

Background

Introduction

The 74th Constitutional Amendment Act, 1992 significantly increased the responsibility of local bodies in India. Urban Local Bodies (ULBs), too have witnessed a significant increase in responsibilities with greater powers and decentralized authority. Effective governance at the ULB level, among other things, requires internal financial systems that embody the standard accounting practices. In addition, the Right To Information (RTI) Act also mandates that the ULBs proactively share data, including key financial indicators, with the citizens. e-Governance has a key role to play in supporting both these objectives. While the requirement to move to a standard double-entry accounting system has led some states and several municipalities to implement financial accounting systems, there has been a little or no focus on a holistic approach with the aim of putting in place an integrated financial management system that can be leveraged as a management tool by the city administrators. The emphasis on RTI implementation has been virtually non-existent.

The Karnataka municipal e-governance implementation project is a significant departure from the traditional, erstwhile tried out approaches to municipal e-governance implementations. Covering the 57 largest municipalities in Karnataka, the implementation covers the entire suite of municipal e-governance applications developed by eGovernments Foundation, a non-profit with focus on leveraging e-governance for improving governance and service delivery in India. The first phase witnessed the launch of City Websites and a Public Grievance Tracking and Redressal system. In parallel, the Accounting Reforms process was launched, followed by the implementation of a Financial Management System. Other e-governance applications that are being implemented in the current phase include a GIS-based Property Tax System and a Birth/Death Certificate Application. This paper focuses mainly on the implementation of the Financial Management System (eGov Financials) in the 57 municipalities in Karnataka.

The Need for Accounting Reforms

The municipal governments have always been maintaining accounts in a cash-based system. The flaws in such a system are obvious – financial statements are not indicative of actual financial position and the true financial performance of the municipality cannot be assessed, resulting in ineffective financial planning. Some of the key drivers that led to Karnataka taking up the initiative to switch to accrual-based double-entry accounting system are:

- **Information gaps** in the cash based system and the promise that the switch would help generate more accurate picture of the financial position and make information readily available for effective financial management.

- As the pressure on the municipalities to become self-reliant grows, municipal governments will increasingly be forced to look to **generate funds from alternative sources** like the open financial markets (eg municipal bonds). This requires a certain degree of fiscal discipline and transparency that would be possible only by making the transition.
- The **Citizen's Right To Information** is expected to force the governments to maintain its records better and as the citizen participation in governance increases, the municipalities will be expected to provide an accurate picture of the financial position coupled with an ability to respond to increasingly sophisticated questions in a timely manner.
- Several **reform initiatives and policy directives** over the last several years, with specific focus on the municipal governments, have set the stage for the transition. Some such drivers are listed below:
 1. ICAI: Technical Guide on ULB Accounting and Financial Reporting (1999)
 2. Recommendation of the 11th Finance Commission, 2001
 3. Directive by the Supreme Court, 2001
 4. Pre-requisite for funding under the Urban Reform Initiative Fund
 5. Recommendation of the Task Force Report, 2002, of the C&AG (Comptroller & Auditor General)
 6. Release of the National Accounting Manual by the C&AG and the Ministry of Urban Development, Government of India, 2005
 7. ICAI Committee for Local Body Accounting Standards, 2005
 8. ICAI Exposure Draft, 2006
 9. Pre-requisite for funding under the National Urban Reform Mission, 2006

Some of the key expectations from the new accounting system for ULBs are as follows:

- Assist all stakeholders in evaluating efficiency and effectiveness of financial performance
- Assist stakeholders to assess the ULB's financial position, including the level of financial sustainability
- Aid in making the ULB's performance transparent and accountable to people.
- Develop a robust financial reporting system that would satisfy the requirements of the banking system/debt markets as the ULBs approach these channels for funds.

Key Stakeholders

Implementation of Accounting Reforms is an onerous task – even more so in the government, especially the local governments which have traditionally been severely constrained in terms of availability of trained manpower. This is why an implementation of accounting reforms coupled with the implementation of an integrated Financial Management System required active participation from three major stakeholders:

- **Government:** The project is being championed by the Urban Development Department, Karnataka. A special post of Additional Secretary, Reforms has been created to drive the implementation. The organizational structure of the municipalities in Karnataka, where all the Municipal Commissioners report to a centralized Director of Municipal Administration (DMA) lends itself to the implementation of a uniform set of processes. Needless to say, the DMA is a key participant in the effective roll-out of the processes and systems.
- **Municipal Administration:** As the end-users of the new processes and systems, there is an enormous strain on the administrative machinery to rise to the occasion. In addition to being trained on new accounting concepts (eg Double Entry Accounting, transition from cash to accrual basis etc), some of the smaller municipalities (especially Town Panchayats) need to be trained on the use of computers.
- **Nodal Consulting Firm:** The implementation of the modern accounting processes requires policy changes, changes in the legal framework (eg updating the Municipal Accounts Act), identification of reporting mechanisms (to translate the financial information into meaningful reports for decision support), development of training templates and most importantly, play an advisory role during the transition phase. In the case of Karnataka, IPE¹ was appointed as the nodal agency to drive this process.
- **Field Level Consultants:** The first year of implementation (currently underway) is generally the hardest in the transition phase. Not only are the municipalities expected to maintain books of accounts in the new double entry format, they are also expected to prepare the opening balance statement, which requires the compilation of all assets and liabilities, including the fixed assets register for the municipality. To handhold the municipalities, Field Level Consultants are being appointed to oversee the first year of transition for all the municipalities.
- **Software Development Agency:** The Government of Karnataka entered into an MOU with eGovernments Foundation (eGov)² as the agency to develop and provide the software applications. In the first phase, eGov is responsible for eGov Financials, eGov Property (Property Tax Information System), eGov GIS (GIS platform for municipalities), eGov PGR (Public Grievance and Redressal), eGov Birth/Death and eGov City Portal. All these applications have been provided free of cost to the Government of Karnataka as part of the implementation.

Operating Guidelines

A transition to a double-entry, accrual-based accounting is a complicated one that requires a close coordination between all the stakeholders. Some of the key operating guidelines that came to be adopted during the entire process are:

- **Process Re-engineering is a necessary pre-requisite:** Definition of rules, guidelines and operating processes is essential for a successful implementation.
- **Standardize Processes:** The 57 municipalities cover City Corporation, Municipalities and Town Panchayats. One critical determinant of a scalable and manageable solution is a standardization of processes across all the ULBs. Standardized processes ensure that they are easier to manage and more importantly, lessons learnt from one ULB can easily be applied to the other ULBs.
- **Software enabled processes:** The software deployment of eGov Financials is being done in parallel to the deployment of the processes. This ensures that there is an early adoption of the software and also that the users do not have go through two stages of learning. A standardized process for all the ULBs has ensured that the same software application will be deployed for all the ULBs – which greatly reduces the maintenance cost projections.
- **Software for non-accountants:** One of the key requirements from the software team was to develop software that could be used by non-accountants. This required the provision of screens that are easy to navigate and use, with the actual accounting treatment handled by the system as a background process.
- **Finance Management:** The focus of the implementation must be effective Finance Management, not mere book-keeping. This calls for proper control procedures like budgetary controls built into the system as well as a reporting tool which is embedded into the accounting software.
- **Proactive Information Disclosure:** eGovernments Foundation is making all attempts to embody this in all its products. In line with this approach, the financial management system is expected to provide information at an aggregate level focusing on the financial position of the ULB to the citizens via delivery mechanisms like the city portal.

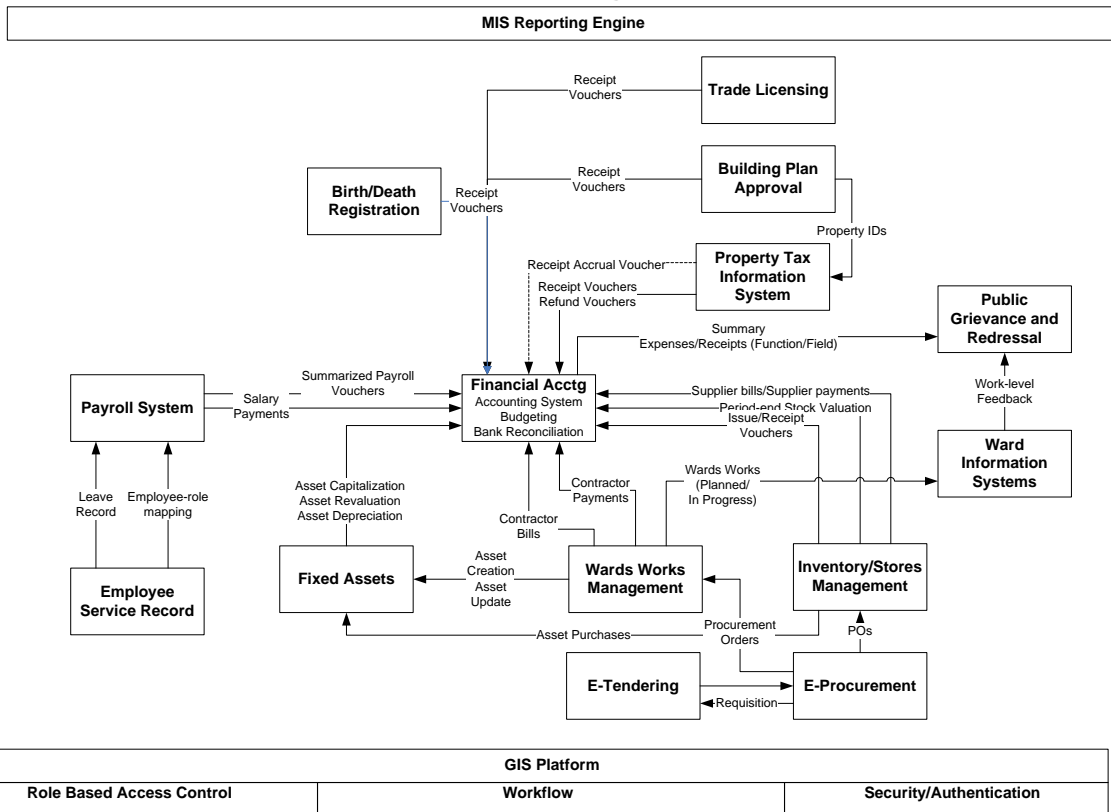
Software Development

eGovernments Foundation (eGov) was entrusted with the software development for the project. eGov is a non-profit trust, set up with an exclusive focus on municipal e-governance. The goal is to develop and deploy enterprise class software solutions to help streamline operations in the municipalities, improve the flow of information across the various stakeholders within and outside the government; provide decision support tools for the administrators, leading up to better transparency and accountability of operations. These applications are built exclusively for Indian municipalities are given to them free of cost, i.e. there are no up front license costs or recurring product upgrade costs. Figure 1 shows the municipal e-governance roadmap that eGov is currently working on.

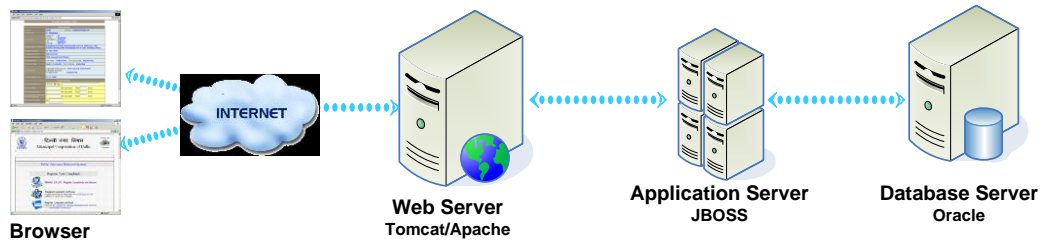
The following guiding principles have been embodied in all of eGov's products and acted as key principles in developing eGov Financials, which has been deployed in 57 of Karnataka's municipalities:

- **Build Products:** All of eGov's products have been built on a Municipal eGovernance Platform, which consists of a set of infrastructure components that are leveraged across all the products. While this ensures a high degree of commonality across the product suite, it greatly reduces the application development effort. In addition to the platform, eGov is focused on building products, not custom solutions. This calls for an upfront investment in product development but in the long run, this is especially advantageous in the rapid deployment of the product suite across a full spectrum of municipalities.
- **Standards-based products:** Just as different industry verticals have chosen adopt process standards, eGov is committed to working with government bodies to introduce standards, especially in the area of information processing. For instance, eGov has collaborated with the Registrar General of India to develop birth/death recording data and XML standards and Survey of India to develop an urban spatial data model. On a similar vein, eGov has developed eGov Financials to support the National Municipal Accounting Manual (NMAM). As municipalities increasingly adopt the NMAM, it becomes easier to implement eGov Financials. *The challenge, of course, is to ensure that the products are sufficiently flexible to allow for state specific modifications – this is where a products-based approach is a key enabling factor.*
- **Enterprise Approach:** As the figure below shows, eGov is in the process of developing a full municipal ERP suite. This calls for a product design that allows for tight integration across the various products – for instance, the eGov Property Tax System is tightly integrated to eGov Financials (eGov Property will be deployed in Karnataka over the next few months).

eGovernments' Municipal e-Governance Integrated Application Architecture



- Software Ease of Use:** The biggest impediment to a successful implementation of e-governance solutions is inadequate capacity, both in terms of numbers and skill sets. This was even more so in the case of the Financial Accounting reforms, given the inherent complexity in this area. To ease the burden, eGov Financials was developed with easy to use screens keeping mind the skill levels of the end-users (there were several cases of accountants in the smaller Town Panchayats who had never used a computer before). In addition, the data entry has been simplified to the extent that the user in most cases does not need to understand the full accounting transaction, which is automated in the back-end. While this does improve the ease of use from a customer point of view, it is a deviation from the products approach since the accounting treatment is likely to change from one state to another.
- Leverage Open Source Technologies:** Needless to say, keeping the total cost of ownership of the solution low was a critical requirement. The entire eGov product suite has been developed on open source technologies (see figure) except the database (the current implementation is Oracle and there are plans to release the applications on MySQL in future) – in addition to the fact that the applications are given away free of cost, this approach ensures that the total cost of implementation for the ULBs is minimized.

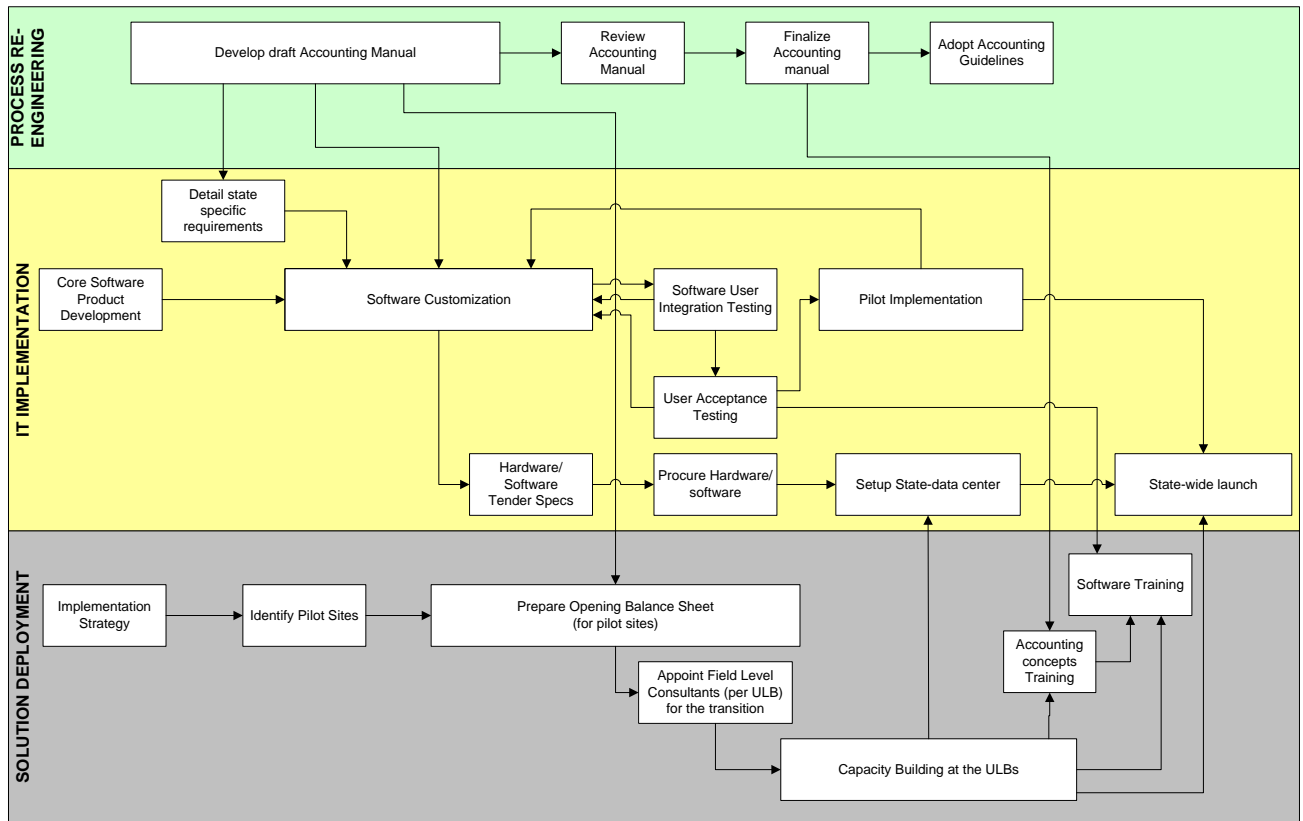


- **Web-based Applications:** A relatively high-literate state like Karnataka found it extremely difficult to hire qualified IT personnel in the smaller towns (the problem repeated itself in almost all TMCs and TPs). It would have been close to impossible to effectively deploy and maintain the software applications locally. This led eGov to deploy all its applications on a web-native platform which centralizes the support and will dramatically bring down the recurring implementation costs.
- **Holistic approach:** An IT system is as good as the processes it supports and the outcomes that are possible from these processes. One of the key outcomes from any e-governance system is the ability to improve transparency and accountability of the administrative setup. In line with this, the aim is to ensure that all the eGov products embody the principles of proactive information disclosure. For instance, it is planned to supply summary income/expenditure/budget utilization data from eGov Financials to the City Portal, giving the citizen a near real-time summary of the financial position of the ULB.

Implementation

The deployment of the Financial Management System and processes, quite expectedly, was an extremely challenging affair spanning over 8 months, calling for close coordination between all the stakeholders (see Figure below).

Implementation Approach for e-governance based accounting reforms in municipal governments



This section takes a look at some of the key lessons learnt from the deployment process. These lessons can and must be leveraged in other deployments of e-governance applications – not just in the municipal space.

- Capacity Building:** It would not be a truism to say that the single most critical factor in successful implementation of any IT application is the ability of the end-users to absorb and leverage the systems to improve work processes. In the government, this challenge is compounded by the fact the current capacity is highly inadequate – both in terms of people and skill-sets. This is even more so in the case of local self-governments. The Karnataka e-governance project is also going through the same set of challenges. In the case of the Financial Accounting Reforms process, the government came up with the following strategic interventions which are expected to go a long way in making the implementation a success:
 - Creation of a new cadre of accountants:** Fully realizing that the accountants in most municipalities would be unable to grasp the complexities of a double-entry, accrual based accounting principles; much less the concept of an accounting system, a new cadre of accountants has been created to support the municipalities. They

have been recruited through the KPSC (Karnataka Public Services Commission) and put through a series of training sessions (accounting principles; software usage), equipping them to drive sustained implementation at the grass-roots level.

- **Hand-holding Support:** The state is in the process of appointing a chartered accountancy firm (called Field Level Consultants or FLCs) for supporting the municipalities in the all-important first year of operations, where the deliverables include the generation of the opening balance sheet for the municipality, an activity which requires the formation of the asset register and estimating their current, depreciated value. In addition, the FLCs are expected to provide support to the municipal accountants in internalizing the new accounting regulations and reporting requirements, and successfully deliver all the statutory reports (Balance Sheet, Income/Expenditure Statement) for the year.
- **IT Support:** Along with the accountants, the government has also hired a cadre of IT personnel, usually covering a cluster of municipalities. This group is currently assisting in the implementation by acting as an IT liaison for the municipality, maintaining the city portals etc. This group is expected to evolve into a municipal level IT support, responsible for the smooth functioning of the systems in the municipalities and resolving local hardware/software support issues.
- **State-wide Deployment:** As mentioned earlier, it has been close to impossible to hire good quality IT support staff in the municipalities. The risks arising out of this have been largely mitigated by the fact all the applications are web-based, deployed from a central data center located in Bangalore. This has two obvious advantages – ease of deployment (of bug-fixes, upgrades etc) coupled with easy access to trained manpower (technical and functional support). The potential risk in a centralized deployment model is that of connectivity from the municipalities, especially the smaller, remote ones. In Karnataka, broadband connectivity is available from about 30 of the 57 municipalities and for the rest, ISDN connectivity is available – in both these cases, the costs are expected to fall over time even as reliability keeps going up.
- **Transition and Ongoing Support:** The Nodal Firm (IPE) and the software development agency (eGov) are responsible for the successful implementation of the reform processes and systems. The sustainability depends on the government's ability to absorb them and ensure that they are inter-woven into the fabric of governance. Karnataka has taken an important step in this direction by setting up an internal competence centre comprising of the EMC (Expert Management Cell) staffed by accounts personnel for functional support and municipal-IT support centre for technical support. These groups are well on their way to establish themselves as a knowledge centre. The state is exploring alternatives to setup a sustainable institutional arrangement which would allow, among other things, the employee

salaries to be in line with the market salaries, outside the constraints imposed by the government pay structures.

The Road Ahead

In Karnataka, the first set of applications has been implemented. These are the Public Grievance and Redressal System; City Websites and most recently, Financial Management System. In the coming months, the Property Tax System and Birth/Death Registration systems will be rolled out. Over the next couple of years, the application footprint will be expanded to cover other areas, especially the two largest expenditure functions of the ULBs – establishment expenses (Payroll) and Engineering Works. In parallel, a separate project is in the pipeline to deploy these applications across the remaining 165 municipal administrations of the state. The intent is very clear – leverage e-governance applications and IT technologies to streamline operations; provide decision support tools; improve accountability and transparency – leading up to improved financial sustainability and ultimately, better service delivery to the citizens.

¹ IPE (Infrastructure Professional Enterprises) www.infrastructureindia.com

² eGovernments Foundation: www.egovernments.org is a non-profit which aims to leveraging technology for improving governance, with exclusive focus on municipal e-governance. The company is in the process of developing a full suite of integrated applications (municipal ERP) and is currently working with Karnataka, MCD (Municipal Corporation of Delhi) and NDMC (New Delhi Municipal Council) to develop and deploy the applications.