules**
 - The requirement of administrative modules shall be decided with the ULB and be incorporated into the total accounting reform package with appropriate interface and linkage provided to the main accounting system.
 - (i) **Reports for Management Information System**
 - All reports and sub-ledger information should be generated for management purposes. The reports include those mentioned in Appendix 1 of this document.
- (v) **Transition to the New Accounting System**
- actual implementation of new accounting system;
 - parallel run of manual and computerized system;
 - conduct an initial workshop to explain the difference between the two accounting systems;
 - help the ULB establish procedures for accrual and reconciliation of accounting records to ensure data integrity;
 - provide on-the-job support to ensure that problems related to the conversion are addressed and resolved promptly;
 - introduce and document procedures for recording and maintaining the accounting system to further ensure data integrity;
 - assist with preparation of opening balance sheet, on-the-job training, and financial statements preparation;
 - the scope of work for the resource-base strengthening component shall consist of:
 - reconcile municipal tax/charge records;
 - assist ULBs in preparing formats to survey properties in all wards;
 - consolidate the properties database and assign a permanent assessment number (for future reference);
 - prepare computerized municipal asset (both fixed and current assets) and inventory;
 - identify and create a database of capital works in progress (buildings, infrastructure, land, etc.) and fixed assets (buildings, infrastructure, land, etc.);
 - identify and create a process for accounting of current assets (cash and bank balances, inventory, loans and advances, receivables) and investments (long- and short-term);
 - provide training needs assessment and training of various stakeholders; and
 - consultants will submit a work plan and a project timeline including scheduled meetings, seminars/workshops, training, implementation activities, outputs, reports, etc.

B. Results to Be Achieved

- (i) **Preparation of Policy Framework**
 - Comparative matrix of various accounting policies that could be adopted;
 - Emerging principles for an accounting framework in adherence to accounting standards and generally accepted accounting practices and in compliance with the recommendations of NMAM;
 - draft for approval of accounting system, rules, procedures to be adopted by corporation and municipalities; and
 - draft policy on accounts use and dissemination of information.
- (ii) **Common Accounting Manual**
 - chart of accounts with 4-digit structure in keeping with NMAM;
 - guidelines for incorporation of opening balances;
 - ascertainment of financial position of the ULB;
 - valuation principles;
 - identification and valuation of assets belonging to the ULB;
 - ascertainment of liabilities due from the ULB;
 - design of forms for collection of information;

- preparation of accounting regulations and procedures to be followed;
 - auditing rules for financial statements audit;
 - preparation of MIS report and performance indicators;
 - preparation of guidelines for content, periodicity, and mode of transfer of information/reports between zonal offices and central office, and between various departments in the central office;
 - preparation of guidelines for content of asset and liability registers, tax/charge assessment and billing records, budget document, and accounting reports; and
 - format of financial statements and dissemination strategy.
- (iii) **Software Development and Support**
- create a list of hardware, networking systems, and other requirements including personnel;
 - complete software design and development including integrated web-enabled accounting system, if required;
 - release of software, testing of software, and software operation manual;
 - prepare an action plan for phased total computerization of prioritized municipal activities; and
 - develop a framework for computerization addressing:
 - income and expenditure.
 - contractors accounting;
 - grants accounting; and
 - fixed assets and lease accounting.
- (iv) **Data Entry**
- Feed all necessary data into the newly established accounting system.
- (v) **Implementation and Training**
- administrative arrangements for monitoring and management;
 - methodology for regular reporting and ranking of ULBs;
 - periodic review meetings;
 - understanding and analysis of financial statements and reports;
 - trial run of the system and generation of reports;
 - handholding for full implementation and parallel run; and
 - monitoring of one year's complete annual accounts, reports, documents, etc.

C. Explanations

- (i) **Modifications to the Municipal Accounts Manual:** The consultants will examine the practical experience gained during the initial period of working in the new accounting system. The consultants will also consider their experiences with other clients in cases where accounting reform was not sustained by ULBs in other states. Further, the consultants will identify required modifications to the municipal accounts manual. The consultants will recommend (a) any change in regulation to make the system more sustainable and (b) changes in the day-to-day operations to make full use of the new system.
- (ii) **Preparation Of Annual Financial Statements for One Full Year:** the ULB will prepare its annual financial statements for one year in the new system as per the new rules. This will result in the opening balance for the next financial year, which can be presented to the council.
- (iii) **Preparation of Reports:** The new system of accounting should introduce new reports for better financial management including the monthly trial balance, income and expenditure, etc. The consultants will assist the ULB in understanding the reports and how they can be used for decision making. The consultants will provide any support needed during the audit process, if conducted.
- (iv) **Preparation of Budget in the New System:** The consultants will train and assist the ULB in preparation of budget following the new system.

- (v) **On-site Handholding Training.** The consultants will assess the training needs of the accounting staff of the pilot ULB and will also train the accounting staff in the new system to ensure that sufficient capacity is built and sustainability is achieved.
- (vi) **Review the Existing Setup of Accounts Department:** The consultants will review the existing structure of the accounts department including the position of the accounts department in the organization and suggest ways to restructure the accounts department.
- (vii) **On-site Technical Support and Troubleshooting:** The consultants will provide on-site support for the accounting software installed at the pilot ULB. This will be performed by the software team. If necessary, the consultants will modify the software.
- (viii) **Reporting Requirements:** The consultants will submit a monthly progress report indicating the monthly progress and a statement of reports prepared by each ULB under the new system. The monthly report will be submitted along with the monthly statement of inputs.

D. Payment Schedule: Payments are to be made based on the stage of the work, with the stages and percentages as follows:

(i)	preparation of policy framework	10%
(ii)	common accounting manual	10%
(iii)	software development and support	20%
(iv)	preparation of opening balance sheet	
(v)	listing and valuation of assets	20%
(vi)	data entry, implementation, and training	40%

Appendix 3: Municipal Accounting Reform: Model Training Program

Training programs are to be designed and conducted according to the various target functions of the ULB. At the higher levels of the municipal hierarchy, trainings should focus on policy-related matters and the management information system reports, which could be useful for the management of the ULB. More detailed and on-the-job training needs to be provided for staff who are directly involved in the routine accounting-related matters of the ULB. Contents of the training program are listed below for the various target groups.

Target Group	Program Contents
Mayor Deputy Mayor Chairman Standing Commissioner Chief Accounts and Finance Officer Chief Auditors Local Fund Auditors Local Chartered Accountant Executive Engineer Superintending Engineer Systems Manager	<ul style="list-style-type: none"> • Objectives of state government and ULB in implementing accounting and budgeting reforms • State's and city's commitment in implementing accounting and budgeting reforms • Steps taken by the state government and ULB in implementing accounting and budgeting reforms and the way forward • Brief history of accounting reforms in India and the experiences of other states where reforms have taken place • Information about Comptroller and Auditor General of India's task force on accounting reforms • Major issues in transition • Steps needed to switch over from cash-based accounting to accrual-based accounting
Elected representatives: Mayor Deputy Mayor Members of standing committees Commissioner Deputy Commissioners Heads of other municipal departments Engineering Staff-Executive Engineer Superintending Engineer Other engineering staff Systems Manager Chief Accounts and Finance Officer Deputy Chief Accountant Chief Auditors Local Fund Auditors Computer Programmers Accountants Dy. Accountant Cashier Auditors Data Entry operators Revenue officers Municipal clerks	<ul style="list-style-type: none"> • Why municipal accounting and budgeting reforms? • Benefits of improved system of accounting—how it will benefit our cities? • Drawbacks of existing system of accounting • Difference between single entry cash-based accounting and double entry accrual-based accounting • Brief history of accounting reforms in India and experiences of other cities where reforms have taken place • Financial management techniques • Steps needed to switch over from cash basis to accrual basis • Impediments in implementing municipal accounting reforms • Steps to be taken at municipal and state level for implementing accounting reforms • Identification and valuation of assets • Preparation of game plan and identification/formation of appropriate committees to oversee implementation on an ongoing basis • Periodic review/problem faced and follow-up • Steps to be taken for accounting reforms
Chief Accounts and Finance Officer Chief Auditors/ Local Fund Auditors Dy. Chief Accountant Revenue officers	<ul style="list-style-type: none"> • Identification of assets and liabilities for preparation of opening balance sheets • Valuation of assets and liabilities • Preparation of opening balance sheet • Major contents of new accounting manual and the scheme of

Municipal accountants/auditors Dy. Accountants Municipal clerks Computer programmers Computer and data entry operators	entries for various functions of the ULB <ul style="list-style-type: none">• Periodical reconciliation procedures• Preparation of financial statements• Auditors report and its follow-up• Introduction to basic operation of computers and specific software• Entries for recording transactions
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Municipal Accounting Reforms in India—An Implementation Guide

India's first generation of economic reforms made a significant change in the perception of the role of local self-government bodies in the Indian public governance system. One of the important reforms introduced during this period was the Constitution (Seventy-fourth Amendment) Act, 1992. This reform empowered the urban local bodies in India to function as local self-governments as the third tier of governance. With the view to further strengthen these urban local bodies in their financial management the central government also developed guidelines for moving to a double entry accrual-based accounting system through the introduction of a National Municipal Accounts Manual. The paper highlights the importance of implementing accounting reforms in the urban local bodies, to inform the processes involved in the implementation, and thus to provide the way forward to improve urban local bodies' financial status and overall management.

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