

Workable solutions to help you make the difference

Tamilnadu Urban Infrastructure Financial Services Limited

Final Report - Tiruchengode Municipality

Conversion of City Corporate Plan into Business Plan

February 2006



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ABBREVIATIONS

TNUIFSL	Tamilnadu Urban Infrastructure Financial Services Limited
TNUDP	Tamilnadu Urban Development Project
CCP	City Corporate Plan
BP	Business Plan
ESR	Elevated Service Reservoirs
GLSR	Ground Level Storage Reservoirs
MLD	Million Litres Per Day
LPCD	Litres Per Day
FOP	Financial Operating Plan
O&M	Operation and Maintenance
ULB	Urban Local Body
TNUIFSL	Tamilnadu Urban Infrastructure and Financial Services Limited
LPA	Local Planning Authority
T&CPA	Town and Country Planning Act
MDR	Major District Road
ODR	Other District Road
ML	Million Litres
UGD	Underground Drainage
SWD	Storm Water Drain
SWM	Solid Waste Management
CAGR	Compounded Annual Growth Rate
ARV	Annual Rental Value
p.a.	Per Annum
CIP	Capital Investment Plan
LCS	Low Cost Sanitation
PC	Public Conveniences
TWAD	Tamilnadu Water Supply and Drainage
AMP	Asset Management Plan
WTP	Water Treatment Plant
STP	Sewage Treatment Plant
MoA	Memorandum of Association

EXECUTIVE SUMMARY

In the 2002-03 period, Tamilnadu Urban Infrastructure & Financial Services Limited (TNUIFSL), an asset-management company, had led the preparation of city corporate plans (CCPs) for a group of towns in Tamilnadu. The objective of the exercise was to develop the vision and growth strategies for these towns. The CCP for each town included operational and financial assessment, capital investment programs and the required resources. However, the towns could not implement these capital investment programs due to inadequate finances and the absence of an action plan. TNUIFSL recently appointed CRISIL Infrastructure Advisory to provide assistance in converting the CCPs into workable business plans.

Scope of CRISIL Infrastructure Advisory's assignment

There have been significant changes in the operational and financial position of these towns in Tamilnadu since 2002-03, when the CCPs had been drafted. Thus, CRISIL Infrastructure Advisory is required to develop firstly, a business plan to identify the current infrastructure requirements of these towns. Secondly, we have been mandated to develop a financing operating plan, identifying the measure and timing of funds required for implementing the investment program identified in the CCPs.

Methodology adopted

CRISIL Infrastructure Advisory has envisaged the execution of this assignment in the following steps:

Step 1: Identifying the infrastructure gaps based on discussions with town officials, available secondary information and CCP reports

Step 2: Determining the investment requirements of the town through technical analysis

Step 3: Determining the investment capacity of the town by developing a financial operating plan under two scenarios viz. Business-As-Usual scenario and Improved Case scenario

Step 4: Highlighting the gap/surplus between the investment requirement and investment capacity, as the case maybe

Step 5: Specifying the financial and operational responsibilities of all stakeholders, i.e. TNUIFSL, lending agencies, municipality, developers and users

1. Tiruchengode's economy and infrastructure

CRISIL Infrastructure Advisory broached the town visit with a study of Tiruchengode's infrastructure. Tiruchengode has substantial growth potential, primarily due to the key tourist spots within the town and an extensive industrial activity. On the land development front, currently 70% of the town's usable land area is unused. If developed properly, this unused land could generate substantial additional revenues.

On the infrastructure front, despite a good water supply distribution network covering 95% of Tiruchengode's roads, water supply reaches only 38% of the houses in the town; almost one-fourth of the population lacks proper sanitation facilities. The coverage of roads and storm water drains is below the prescribed norms, with roads covering only 72% of the town and storm water drains covering 34% of it. Street lighting facilities and the solid waste collection system cover larger areas; streetlights facilities have attained 100% coverage level, which is as per norms, and the solid waste collections cover 100 per cent of the area under the Tiruchengode municipality's jurisdiction. However, service delivery with respect to other aspects of solid waste management (SWM) like transportation and disposal are inadequate.

2. Key functions and performance of Tiruchengode municipality

One of our first steps towards formulating a business plan was to study the functions and performance of the Tiruchengode municipality, which would be the chief executor of the plan. The Tiruchengode municipality covers an area of 25.2 sq. kms and is divided into 33 wards. Responsible for providing a host of services, the municipality plays a number of functions including obligatory functions like the provision of water supply, and discretionary functions like the development of parks and playgrounds. The functions are distributed between different departments; each department has a Head who reports to the Commissioner.

CRISIL Infrastructure Advisory examined the roles of each department and identified the weaknesses in each department, since the business plan had to be prepared taking these into cognisance. Our findings about the functioning and the lacunae in the discharge of responsibilities by each department are detailed below.

Revenue department: The revenue department raises demands for key revenue items like property tax and water charges, follows up on outstanding payments and prepares demand collection balance (DCB) statements. Our study revealed that the demand notice for property tax is not raised on time, which adversely affects the working capital cycle. Also, though targets have been identified for the bill collector, there are no significant checks to ensure that the targets are met. Finally, neither incentives nor disincentives are used to expedite payments from the users.

Accounts department: This department maintains all income and expenditure statements, prepares and implements the budget, pays works and supply bills and disburses salaries. However, due to the accrual based accounting system, the demand is being projected as the collection, which has been modified for projecting the cash flows in our engagement. This would provide a more accurate financial position of the town

Engineering department: This department is responsible for the execution of projects related to roads, street lighting, water supply and sewerage. Besides, it has to maintain these assets for optimum service delivery. We found that the department suffers from inadequate infrastructure and lack of scientific maintenance procedures.

Health department: This department attends to SWM, issues licences for non-hazardous and non-polluting businesses, and organises health camps and other government immunisation programmes. It also manages the municipal hospitals and other health centres. However, this department is still unable to provide proper sanitation facilities to significant segments of the population. Also, the SWM system is poor, excepting its collection component. Sewer is discharged in the open without any treatment.

Town planning department: This department issues building licences after assessing their need and legality. It also undertakes assessment of the town to ensure reduction in unauthorised layouts. But, we were able to identify about 50-60 acres of unauthorised layouts.

Information technology department: This department maintains computerised updates of all municipality-related information, updates the database for collection of various taxes and provides management information system (MIS) reports. However, this department is constrained by inadequate trained staff as well as insufficient maintenance of software and hardware.

Having assessed the operational and maintenance performance of the Tiruchengode municipality, our team attended to the municipality's financial profile, vital to the formulation of a business plan.

3. Financial performance of Tiruchengode municipality

Tiruchengode municipality has maintained a very poor financial profile in the last five years, generating an average annual revenue deficit. Fairly high O&M expenses, accounting for 65% of municipal receipts, constitute the chief reason for its poor performance. Also, its outstanding balance of Rs. 32.72 crores that is almost four times the closing balance of 2004-05 is a major cause of concern.

4. CRISIL Infrastructure Advisory's plans for Tiruchengode

Based on our detailed study of Tiruchengode's infrastructure requirements and the strengths and weaknesses of the Tiruchengode municipality, CRISIL Infrastructure Advisory drew up the following plans for the town's growth.

Asset Management Plan

We drafted an asset management plan following our assessment of the impact the O&M expenses have on the finances of the municipality. This plan would help the municipality to identify its revenue generating assets as well as those that are draining its revenues.

5. Capital Investment Program

The Capital Investment Program (CIP) identifies the investment requirements of the town through demand-gap analysis. We estimate Tiruchengode's total investment requirement to be of the order of Rs 3794 lakhs; 44% of this investment would be required for improvement in water supply, 11% in upgradation of roads, and 14% for improved storm water drains. The estimated investments required for different sectors over a period of five years are shown in the table below.

Year wise projections of investment requirement in different service sectors

Sector wise Phasing	I year	II year	III year	IV year	V year	Total
Water supply	206.88	827.50	620.63	-	-	1,655.00
Storm Water Drain	-	66.88	267.50	200.63	-	535.00
Sanitation and Sewerage	53.75	215.00	161.25	-	-	430.00
Solid Waste Management	-	18.75	75.00	56.25	-	150.00
Roads	-	70.60	282.40	211.80	-	564.81
Transportation	-	-	-	10.00	10.00	20.00
Street lighting	-	3.00	12.00	9.00	-	24.00
Others	-	-	51.88	207.50	155.63	415.00
Total	260.63	1,201.73	1,470.65	695.18	165.63	3,793.81

All figures in Rs. lakhs.

6. Financial Operating Plan

The Financial Operating Plan (FOP) assesses the financial strength of Tiruchengode and the financial feasibility of the identified investment projects. CRISIL Infrastructure Advisory conducted the assessment in two envisaged scenarios viz. Base Case and Improved Case. In the former case, a Business-As-Usual scenario is assumed, while in the latter case, several improvement measures on account of efficiency gains¹, new charges and rate revisions across revenue items are assumed.

We concluded that Tiruchengode could sustain the identified investments only if it implements improvement measures. If the town continues to function in the Business-As-Usual mode, then it would be unable a substantial surplus that can meet its requirements. If the town operates in the Improved Case mode, it would be able to sustain up to Rs. 5731 lakhs of investment, which is almost 1.5 times the required investment.

¹ Efficiency gains are gains resulting from increase in coverage of services and taxes.

7. Action plan and implementation schedule

Finally, CRISIL Infrastructure Advisory drew up a detailed action plan and implementation schedule to aid the effective execution of the business plan. Though the Tiruchengode municipality will be the chief executor of the plan, it will require the involvement of other stakeholders to be successful. The two other chief implementers besides the urban local body (ULB) will be the Municipal Council and the state government. We expect the budgetary grant from the state government to meet 30% of the plan's total investment requirements and the ULB to contribute around 10%. Financial institutions will meet the remaining 60 per cent of the investment requirements.

Achieving the set objectives would require a high degree of commitment from the municipality and active support of the council and the state government. Each of these stakeholders will be responsible for different areas of work. The municipality will be expected to adopt measures to ensure operational efficiency, hike water tariff and property taxes, introduce new charges for SWM, manage assets for its optimum use and induce new capability in the engineering, health and accounts sections. We expect the council to assume charge of increase in water charges, removal of public fountains, and coverage of unregistered properties. The council would also be required to include charges for SWM and regularise unauthorised layouts. The chief expectations from the state government are support for revision of water tariffs and introduction of a policy for converting unauthorised properties into authorised properties upon payment of penalty charges.

Activity Chart

Stakeholders	Actions	Pre - Project	I year	II year	III year	IV year	V year	VI year
Financial								
TUFIDCO/TUFISIL	Release of loans		182.4	205.0	393.3	486.6	115.9	
Govt. of Tamilnadu	Release of grants		78.2	360.5	441.2	208.6	49.7	
Tiruchengode	ULB contribution			636.2	636.2			
Public	Initial contribution for new projects like							
Physical								
Council	Resolution to undertake the project							
Implementing agency	Implementation of the projects							
TUFIDCO/TUFISIL	Monitoring of the implementation							
Govt. of Tamilnadu	-do-							
Tiruchengode municipality	Monitoring of the implementation							
	Repayment of loans							
Self Help Group (Public)	Feedback/Highlighting pitfalls							
	Providing ground level support							

The above activities, undertaken in the specified time frames, will enable Tiruchengode to attain its growth objectives and pave the way for its future progress.

1. BACKGROUND

Tamilnadu Urban Infrastructure Financial Services Limited (TNUIFSL) was involved in preparation of City Corporate Plans (CCP) for a set of towns in Tamilnadu as part of the Tamilnadu Urban Development Project II (TNUDP II). The objective of the CCP was to develop the vision and strategies for the municipalities in the state of Tamilnadu. The CCP included appropriate investment strategies, capital investment programs and resource mobilization measures to be adopted by the municipalities in provision of efficient services. However, the ULBs are not in a position to implement the identified capital investment programs due to several reasons, the primary being inadequate finances of the corporation. In addition, there is no action plan that would enable implementation of the corporate plan towards achieving the set objectives of service delivery. Hence, it was imperative to develop a Business Plan (BP) to define the strategies and tasks for the timing of funds, for the programs identified in the CCP.

CRISIL Infrastructure Advisory has been appointed as Consultants to TNUIFSL in providing assistance to convert the CCPs of seven towns (Cuddalore, Nammakal, Tiruchengode, Kodaikanal, Tirunelveli, Nagercoil and Avadi) to individual Business Plans.

1.1 Objectives and scope

The objective of this assignment is to formulate a strategic plan for conversion of CCP into Business Plan to enable the ULB to accomplish its objectives covered in the CCP by assessing the ULB's financial capability to undertake capital investments.

The scope of work is:

- Assess the finances of the ULBs - An assessment of the finances (past 5 years) in terms of sources and uses of funds, base and basis of levy, rate revision history and impact, state assignments and transfers - base and basis of transfer and its predictability, outstanding liabilities (loans, power dues, pension etc), levels of service, coverage and quality of municipal services, staffing and management arrangements in delivery of services
- Outline issues in revenue realizations, quality of existing assets in relation to service levels and coverage and institutional constraints.
- Develop quick indicators of performance, based on current coverage and additional population in the medium term (10 years) and unit costs
- Indicate city level investment requirement for up gradation of infrastructure.
- Improve service coverage and asset quality by:
 - Prepare a comprehensive Asset Management Plan and use fiscal notes and policy analysis to assist in making informed investment choices to achieve sector/ city goals
 - Define priority assets and indicative costs of rehabilitation
 - Conduct fiscal impact analysis of investments: life- cycle O&M costs, revenues from project, and costs/ impacts on finances and of not doing the project
 - Explore funding options for rehabilitation of facilities
- Prepare a Financial and Operating Plan (FOP). The FOP is a medium term framework of the ULBs, and shall present the following–

A. Additional data to be collected:

- Break up of energy cost on UG, WS etc.
- Salary for all the departments including staff and payments to private operators
- Finding out the benchmark cost i.e. at ideal condition, what would be the cost of the identified investments, a table indicating the investment plan for next 5 years with identified source of finance.

B. Indicative areas of reduction in expenditure:

- Optimisation of financial, collection, operational and service delivery efficiencies.
- Efficient operation and maintenance system.
- Improvement and up gradation in the existing system.
- New financing methods like leasing.
- Cost reduction measures without additional investment, with minimum additional investment and with major additional investment.
- Charging or levying of new taxes/charges.
- Effective utilization of existing resources and untapped non-conventional resources.
- Energy audit resulting in savings in energy.
- Leak detection resulting either in connections or in the tariff (or) maintaining the same supply and achieving a reduction in energy cost.
- Privatising the MSW collection and identifying a BOT operator for eliminating, composting etc, items of revenue can be identified.
- Laying of Cement concrete road / Fly ash and savings on maintenance cost resulting in increasing operating surplus.
- Water recycling / reuse
- Rejuvenation of tanks and reduction of cost / litres of water produced
- Privatisation & option for revenue rising.
- Better inventory control and management.
- Fleet management.
- Potential for scrap disposal.

C. Options for increasing the revenues through non-traditional methods

- Land development for raising revenue (not the traditional commercial complexes)
 - Suggestion for improvement of revenues.
1. Prepare a draft Memorandum of Understanding between ULB and TNUIFSL for effective implementation and monitoring of the Business Plan. The MoU would outline the base line (based on the Situation Analysis) and the Performance Benchmarks to be monitored, apart from other financial and loan covenants. The targets would be based on service development targets and outputs of the financial and operating plan.
 2. Initiate consultations with council and local stakeholders on the priorities; redefine priorities (rerun FOP if required) and work with the Council to resolve on adoption of the City's FOP and CCP actions.
 3. Finalize Business Action Plan for the City, with a resolution from the council on the priorities and commitment to implement revenue and management improvement measures.
 4. Identify the obligations on the part of the ULB/TNUIFSL/TNUDF/Government for successful implementation of the Business Plan.

1.3 Report Structure

Chapter 1: Background

Chapter 2: Review of the CCP – city profile

Chapter 3: Review of the CCP – Municipal assessment: Infrastructure and Organisation

Chapter 4: Review of municipal finances

Chapter 5: Capital Investment Program (CIP)

Chapter 6: Financial Operating Plan (FOP)

Chapter 7: Asset Management Plan (AMP)

Chapter 8: Business strategy

Chapter 9: Action and implementation plan

Chapter 10: Draft Memorandum of Association between Tiruchengode and TNUIFSL

Annexure

1.4 Deliverables

This report provides

1. The comprehensive business plan based on the updated information from the towns, observations during the town visits, service level assessments and a complete financial analysis.
2. Draft Memorandum of Association (MoA) to be signed between Tiruchengode and TNUIFSL.

2. REVIEW OF CCP - CITY PROFILE

Tiruchengode is a town with a substantial growth potential due to its inherent strength of geographical location that has key tourist spots and an extensive industrial activity. However, the town's growth has been stifled due to inadequate planning and untapped revenue generation potential across sectors. The town has to adopt an integrated approach to development in order to improve the existing situation

Tiruchengode, the headquarters of Tiruchengode taluk is situated in the central part of Tamilnadu at a distance of 45 kms from Salem. The town has historic significance due to the hill top Arthanareeswar temple. It was constituted as municipality in 1965 and in 1984 it was upgraded to a Grade I municipality and in 1988, it was upgraded into a Selection municipality. Its total coverage is 25.2 sq. kms and is divided into 33 wards. The town has a population of 0.85 lakhs (2001 census) with a population density of 3373 persons per sq. km. The literacy rate has been increasing over the last 4 decades and as per 2001 census, 62% of its population is literate.

2.1 Economic profile

The main activities of the town are manufacturing of rigs and lorry bodybuilding. The town's Arthanareeswar temple is one of the most important heritage sites in the state. Other than this, there are a host of temples that add to the heritage value of the town. The town's revenue generation potential is primarily from industrial activity of lorry bodybuilding. The tourist attractions could also supplement the revenue generation capacity, if measures are taken to improve the ambience of the spots.

2.2 Past planning efforts

There are 12 detailed development plans prepared by the town, notified under Town and Country Planning (T&CP) Act 1971 and there are special zoning regulations that form part of the master plan, which was approved in 1993. The development of the town is as per this act, which is permitted by the Local Planning Authority (LPA), whose key members are the counsellors and the existing land use is largely based on their directives. However, the efforts have not yielded the desired results, as there are 36 unauthorized layouts (Approximately 80 acres). Some of the unauthorized layouts at strategic points like the foothills of the temple are adversely affecting the tourist activities as well. The existing land use in the town highlights the vast untapped potential of the town, as almost 70% of town's area is unused. If proper efforts are taken, this could provide a good revenue source. The land use pattern details are mentioned below

Table 1: Land use Pattern

Use	Area (Hectare)	Percentage
Residential	427.7	19.45
Commercial	43.88	2.0
Industrial	91.11	4.14
Public-semi public	17.56	0.8
Education	18.12	0.82
Total (1)	598.37	27.21
Wet Lands	13.18	0.6
Dry Lands	1505.82	68.52
Hillocks	58.8	2.67
Water Bodies	21.83	1.0
Total (2)	1599.63	72.29
Grand Total (1) + (2)	2198	100.00

Source: City Corporate Plan, Tiruchengode

2.3 Key development issues

Despite the significant revenue generation potential of the town through various sources, the growth of the town is stifled due to three key issues viz. low levels of land development (Almost 70% of the usable land lying vacant), significant number of unauthorized layouts and full potential of the tourists spots untapped due to lower levels of development in these places

3. REVIEW OF CCP - MUNICIPAL ASSESSMENT: INFRASTRUCTURE & ORGANISATION

The municipality is responsible for providing a host of services ranging from obligatory function like provision of water supply to discretionary function like development of parks and playgrounds. The common requirement across any of the functions is good asset quality in adequate supply. Despite a good distribution network, water supply reaches only 38% of the houses in the town and almost 1/4th of the population lacks a proper sanitation facility. Roads and Storm Water Drains (SWD) are inadequate to cater to the existing population, while street lighting and solid waste collection system is adequate. However, these assessments have been undertaken without a detailed assessment of its slum infrastructure, which is essential before implementing any of the projects identified in Section 5.

3.1 Water supply

The source of water supply to Tiruchengode municipality is from the two locations in the Cauvery river viz. Kokkaranyanpet and Avathipalayam, which are located at a distance of 17 kms and 22 km respectively, from the town. The town is covered under the water supply scheme, which was commissioned in 1968 at an estimated cost of Rs. 138 lakhs. Subsequently, to cater to the increased requirements of the town, another scheme was commissioned in 1990 at an estimated cost of Rs. 466 lakhs. However, the second scheme is catering to 38 villages beside the town, which has affected the town's supply adversely. Hence, the third scheme was implemented that provided 7.5MLD² (Million Litres Per Day). Even though, this supply is sufficient for the existing demand of 7.21 MLD, the town is facing a deficit situation, as 100% of the supply does not reach the consumers due to transmission and distribution losses of approximately 30% - 40%. Added to it, the source is being polluted due to discharge of industrial wastes into the river.

3.1.1 Additional storage capacity not required

There are 13 Elevated Service Reservoirs (ESR) and 1 Ground Level Storage Reservoir (GLSR) with a total storage capacity of 4.19ML (Million Litres) and 0.57 ML respectively that is 41 % of the daily requirement, higher than the norm of 33.33%. Hence there is no need for any additional service reservoirs. However, the conditions of the old reservoirs need to be assessed in detail and plans should be drawn for their repairs, rehabilitation and maintenance, if found necessary. The existing treatment capacity is 23 MLD, which is 3 times the existing supply and hence adequate to cater to the current needs.

3.1.2 Distribution lines cover 95% roads

The total length of the distribution system is 110 km covering 94.8% road. This is above the state average for municipalities (78%) and the norm of 85% and hence, there is no need for additional pipelines. However, the system requires an overhaul as most of the pipes were laid in 1967 that have exceeded its normal working cycle of 30 years. Water supply is quite erratic with a frequency of once in 5 days that goes up to 8 days during power failures. This has caused a high level of discontent with the users, leading to illegal tapping of water and non-payment of water charges. The problem is compounded as a portion of the total supply is diverted to the 291 public stand posts in the town that is much above the accepted norm of 145 stand posts (1 per 150 Slum residents³). However, as per the government's policy, the public stand posts have to be eliminated completely.

² 7.5 MLD out of a total capacity of 21.08 MLD

³ As per TNUDP II accepted norms. There are 3834 slum households with a population of 21796 in 20 locations.

3.1.3 Water supply reaching only 38% houses

The distribution system covers only 38% of the total households (10432 out of 27353 properties in the register). This could be even lesser, if the number of unassessed properties is taken into consideration. The non-coverage of 62% households highlights the poor operational efficiency, as the coverage has not improved over the last 4 years from 2000-01 to 2004-05.

3.1.4 Issues

Due to lack of additional water source, despite sufficient supply capacity, there is an increasing demand-supply gap and there is a high level of transmission and distribution loss due to inefficient operations. The asset quality is deteriorating due to improper maintenance at source, transmission and distribution with a high-energy consumption due to poor efficiency of pumps. On the service delivery front, the coverage is very low

3.2 Sewerage and sanitation

3.2.1 23% population devoid of any sanitation facility

At present, there is no Underground drainage (UGD) in the town and it has only shallow open drains for disposal of the sewerage. Currently, the roadside drains carry the sewerage and rainwater. Houses and other commercial establishments have their own septic tank arrangements for sewage disposal. The sewage water from the houses as well as storm water is collected in the open drains and disposed in the Kootapalli lake causing environmental degradation and spread of water borne diseases.

17.3% the town has access to public conveniences⁴ and out of the 27353 properties in the town, almost 41% are covered with septic tanks while 18.8% households have access to low cost sanitation facility⁵ thus resulting in almost 23% of the population uncovered by any proper sanitation facilities.

3.3 Roads cover 72% of the town⁶

The town has 10 major radial roads towards all directions, leading to major cities like Salem and Nammakal. The ten major roads radiating from the town are Salem road, Sankari road, Nammakal road, Mohanoor road, Velour road, Pallipalyam road, Kumarapalayam road, Kokkaranpettai road, Kolikalnatham road, Molasi road and Bye pass road. The total road length is 121.5 kms; 101 maintained by the municipality and the rest by the department of highways. However, as per the accepted norms, per capita municipal road length is 1.75 meters, while for Tiruchengode, it is only 1.26 meters implying a shortfall of 28%. Excluding earthen roads, the surfacing of other roads is marginally less than the prescribed norms⁷ viz. 23% cement concrete, 64% Bitumen top and 11% earthen roads.

In order to decongest the traffic, a ring road of 21.6 kms, connecting all major radial roads around the town has been proposed. This would ease the traffic flow of commercial vehicles, as it would provide an alternative route that currently flows into the town. New municipal roads require acquisition of additional land, as there is no space for widening. Despite covering a significant portion of the town, the town has to upgrade its road infrastructure, in order to meet the growing demands of the town. The key areas of concern are insufficient roads, insufficient maintenance and lack of connectivity of the ring road to all the arterial roads

⁴ There are 63 'Pay & Use' public conveniences which is below the norm of 363 (60 persons per seat of public convenience – slum population of 21796)

⁵ Septic Tanks: 11275 households, LCS: 5164 households

⁶ As per the norm of 1.75m of per capita municipal road

⁷ Concrete: 5%, Black Top: 85%, WBM: 10%, Earthen: 0%

3.4 34% roads covered with Storm Water Drains (SWD)

The existing SWD is poor as it covers only 68 kms, which is much below the required level of 151.5 kms.⁸ In addition to very poor coverage, there are several other key issues plaguing the SWD system in the town. Uneven distribution and poor design has resulted in stagnation and flooding at many points across the town. The residential sewer and industrial waste is draining into a single drain resulting in unhygienic conditions and the discharge into the lake without treatment is resulting in pollution of the town

3.5 100% collection of solid waste, but poor disposal facilities

The town has been able to collect 100% of its 62 MT (Metric Ton) waste generated every day through its privatised operations in 11 wards and its own infrastructure in the remaining 22 wards. This is dumped at the transfer points, from where the lorries and tippers clear it. However, there is no segregation of organic and inorganic waste that is causing substantial environmental hazard at the dumping site. The existing fleet of vehicles handle a capacity of 14.4 MT per day and make 2-3 trips per day⁹ to transport the waste from the transfer point to the disposal site. This is a 2.23-acre site located at Kootapalli at a distance of 7 km from the town whose capacity has exhausted and the municipality has proposed to acquire a land at Aniumur village, at a distance of 8 km from the town.

3.6 Street lights cover 100% of the town¹⁰

There are 3865 streetlights; 18.15% of which are high power lamps (sodium vapour and mercury vapour) and 81.85% tube lights. The existing spacing is 30m between lampposts, implying 100% coverage of the town, but requires additional lamps for better illumination. The key issue here is the high-energy cost, which the municipality is trying to reduce.

3.7 Inadequate social and recreational facilities

The social infrastructure consists of educational centres and health care centres. The educational centres include schools, colleges & training institutes. Tiruchengode's educational facilities are inadequate for the existing population and needs additional infrastructure. The town needs 4 more primary schools and 1 additional college, while the number of secondary school is adequate.¹¹ The health care infrastructure also is almost adequate with 1 hospital, 1 maternity centre and 14 nursing homes.¹² The town needs only one more maternity centre.

In addition to the low coverage of educational facilities, the existing quality of infrastructure is also suspect. The key issues to be addressed are quality of teaching staff at the municipal schools, lack of accident care centre/trauma centre at the hospital and inadequate facilities at the government hospital like insufficient beds, limited parking etc.

⁸ As per the norm of 150% road length (including non-municipal roads)

⁹ This is acceptable, as the existing norm is 3.5 trips per day

¹⁰ As per the norm of 1 street light per 30m

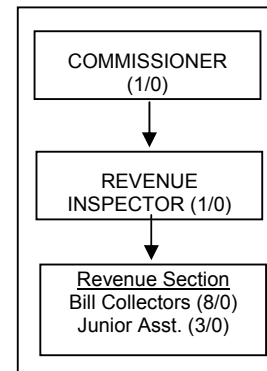
¹¹ As per the norm of 1 primary school per 300 students, 1 secondary school for a 7500 population and 1 college for 1.25 lakh

¹² As per the norm of 1 government hospital with 150 beds for 2.5 lakh population, 2 maternity centres with 13 beds for 45000 population and 2 nursing homes for 45000 population

3.8 The organisation requires training in key areas

3.8.1 Revenue section

The revenue section is responsible for collection of various taxes and charges from the citizens. This section consists of 12 permanent employees who handle all revenue functions including raising the demand for key revenue items like property tax, water charges etc., follow up on outstanding payment and prepare the Demand Collection Balance (DCB) statement. The payment is made by the users directly at the 3 collection centres and hence, the earlier collection work has been eliminated.



Operation and Maintenance (O&M) issues

1. Adequacy of strength

Some of the existing bill collectors are posted at the various collection centres, after being trained on various modules. Discussions with the commissioner has highlighted that additional strength is not required in this department

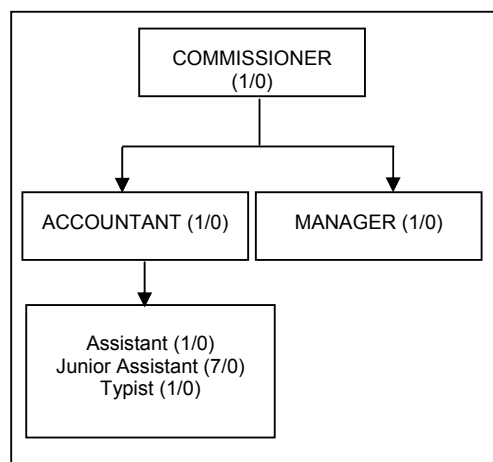
2. Business process/system issues

On the demand side, the demand for property tax is not raised on time, which results in a lag in the entire collection cycle, thus adversely affecting the working capital cycle and there is an estimated 80-acre of unauthorized layout, which has a significant revenue generation potential. However, no significant action has been taken to improve it. On the collection front, there is no penalty for late payment, due to which, there is no incentive for the taxpayers to make timely payments and, there are no significant checks that prompt the bill collectors to achieve the target

3.8.2 Accounts & establishment section

The accounts section is responsible for maintenance of all income and expenditure statements, payment, preparation and implementation of budget. The system of accounting has undergone a transformation from cash based accounting system to accrual accounting system. The municipality maintains the accounts in three funds viz. revenue fund, water & drainage fund, and elementary education fund

An accountant heads the department, who is responsible for payment of all works and supply bills, scrutinising of pay bills, disbursement of salaries to the employee and payment of pension benefits to teaching and non-teaching staff of municipal schools and for retired municipal employees. A Manager heads the administrative functions of the town. His team of typists and clerks who are assigned specific revenue streams assist him. In the absence of the commissioner, the manager is responsible for the smooth functioning of the municipality.



Though the work process captures significant amount of financial and operational information, it does not deliver the required information to the management due to its poor maintenance of records. A small improvement in the database design would aid in achieving the same. The following table highlights the information that can be derived from the existing account information. Maintenance of records of these parameters will implicitly improve the record keeping functions

Table 2: Suggestive list for MIS

Category	Description	Unit	Base data
Property Tax	Collection efficiency	%	Total collection, Total Demand
	Arrears as a % of the total	%	Current collection, Arrear Demand
Water	Metered Residential Connections/Total Residential properties	%	No. of residential, commercial and industrial connections
	Metered Commercial Connections/Total Commercial properties	%	
	Metered Industrial Connections/Total Industrial properties	%	
	Collection efficiency	%	Total Demand and Collection (in Rs.)
	Arrears as a % of the total	%	
	Unauthorized connections/ Total Connections	%	No. of connections
Sewerage & Sanitation	Sewerage connections/Total number of properties	%	No. of connections and properties
	Septic Tanks/Total number of properties	%	
	Low Cost Sanitation/Total number of properties	%	
	Number of Slum residents per seat of Public convenience	Number	No. of seats and Slum population
Solid Waste Management	Collection efficiency	%	Waste generated and collected
	Road length per staff	Meters	Road length and No. of conservancy staff
	Disposal site capacity/Total Waste Generated	%	Site capacity and total waste gen.
	Area covered per conservancy staff	Sq. Meters	Area of municipality and No. of conservancy staff
Storm Water Drain	Road covered with Pucca Open Drain	%	Length of drains and roads
	Road covered with Pucca Closed Drain	%	
	Road uncovered with SWD	%	
	Pucca Drain/Total SWD	%	
Roads	Roads Surfaced (any kind of surfacing)	%	Road length
	Concrete Road/Total Road	%	
	Black Top Road/Total Road	%	
	Earthen & Other Road/Total Road	%	
Street Lights	Tube lights/Total Lights	%	No. of lights
	High power lights/Total Lights	%	
	Other Lights/Total Lights	%	

O&M issues

1. Adequacy of strength

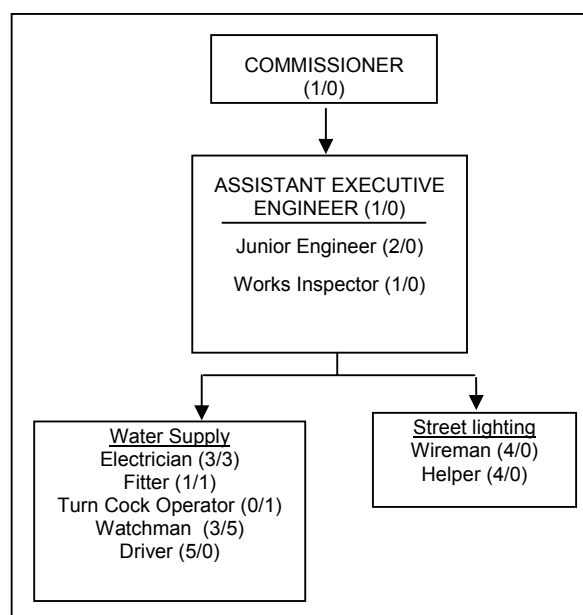
Currently, the accounts section consists of an accountant, 7 junior assistants and a typist. The staff strength in accounts is adequate for the current functioning, but it requires additional training due to increased automation. Currently, there is no independent verification of reports (related to revenue / cost items) submitted by other departments.

2. Business process/system issues

Despite being vested with powers to increase the rate, the administration has not initiated efforts with the council to increase the property rates, which is only 14% of the Annual Rental Value (ARV). However, poor service delivery levels have hindered the municipality's inability to raise the rates

3.8.3 Engineering section

The engineering section is responsible for execution of projects related to road, street lighting, water supply and sewerage. It is also responsible for the O&M of these assets. An Assistant Executive Engineer (AEE) heads the department. Most of the projects are executed through private contractors who are appointed through a bidding system and the engineering section is responsible for overseeing the operations.



O&M issues

1. Adequacy of strength

The staff is sufficient for the existing projects.

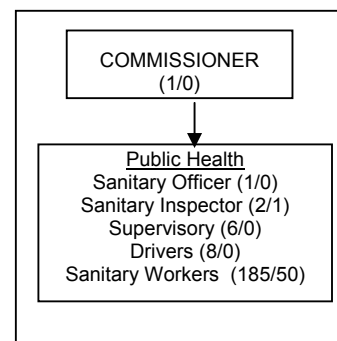
2. Business process/system issues

There is a deficit in the water supply situation and the existing water supply's Transmission and Distribution (T&D) lines are obsolete resulting in significant T&D losses. On the sanitation front, Low Cost Sanitation (LCS) and Public Conveniences (PC) is not available to the entire slum population

3.8.4 Health section

The health section is responsible for maintaining a safe and pollution free environment. A sanitary officer heads the department. The key functions are:

- Manage the solid waste disposal
- Ensure clean and safe environment
- Assess the hazardous/polluting nature of the business and issue licenses, only if satisfied with the nature of the business
- Undertake health camps and other government immunization programs to maintain the health of the citizens
- Manage and upkeep the municipality owned hospitals, maternity centres and other health centres



O&M issues

1. Adequacy of strength

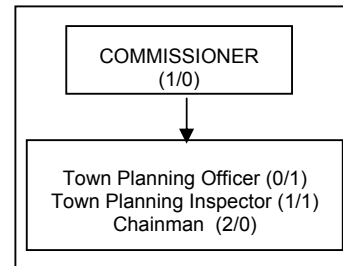
The staff is sufficient for the existing projects. The department supervises the work of the private player in 11 wards.

2. Business Process/System Issues

Inadequate landfill sites and managing the operations of the private player are the two key issues of the town

3.8.5 Town planning section

The town planning section is responsible for developing the integrated plan of the town. A Town Planning Officer (TPO) heads the department, which is vacant now and the Town Planning Inspector is handling the functions. The key functions are, issue building licenses after assessing the need and legality and undertake assessment of the town to ensure the reduction in unauthorized layouts



3.8.6 Information technology section

An assistant programmer heads the systems department and one data entry operator assists him. The department has come under the limelight after a significant computerisation activity was undertaken in TNUDF-II, when a full-fledged department was established in 2003-04. The computerised system is used for the following functions viz. birth and death registration, water charges, professional tax and other non-tax items. However, some discrepancies still exist between the manual and computerised data. The municipality has also initiated the online collection counters with easy access to the public. This also ensures better service delivery and aids the municipality in effective collection of revenues. Computation of property tax is also carried out through this database. The module involves new assessment calculation (tax calculation), DCB statement, demand registers and challan registers (arrears demand), defaulters list and demand generation. The municipality also has an E-mail address and any complains or suggestions can be received on this. This also is a mode of correspondence from the Commissionerate of Municipal Administration (CMA), Regional Directors of Municipal Administration (RDMA) and the government departments.

O&M Issues

1. Adequacy of strength

The staff is sufficient for the existing works. However, with the envisaged increase in computerisation, the department would require more experienced personnel with a proper training schedule.

2. Business process/system issues

Inadequate hardware and networking infrastructure and non-updation of various modules is the key concern of this department.

3.8.7 Status of e-Governance

The property tax, water charges and trade license module has been completed. Added to it, the Birth and Death registration module is also complete and the certificates are issued from the collection centres. The data entry for the remaining modules is in progress. These are

- Solid waste management
- Hospital management
- Census
- Electoral rolls
- Financial accounting system
- Vehicle
- Grievances
- Mother and child welfare
- Moveable and immoveable items
- Inventory items
- Personnel management system

There are three on-line collection centres, but are not interconnected. These are located at the municipal office, bus stand and Rajakondapalayam. The details at the end of the day are updated in the main server located in the municipal office. However, additional training is required on the software front and it would be beneficial to train select individuals on the software developed for collections.

4. REVIEW OF MUNICIPAL FINANCE

Tiruchengode municipality has performed poorly during the period 2000-01 to 2004-05. Similar to other ULBs in the state, Tiruchengode too over-estimates its revenues due to the improper accounting policy of projecting its demand as the actual collection, especially for tax items. Tiruchengode has a revenue deficit throughout the above period, primarily, due to its high O&M expenses that constitute almost 65% of the municipality's revenues. Its outstanding liability of Rs. 3272 lakhs (including debt and non-debt) is a cause for concern, as it is almost four times the town's closing balance of 2004-05

The review¹³ includes a time series analysis of the income and expenditure to identify the trends in the major sources and uses of funds and its impact on the financial position of the town. It also includes analysis of key parameters like per capita income, per capita expenditure and debt servicing ability etc. The municipality operates on accrual based accounting system that recognizes the **demand** of the revenue items as the **collection**, which results in an inflated revenue surplus position of the town. Hence, the annual accounts have been recast to arrive at the true financial position of the town. The core revenue receipts of the ULBs are broadly categorized as per the table shown below:

Table 3: Classification of revenue items

Tax Revenues	Property tax, Water tax, Advertisement tax, Professional tax and Education tax
Non-Tax Revenues	Service charges and fees viz. Water Charges, Education charges, Shops and market rent; Trade license and Building license; Other Income
Assigned Revenue	Entertainment tax, Surcharge on Sales tax
Grants and Contributions	Devolution Fund, Other Grants and Contributions

4.1 Tiruchengode has an accumulated revenue loss of Rs. 10.22 crores

Over the past five years (2000-01 to 2004-05) the municipality has consistently shown a revenue deficit with an operating ratio¹⁴ of 1.35 (5 year average). The town had an accumulated revenue loss of Rs. 1022 lakhs at the end of 2004-05. The per capita revenue and expenditure is Rs. 970 and Rs. 1078 respectively in FY2003-04, implying a revenue deficit of Rs. 108 per capita, both of which are significantly below the state average for municipalities in Tamilnadu for that year (Rs. 174)¹⁵. Over the last 5 years (2000-01 to 2004-05), the town has been performing very poorly with an average per capita revenue deficit of Rs. 264. The detailed financial statements are provided in Annex

¹³ The financial information provided by the corporation for the period 2000-01 to 2004-05 is the basis for review of the current financial position of the corporation.

¹⁴ Revenue expenditure /Revenue receipts

¹⁵ Per Capita Revenue Income: Rs. 702, Per Capita Revenue Expenditure: Rs. 528

Table 4: 12.83% growth in Property tax between 2000-01 and 2004-05¹⁶

	2000-01	2001-02	2002-03	2003-04	2004-05	CAGR
Opening balance	41.4	(155.9)	(534.9)	(836.4)	(926.2)	
Municipal receipts	497.5	490.6	844.9	801.5	838.4	
<i>Property tax</i>	<i>13.3</i>	<i>14.2</i>	<i>17.3</i>	<i>21.0</i>	<i>21.5</i>	12.83 %
<i>Water tax</i>	<i>62.0</i>	<i>64.6</i>	<i>79.5</i>	<i>94.7</i>	<i>100.5</i>	
<i>Revenue from education</i>	<i>22.2</i>	<i>23.1</i>	<i>28.4</i>	<i>33.8</i>	<i>35.9</i>	
Municipal expenditure	694.8	869.6	1,146.3	891.4	934.2	
Municipal Surplus/deficit for current year	(197.2)	(379.0)	(301.5)	(89.9)	(95.8)	
Final closing balance	(155.9)	(534.9)	(836.4)	(926.2)	(1,022.0)	

All figures in Rs. Lakhs

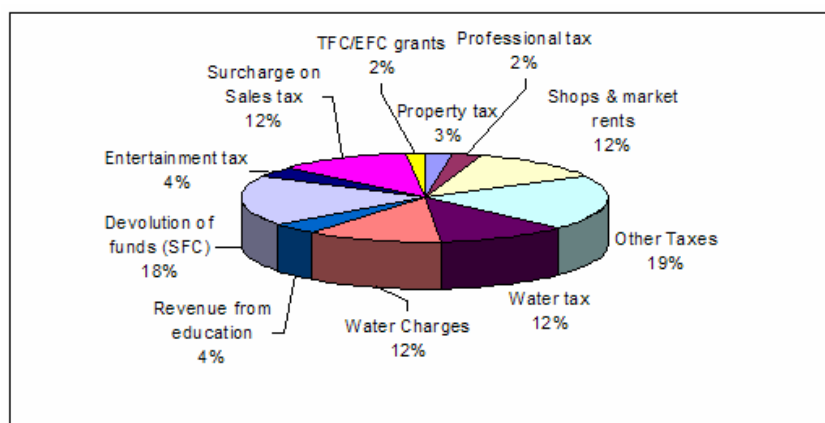
4.2 Revenue receipts

4.2.1 Revenue growth stifled due to fall in key non-tax revenues

Tiruchengode municipality had a revenue receipt growth of 13.9%, but had a very poor operating ratio averaging 1.35 during 2000-01 to 2004-05 due to higher expenditure levels. The growth would have been higher, if the town had been able to tap into the **betterment charges**, which it is losing out due to the issue of unauthorized layouts. Currently, to develop any new property, the approval of the Registrar is required. However, the Registrar does not co-ordinate with the municipality to establish, if the property is being constructed on authorized layouts, resulting in a proliferation of properties on unauthorized layouts. The municipality is affected adversely due to loss of revenue from the estimated 36 unauthorized layouts with 80 acres. It also has to incur higher expenses as, these properties, release their sewer in the open causing environmental hazards and increasing the maintenance cost. In addition to it, the properties utilise the public stand posts meant for others that increases the cost of service

4.2.2 Property tax and water tax contribute to only 15% of the total revenues

Unlike other local bodies, where property tax and water tax are the major revenue sources, Tiruchengode's key source of revenue is from shops and market rent that constitute 12% of the total revenues receipts. The per capita property tax is Rs. 21.4, which signifies a very poor coverage and collection level

Revenue receipts during 2000-01 to 2004-05

¹⁶ The financial statements provided by Nagercoil municipality have been recasted to facilitate analysis

The average collections efficiency levels during 2000-01 to 2004-05 for Property tax and water Tax is 56% and 52% respectively, which is significantly below the state's average of 74% and 90%. Despite a robust own revenue source, Tiruchengode, like other ULBs in the state relies significantly on state grants for its revenue expenses that contribute to 33.9% of the revenues, which is marginally lower than the state average for municipalities - 34.8%.

4.3 Revenue expenditure

4.3.1 O&M expenses is 63% of municipal revenues

The municipality's salary expenditure is 22%; lower than the state average of 45%, while the O&M expenses is 63%, much higher than the state average of 45%. The overall revenue expenditure has grown at a CAGR of 7.7% p.a. during 2000-01 to 2004-05, which is lower than revenue growth of 13.9% p.a. However, despite the growth, the municipality has been able to generate a revenue surplus only for the last 2 years due to its substantial O&M expenses, which is almost 2/3rd of the municipality's revenues.

Despite the salary expenses decreasing by 2.5%, it is still high compared to other similar towns in Karnataka. The town's salary expense and O&M expense is 1.08 times and 2.5 times respectively, higher than the average for similar towns. A comparison of the salary and O&M expenses for the similar towns in Karnataka is highlighted below

Table 5: Salary and O&M expenses of similar towns in Karnataka

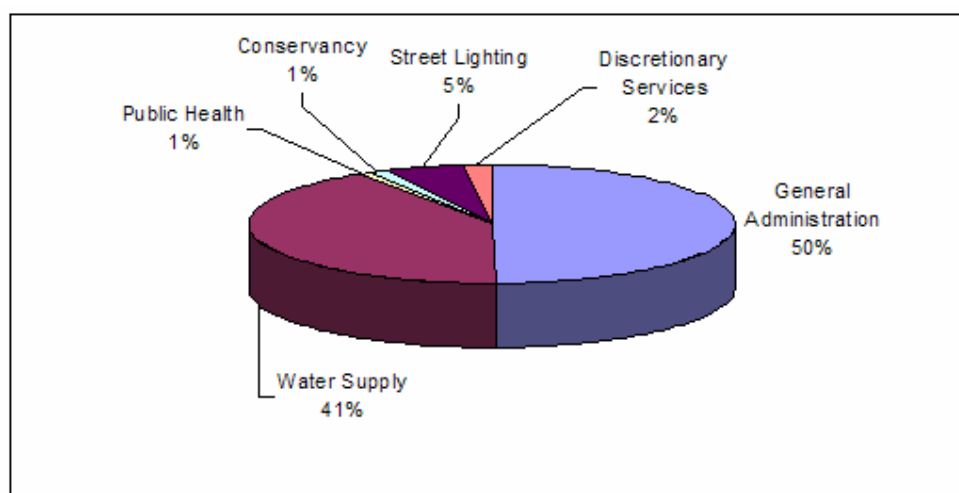
Town	No. Of Properties	Population	Expenses (Rs. Lakhs)	
			O&M	Salary
Bagalkote	17167	90988	59.34	143.71
Bidar	28850	172877	138.02	203.08
Chitradurga	24292	122702	201.58	222.59
Gadag-betageri	29263	154982	248.71	382.23
Gangavathi	17353	93240	146.86	106.34
Hassan	25159	116574	38.53	216.04
Mahadevapura	32549	135794	91.12	99.95
Mandya	27799	131179	106.20	153.02
R.R.Nagar/ Pattanagere	22282	96385	594.62	64.67
Ramanagara	15562	79394	834.55	88.99
Ranebennur	16041	89618	103.09	129.52
Robertson pet	27358	141424	219.66	141.08
Yelahanka	21032	90827	322.24	79.92
Average			238.81	156.24

4.3.2 No significant maintenance towards roads and Storm Water Drains

Unlike other better performing towns, its expenses towards general administration is very high at 50%¹⁷ and the second largest share of expenses is towards water supply contributing 41% of the total expenditure. However maintenance of roads and SWD have been neglected. The figure below highlights the sector wise expenditure.

¹⁷ This has to be analyzed further, as the data reflects that no salaries are paid to several key functions like conservancy, street lighting, public works etc.

Administrative and water supply expenses contribute to 91% of expenses



During 2000-01 to 2004-05, Tiruchengode's financial burden has been quite significant, as 19.45% of its expenses are towards debt repayment.

4.4 Outstanding liabilities

4.4.1 Debt liabilities - 2.75 times 2004-05 revenues

The town's outstanding liability is Rs. 2306.52 lakhs, which is 275% of the revenues of 2004-05. (Rs. 838.41 lakhs). The outstanding balance poses an adverse situation for the town and added to it, the town has been unable to generate yearly revenue surplus consistently. Moreover, there are significant overdue payments indicating the town's poor repayment record. The details of the loan are highlighted below

Table 6: Rs. 2306.52 lakhs of debt liabilities

Lending Agency	Loan (Rs. Lakhs)	Interest Rate	Repayment period (Years)	Purpose / Scheme	Total loan repaid as on 31.03.2005 (Rs. Lakhs)			Outstanding Loan (Rs. Lakhs)
					Principal	Interest	Total	
Govt. Loan	780	12%	20	Water Supply	-	-	-	780
	1054.05	13.5%	20	Water Supply	83.11	259.29	342.40	970.94
LIC	88.75	10.5%	15	Water Supply	-	-	-	88.75
TUFIDCO	350.24	9.25%	15	TOF	51.46	53.84	105.30	298.78
	110.00	8.75%	13	Special Fund	-	57.17	57.17	110.00
	56.52	7.5%	25	IDSMT	46.84	-	46.84	9.68
	9.93	10.5%	5	Water Supply	-	1.28	1.28	9.93
TNUDF	402.29	13.5% to 16.5%	10	MUDF	377.81	-	377.81	38.44
Total	2851.78				559.22	371.58	930.80	2306.52

Source: Tiruchengode Municipality

4.4.2 Non-debt liabilities – 2.58% of 2004-05 revenues

Tiruchengode's non-debt liabilities include a several items that amount to Rs.216.77 lakhs. The details of it are highlighted below.

Table 7: Rs. 216.77 lakhs of non-debt liabilities

Item	Amount (Rs. Lakhs)
PF subscription collected, but not remitted	3.01
Interest due on PF not adjusted	12.70
Electricity charges due to the Board	36.35
Arrears due to TWAD Board towards water charges and maintenance	115.95
Library Cess collected but not transferred	35.49
Group Insurance not paid	9.18
Survey charges	4.09
Total	216.77

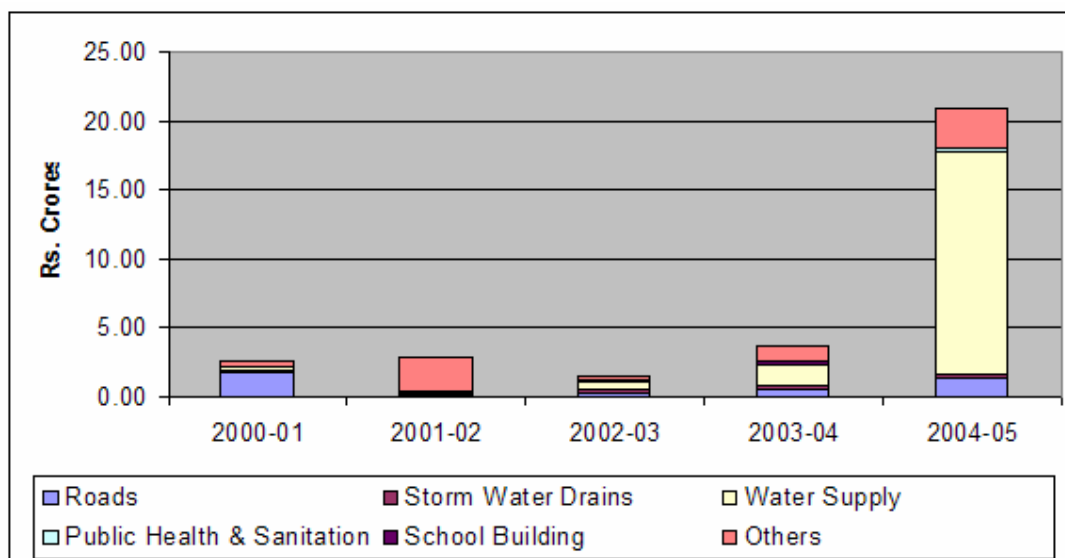
Source: Tiruchengode Municipality

Overall, the liabilities would have a huge financial impact on the town, as these constitute almost four times the town's average annual revenues. All other loans are deducted from the SFC devolutions

4.5 40% capital expenses met from internal revenues

For the period under review (2000-01 to 2004-05), despite its poor financial position, Tiruchengode municipality has met 40% of its capital expenditure from its revenues. However, given the existing revenue deficit position, the future capital investments would have to be funded through capital receipts than internal revenues. This situation can improve, once the town improves its revenue generation potential. Despite 56% of the funds invested in roads and water supply, the existing service levels are from satisfactory. This is a serious issue and has to be looked into immediately. The following chart summarizes the past trend in capital expenditure

56% funds invested in roads and water supply



4.6 Key Performance Indicators

The key parameters that need to be monitored for the effective functioning of the municipality are highlighted below

Table 8: Key Performance Indicators (KPI)

Area	Item	Measure	Existing levels (2004-05) / Growth over previous year	Unit
Revenue Improvement	<i>Per Capita Income</i>		998.8	Rupees
	<i>Source of Funds</i>	Share of Taxes	20.97	%
		Share of Non Tax	45.12	%
		Share of Grants	33.92	%
	<i>Growth in Income Sources</i>	Growth in Taxes	5.9	% p.a.
		Growth in Non Tax	36.1	% p.a.
		Growth in Grants	(30.2)	% p.a.
		Growth in Own Sources	25.9	% p.a.
Expenditure Management	<i>Per Capita Expenditure</i>		1113.0	Rupees
	<i>Functional Allocation</i>	Share of Salaries	18.56	%
		Share of O&M expenses	66.77	%
	<i>Growth in Items of Expenses</i>	Growth in Salaries	2.1	% p.a.
		Growth in O&M expenses	2.8	% p.a.
		Growth in Total Expenditure	4.8	% p.a.
Performance	<i>Operating Ratio</i>		1.11	Ratio
	<i>Per-capita performance Assessment</i>	Per Capita Own Income	745.7	Rs. p.a.
		Per Capita Grants	253.1	Rs. p.a.
		Growth in Per Capita Revenue Income	3	% p.a.
		Per Capita Salaries	206.6	Rs. p.a.
		Per Capita O&M expenses	743.1	Rs. p.a.
Taxation	<i>No. of Property Tax Assessments</i>		27353	
	<i>Current Tax Rate (Weighted Average)</i>		14	% of ARV
	<i>Tax Per Assessment (excluding Vacant Land)</i>		78.93	Rs. p.a.
Efficiency	<i>Property Tax</i>	Growth in Assessments	3	% p.a.
	<i>Collection Performance-Property Tax</i>	Arrears as % of Total Demand	49	%
		Demand per Assessment	155.67	Rs. p.a.
	<i>Water Supply</i>	Growth in Water Connections	1	% p.a.
		Average Expenditure/Connection/ month	398.09	Rupees
		Average Revenue / Connection/ month	167.77	Rupees
		Cost Recovery on Water Supply	57%	%
	<i>Collection Performance-Water Charges</i>	Arrears as % of Total Demand	49.77	%

5. CAPITAL INVESTMENT PROGRAM

The Capital Investment Program (CIP) identifies the investment requirement of the town based on the demand-gap analysis. However, it does not take into account the financial feasibility of the projects, which is undertaken in the Financial Operating Plan (FOP). Tiruchengode's investment requirement is Rs 3794 lakhs with 44% of this investment would be required for improvement in water supply, 11% in upgradation of roads, and 14% for improved storm water drains.

The CIP is essentially a multi-year scheduling of physical investments that determines the priority investments based on the demand-gap analysis. It also highlights the implementation and monitoring requirements. The scheduling or phasing of the CIP is also based on choice of specific improvements that need to be taken up over a period of five years. In addition to the core services, the CIP would also highlight other investments that are essential for developing the town.

5.1 Capital Investment

The CIP is formulated to meet the estimated need of the town over a five- year period. Based on the existing demand-supply situation, the town's investment requirement is Rs. 3794 lakhs over the next five years. The phasing of the investment is given below:

Table 9: Phasing of investment over five years

Sector wise Phasing	I year	II year	III year	IV year	V year	Total
Water supply	331.0	331.0	331.0	331.0	331.0	1655.0
Storm Water Drain	107.0	107.0	107.0	107.0	107.0	535.0
Sanitation and Sewerage	143.3	143.3	143.3			430.0
Solid Waste Management	75.0	75.0				150.0
Roads			188.3	188.3	188.3	564.8
Transportation	20.0					20.0
Street lighting	24.0					24.0
Others	207.5	207.5				415.0
Total	907.8	863.8	769.6	626.3	626.3	3793.8

All figures in Rs. Lakhs

5.2 Department wise investment identified for immediate requirement

5.2.1 Rs. 1665 lakhs required for water supply projects

Department-in-charge – Engineering department

Project title – Improvement of water supply

Project manager – Municipal engineer

Description:

Water supply – Source augmentation, storage facilities, distribution network.

Justification:

The municipality sources its water from the Cauvery river under 3 schemes with a design capacity of 21.08 MLD. Till recently, this scheme also catered to 38 villages beside the town, which drew more than the allocated level that adversely affected the supply to the town. However, currently, the 2nd scheme supplies the villages and the 3rd scheme to the town due to which, the town would receive 7.5 MLD that would provide a service level of 8.7 MLD and 10.2 MLD for the population expected in the

year 2013 and 2023. However, proper preventive maintenance of the transmission main is required to extract the maximum quantity from the source. There are 13 ESR and 1 GLSR with a total storage capacity of 4.76 ML, which is 41 % of the daily requirement, higher than the norm of 33.33%. Hence there is no need for any additional service reservoirs. The existing distribution loss across any water distribution system is approximately 40% to 50%, against the permissible limit of 15%. More than 60% of these losses occur at the last mile – house service connections. The situation in Tiruchengode is not much different and hence it would be advisable to undertake a wastage assessment survey that would aid in taking measures to control the loss levels, thereby improving the service level and revenue. In order to undertake the surveys and preventive maintenance procedures, the staff has to be trained adequately. A proper maintenance schedule should be prepared and adhered to. The privatisation option could be explored that might result in better maintenance and higher savings to the municipality. In order to minimize losses, studies need to be undertaken to assess the unaccounted water.

Investment requirements in different areas:

Area	Description of works	Quantity	Unit	Unit cost (In Rs. Lakhs)	Total cost (In Rs. Lakhs)
Distribution system					
	Replacement of existing lines	30	Km	2	60
	Installation of new lines	15	Km	4	60
Transmission system					
Source	Alternative Source	1	Nos	1500	1500
Storage & Treatment					
	Treatment plant	1	Nos	35	35
Total					1655

Total Project Cost: Rs.1665 lakhs

5.2.2 Rs. 430 lakhs required for sanitation facilities

Department-in-charge – Tamilnadu Water Supply and Drainage Board (TWAD)/ Engineering department

Project title – Construction of public conveniences

Project manager – Municipal engineer

Description:

Public conveniences

Justification:

Since the municipality is not likely to have an underground sewerage system, the sanitation arrangements in the town should be upgraded. About 41% of population has access to individual septic tanks with 18.8% having access to low cost sanitation facilities. For the remaining population, 73 PC/sanitary complexes have been provided. However, the quality and the location of the PCs need to be analysed in respect of their utility to the low-income group and Below Poverty Line (BPL) families. The O&M of PCs could be entrusted to the local women Self Help Groups (SHG), who could collect nominal user charges to meet the O&M expenses.

Investment requirements in different areas:

Area	Description of works	Quantity	Unit	Unit cost (In Rs. Lakhs)	Total cost (In Rs. Lakhs)
Pumping & Treatment					
	Treatment plant	1	Nos	300	300
Public conveniences	Pay & use Toilet	2	No	10	20
	Sanitary complexes (10 seater)	18	Nos	5	90
Septic tanks	Repairing existing P.C.	10	Nos	2	20
Total					430

Total Project Cost: Rs.430 lakhs

5.2.3 Rs 150 lakhs required for SWM

Department-in-charge – Health department

Project title – Improving the SWM system

Project manager – Health officer

Description:

Procurement and development of sanitary landfill and additional vehicles for disposal

Justification:

Currently, 62 tons per day of solid waste is generated with a per capita waste generation of 773 g/day. The municipality has achieved 100% collection due to its efficient collection system. However, there are no specific plans to extend the privatisation to other wards after the retirement of the employees in these wards; the ULB intends to carry out its operations by filling up the required vacancies through its own employees.¹⁸

The transportation and disposal facilities are not quite adequate. The solid waste is disposed at the site located at Kootapalli, which is 2.23-acre land, at a distance of 7km from the town. However, the capacity of the site has exhausted and hence another site has been identified at Aniumur village, at a distance of 8 km from the town, which is yet to be acquired. Discussions with the officials reveal that no scientific landfill is required

Investment requirements in different areas:

Area	Description of works	Quantity	Unit	Unit cost (In Rs. Lakhs)	Total cost (In Rs. Lakhs)
Secondary collection					
	Mini trucks/lorries	4	Nos	7	28
	Trucks/Lorries	2	Nos	12	24
	Tippers	1	Nos	16	16
	Tractors	4	Nos	8	32
Secondary transportation					
	Dumper Placer	2	Nos	12.50	25
	FEL/JCB	1	No	25	25
Total					150

Total Project Cost: Rs. 150 lakhs

5.2.4 Rs. 1100 lakhs required for roads and drains

Department-in-charge – Engineering department

Project title – Improving roads and drains

Project manager – Municipal engineer

Description:

Bye-pass roads, resurfacing Black Top (BT) roads, upgrading earthen roads to BT, widening of roads, traffic management system

¹⁸ It was not possible to estimate the cost through outsourcing, as the exact age profile of the employees was not available with the municipality

Justification:

The total municipal road is 121.5 km with 64% BT, 11% earthen road and 23 % cement concrete surface. The following projects needs to be taken up to improve the roads and traffic situation

Investment requirements in different areas of roads:

Area	Description of works	Quantity	Unit	Unit cost (In Rs. Lakhs)	Total cost (In Rs. Lakhs)
Black Top Roads					
	Restoration	51	Km	5	255
WBM Roads					
	Upgradation to Black top	12.2	Km	9	110
	Installation of new system	1	Nos	20	20
Others					
	Roads in unauthorised layouts	9	Km	22.20	200
Total					585

Currently, the length of storm water drains is only 68 km, which is 56 % of the total length of the roads of 121.5 km (including State Highways). Hence additional drains of at least 133 km are required. **Rs. 535 lakhs is envisaged for construction of 66.8 kms of pucca drains.** In addition to the projects in roads and SWD, improvement measures in the existing traffic management systems need to be undertaken. This includes setting up of automated and manual traffic signals. Over the last few years, it can be seen that the population growth is concentrated in the Naripalam area. Hence, traffic management systems should be first commissioned in these areas.

Total Project Cost: Rs. 1100 lakhs

5.2.5 Rs. 24 lakhs required for street lighting services

Department-in-charge – Engineering department

Project title – Improving the streetlights

Project manager – Municipal engineer

Description:

Energy saving lamps, providing lightings at strategic locations

Justification:

There are 3865 streetlights; 18% of which is sodium vapour lamps, 81.85% tube lights and 0.15% mercury and high mast lamps. Solar lamps, energy saving lamps etc., in place of conventional lamps could be installed. Possibility of identification of sponsors for providing and maintaining lamps at strategic location should also be explored. A nominal investment of Rs.20 lakhs to improve the quality of lighting is required.

Investment requirements in different areas:

Area	Description of works	Quantity	Unit	Unit cost (In Rs. Lakhs)	Total cost (In Rs. Lakhs)
Tube light					
	Installation	200	Nos	0.04	8
Others					
	Energy savers	200	Nos	0.08	16
Total					24

Total Project Cost: Rs. 24 lakhs

5.2.6 Rs. 415 lakhs required for other services

Department-in-charge – Engineering department

Project title – Setting up bus stand, improving hospitals etc

Project manager – Executive engineer

Description:

Improving the social and physical infrastructure of the town

Justification:

There are several projects that require immediate attention that would improve the overall living conditions of the town. This includes setting up of bus stands, improving the conditions of the hospitals and schools, providing parking spaces, setting up parks etc.

Investment requirements in different areas:

Area	Description of works	Quantity	Unit	Unit cost (In Rs. Lakhs)	Total cost (In Rs. Lakhs)
Hospital/Health centre					
	Improvement	1	Nos	30	30
Markets - Daily/Weekly					
	Improvement	1	Nos	100	100
	New constructions	1	Nos	100	100
Shopping complex					
	New constructions	1	Nos	20	20
Parks and Playfield					
	Improvement	3	Nos	10	30
	Buildings Office Building	1	Nos	30	30
	Building studies	1	Nos	5	5
	Rain Water Harvesting	2	Nos	50	100
Total					415

Total Project Cost: Rs. 415 lakhs

Overall investment required for Tiruchengode: Rs. 3794 lakhs

6. FINANCIAL OPERATING PLAN

The Financial Operating Plan (FOP) assesses the financial strength of the town to implement the identified investments. The assessment is done under two scenarios of 'Base Case' and 'Improved Case'. In the former case, a 'Business As Usual' scenario is assumed, while in the latter case, several improvement measures across the revenue items is assumed. The analysis highlights that the town's investment capacity is sustainable only under the 'Improved Case'. If the town continues in the 'Business As Usual' scenario, then, it would be able to invest at all, which would affect the service delivery levels adversely

The Financial Operating Plan (FOP) forecasts the municipal finances on the basis of certain assumptions on income and expenditure. The primary objective of the FOP is to ascertain the investment sustenance capacity of the municipality under different scenarios of revenue enhancement and expenditure control. This would assist the decision-makers in structuring and implementing appropriate policy with the required management and operational interventions to maximise investment sustenance and achieve the goals set for provision and maintenance of basic services.

The investment identified is based on iterative process taking into account the loan, grant and ULB contribution. This further highlights the priority needs for future development and other immediate requirement contemplated by the municipality.

6.1 Need for a FOP

Under a 'Business As Usual' scenario, the municipality's existing revenue surplus is not being utilized effectively due to the various reasons viz. lack of an integrated approach to town development, inability to identify the priority sector for investment, inability to raise the required finances for funding and inability to tap into other sources of funds due to lack of a comprehensive FOP. Moreover, in the absence of a FOP, new projects would not be undertaken that would adversely impact the position of the town. In the event of the town not undertaking the project, the key problems would be poor infrastructure resulting in poor service delivery and loss of potential revenue from new revenue streams like UGD.

To counter these issues, the framework for FOP is developed that aids in harnessing the existing strengths of the town and also reducing the inefficiencies in the system, such that the town develops significant financial strength to undertake projects. In order to develop a FOP, there are several activities to be undertaken by the various stakeholders.

6.2 Assumptions for FOP

The FOP estimates the surplus that would be available for undertaking additional investments based on the current financial position. The investments are derived from the amount of surplus that is generated in the future. Not all the surplus can be used for capital works, as the municipality would also have to provide for additional O&M expenses for the upkeep of the assets.

The year-on-year surplus is translated into investment capacity i.e. project size (loan, grant and ULB component) based on certain preliminary assumptions regarding interest rate, repayment method and loan-grant mix. Additional O&M expenses have been estimated based on percentage of capital cost. A financial model has been created to depict the financial position of the Municipality. The model can be used to calculate future surpluses under various scenarios involving combinations of internal revenue improvement, state support, financing terms, etc.

6.2.1 Revenue Receipts Items

Taxes - property and utility-based taxes and charges

The assumption adopted in forecasting property tax, water tax/charges, other tax items are essentially based on growth in assessments, tax demand, rate revisions and collection performance

Other taxes

Other tax items including fees, etc. are assumed to grow at the past growth trends, subject to a minimum of 7% and maximum of 10% per annum.

Own income sources

Non-tax income from the municipality's operations and assets like income from commercial activity, fees for permissions/ registrations, rental income from properties, income from educational and health facilities, new connection charges are assumed to grow at the past trends, subject to a minimum of 7% and maximum of 12% per annum.

Revenue grant

The recurring revenue grants like SFC grant are predetermined amounts based on the criteria specified by Second State Finance Commission (SSFC). Thus, these grants are assumed to grow at the current level of CAGR. The deduction from the SSFC grant would continue at the same level. The gross SFC grant (amount released by the state government) has been considered for projection in the FOP. The other revenue grants announced from time-to-time are assumed to grow at past trends, subject to a minimum of 7% p.a. and maximum of 12% p.a. These grants mainly include SFC developmental grant, Tenth Finance Commission (TFC)/ Eleventh Finance Commission (EFC) grant.

6.2.2 Revenue expenditure

The items of revenue expenditure under current heads of expenses and for current service levels are projected based on past trends subject to a minimum of 6% p.a. and maximum of 8% p.a. The additional O&M expenditure and debt servicing commitment of the municipality that would accrue due to new investments is also considered as incremental O&M expenditure.

6.2.3 Capital income and expenditure

The municipality receives capital grants from the government under various state and central government sponsored schemes for specific capital works. The income under such grants has not shown any specific trend during the last five years. In addition to the regular scheme-based capital grants, Government of Tamilnadu (GoTN) also extends grants for capital works for various capital projects.

The grants under the capital projects would not have any impact on the financial health of the municipality. Hence, the items under capital head are not considered for forecasting in the FOP. At the same time the grant received under this head are scheme specific grants, which means that it should be utilised for the same purpose for which it has been earmarked.

6.3 Property tax and water tax improvements have the maximum impact

The main areas of intervention, where improvement potential exists are enlisted below. The objective is to enhance the revenue generating potential that would aid in meeting the investment obligations of the town. These include

- Property taxes
- Water charges
- Shop market rents
- Others
 - Development / Betterment Charges
 - Building license fee
 - Trade licenses
- Expenditure control

The estimates for improvement potential for the various revenue sources are based on the discussions with the municipal officials. The investment potential is quite high, but would require immediate and sustained effort from the municipality. The improvement potential has been classified into three groups viz. improvement in collection, increase in rates and addition of new rates. The internal improvements is possible through increase in efficiency levels, while the external improvements will include changes like higher rates/taxes, additional charges etc. Increase in rates and introduction in new charges would both have an impact on the taxpayer/consumer and would therefore face resistance. The support of the council and the state government would be required for successful implementation of the changes.

6.4 Property tax / general tax

6.4.1 Rs. 79 collected per property per annum in 2004-05

Out of the 22623 residential and 4730 commercial properties in the property register, on an average 74% of properties have paid tax during the last five years. This highlights a low coverage of taxpayers and a potential to increase the tax collection by increasing the efficiency levels. The property tax (general tax) collection for the year 2004-05 was Rs. 21.59 lakhs, with an average collection per property of Rs.79 per annum. Taxes are also collected from the vacant land, central/state government and public sector utilities. The detail of the properties for the last five years is presented in table below.

Table 10: Property tax details – Assessment and taxpayers: 2000-01 to 2004-05

No of Properties in the register	2000-01	2001-02	2002-03	2003-04	2004-05
<i>Residential Properties</i>	20474	20694	21099	22008	22623
<i>Non-Residential Properties</i>	4520	4535	4560	4630	4730
<i>Vacant Land Sites</i>	22	22	22	20	20
Total	25016	25251	25681	26658	27373
No of Properties that Paid Tax During the Year	2000-01	2001-02	2002-03	2003-04	2004-05
<i>Residential Properties</i>	19050	18458	17946	12619	4693
<i>Non-Residential Properties</i>	4490	4495	4510	4615	4720
<i>Vacant Land Sites</i>	1	1	1	2	10
Total No of Tax Payees	23541	22954	22457	17236	9423
Tax payers as a % of properties in register	94%	91%	87%	65%	34%

6.4.2 Improvement measures can yield Rs. 405 lakhs

Improvement in collection efficiency: The efficiency of property tax collection in 2004-05 was 62%, which is low. If the efficiency increases to 90 % and 60% (current and arrears) from the existing 68% and 52% (current and arrear), over a 5-year period from 2005-06 to 2010-11, it would generate additional Rs.207 lakhs¹⁹ (in current value terms).

Inclusion of unauthorized properties: The existing number of person per property is 3, which is much above the benchmark of 5, indicating a very high level of coverage of properties in the register. If this level is maintained throughout the projected period till 2020-21, the probability of adding new properties into the register is low. However, if the growth in the number of properties were proportional to the population growth, it would capture the unauthorized properties as well. The expected gain from this improvement would be Rs. 253 lakhs (in current value terms).

Rate increases: Property tax in the municipality is assessed on the basis of Annual Rental Value (ARV) that is based on several parameters viz. basic value of the property, depreciation, type of occupancy and the nature of building. The quinquennial revision of the property tax was last carried out in the second half of the 1998. The property tax rate is around 14% of the ARV that is payable half-yearly. If the rates were increased by 30% every 5 years, it would yield Rs. 302 lakhs in current value terms (The growth in number of properties would be as per the Base Case scenario).

6.4.3 Summary

If all improvement measures are undertaken as per the assumptions, the total additional revenue would be Rs. 405 lakhs (in current value terms)

Table 11: Rs. 405 lakh revenue potential through improvement in property tax

Improvement measures	Revenue (In Rs. Lakhs)
Increase the efficiency from 68% (current) and 52% (arrears) to 90% (current) and 60% (arrears)	207
Inclusion of unauthorized properties in the tax net	253
Rate increase by 30% every 5 year	320
All of the above measures combined	405

Revenue: In current value terms

6.5 Water charges

6.5.1 Low coverage of 38%, but high collection efficiency of 88%

At the end of 2004-05, there were 10450 connections (10150 domestic and 300 non-domestic connections) generating Rs.152.39 lakhs. The coverage of water connections (No. Of water connection/ No. Of properties) is very low – 38%. Despite the distribution pipelines covering 95% roads, the low levels of water connections coverage could be attributed to the poor operational efficiency.

All connections are metered, but due to lack of a steady source of water supply, only fixed rates are charged to all connections. Currently, this is beneficial to the town, as it generates more revenues²⁰.

¹⁹ The efficiency gains highlighted for each improvement indicate the expected increase in revenue, if the other parameters of improvement are kept constant for a period of 15 years. Also, the overall gain would not be a sum of individual efficiency improvements

²⁰ The revenue generated through metered connections would be proportional to the water supplied. Since, the current supply of water is limited, the revenues would be less as compared to a fixed rate

However, this itself could be a deterrent to the users to take up the connections, as they would be aware of increased charges they would have to pay, when the connections are taken. This could also be a reason for the low coverage levels.

At the existing low levels of coverage of 38% and collection efficiency of 52% (5 year average), the average monthly per capita water collection is Rs. 81.16. The municipality has tried to improve the situation by increasing the water rates by 50% in 2002. However, this is a case of imposing more financial stress on the regular payers, which could have an adverse impact, if the supply situation is not improved

Table 12: 0.9% growth in water connection over during 2000-01 to 2004-05

Connection details	2000-01	2001-02	2002-03	2003-04	2004-05
<i>Domestic</i>	9795	9835	10010	10100	10150
<i>Commercial</i>	255	265	270	275	300
Total	10050	10100	10280	10375	10450

The monthly charge for non-domestic connections is twice the domestic rates. The details are highlighted below

Table 13: Water charges details

Water rates (Rs.)	Domestic	Commercial
<i>Connection Charges</i>	6000	12000
<i>Monthly rates</i>	65	185

6.5.2 Improvement measures can generate Rs. 3347 lakhs

Increase in connections: If the coverage (No. Of water connection /No. Of properties) increases to 80 % over a 5-year period from 2007-08 from the current level of 38% with the increase in properties as per the 'Improved Case' scenario²¹, it would generate additional revenue of Rs. 1769 lakhs (in current value terms).

Collection efficiency gains: If the collection efficiency increases to 80% (current and arrear) from the existing 28% (current and arrear), over a 5-year period from 2007-08, it would generate additional revenue of Rs. 1314 lakhs (in current value terms).

Rate increase: The rates have been increased by 50% in 2002. Hence, an immediate increase would not be acceptable, given the current supply situation. However, over the years, with improved service delivery, if the rates were increased at 30% every five years, it would generate additional revenue of Rs. 1506 lakhs (in current value terms).

6.5.3 Summary

If all improvement measures are undertaken as per the above assumptions, the total additional revenue would to be Rs. 3347 lakhs (in current value terms)

²¹ In this case, the number of properties growth is as per the existing level of 3 persons per household, which is higher than the existing growth rate of 2.28%

Table 14: Rs. 3347 lakh revenue potential through improvement in water tax

Improvement Measure	Revenue (In Rs. Lakhs)
Increase in number of connections	1769
Increase the efficiency from 28% (current & arrears) to 90% (current and arrears)	1314
Rate increase by 30% every 5 year	1506
All of the above measures combined	3347

Revenue: In current value terms

6.6 Shops & market rent

6.6.1 Improvement measures can generate Rs. 5005 lakhs

Currently, the municipality generates approximately Rs 132 lakhs from 274 shops that it owns. The shops are leased for a 3-year period with a contract to increase the rent by 15% after the end of the contract period.

Collection efficiency gains: If the collection efficiency increases to 98% and 75% (current and arrear) from the existing 98% and 68% (current and arrear), over a 5-year period from 2007-08, it would generate additional revenue of Rs. 2309 lakhs (in current value terms).

Rate increase: If the rates were increased at 30% every 3 years, instead of the existing 15%, it would generate additional revenue of Rs. 5002 lakhs (in current value terms).

6.6.2 Summary

If both the improvement measures are undertaken as per the above assumptions, the total additional revenue would be Rs. 5005 lakhs (in current value terms)

Table 15: Rs. 5005 lakh revenue potential from shops and market rent

Improvement Measure	Revenue (In Rs. Lakhs)
Increase the efficiency from 98% and 68% (Current and Arrears) to 98% and 75% (Current and Arrears)	2309
Rate increase by 30% every 3 year	5002
Both the above measures combined	5005

Revenue: In current value terms

6.7 Other revenue sources can generate Rs. 913 lakhs

The other heads of revenue include trade licenses, building license fees and others including SWM charge. The trade license and building license fee generate approximately 0.96% of the total own revenues. Hence, the absolute gains, which can be made from these sources, are very small and would not have any tangible impact on the overall investment capacity of the town. The increase in revenue from these sources is expected to be Rs. 235 lakhs in current value terms. However, the revenue generation potential from the other components like Drainage charges, Bus stand fees, Library Cess collection charges, Fees from land and buildings etc has a significant impact and has a potential to generate Rs 3894 lakhs.

Table 16: Revenue potential for other sources

Category	Revenue (In Rs. Lakhs)
Trade Licenses	76.33
Building License fees	159.21
Others (including SWM cess)	3893.69
Total	4129.23

Revenue: In current value terms

In addition to the revenue improvement measures, the town also needs to focus on the areas of expenditure reduction.

6.8 Implementation measures

Revenue improvements under various heads are already identified above. In order to accrue the same, a will have to adopt two pronged approach – a) one that focuses on achieving revenue improvement very early so that investment capacity is scaled up and b) one that sustains these improvements and builds a recurring revenue generation capacity. Accordingly the following two approaches are suggested:

1. Immediate revenue improvement measures to increase the investment capacity
2. Long term measures to create a sustainable revenue generation capacity

The above approach would need to have five broad areas of focus-

1. **Small special cells** with expertise in specific areas such as GIS and IT. In addition, in the transition stage, the department will also have special cells to focus on one time assessment activities and legal changes.
2. **A high value group** is expected to be constituted to focus on commercial properties, institutions and large residential properties. The group would be provided MIS support by the full time co-ordinator for property tax.
3. **Outsourcing** is expected to be utilised in the proposed system. Outsourcing would require special skills in contract design, procurement, monitoring and in dispute management.
4. A systematic approach for **new assessments** and integrating the different databases of the corporation will also be an area of focus. The department structure will include a group of employees who will be tasked with updating the database of properties.
5. Lastly, the revenue department will be **decentralised** at the zonal or ward level. This decentralised department will undertake the core functions of collections and enforcement for both property tax and user charges.

In case of water charges, the following activities need to be carried out:

1. ULB should develop a volumetric metering, billing and collection system for water supply. This should cover -- redesigning of processes for collecting meter readings, redesigning of the billing system and the principles collection and enforcement.
2. It should unify decentralised collection staff across departments. Based on the outcome of the new operating structure the department would be reoriented to ensure that the manpower of the department is optimised so as to ensure better collection alongwith non duplication of efforts.
3. Design and implement a billing system, which should be linked with the GIS database and the accounting system.
4. Improve enforcement against defaulters by modifying byelaws with adequate recourse to ULB within the current framework of laws for enforcing disconnections on defaulters.

6.9 Areas of expenditure reduction

In addition to the revenue improvement measures, the town also needs to focus on the areas of expenditure reduction. There are several areas of expenditure reduction across all departments that would aid in increasing the revenue surplus of Tiruchengode. Most of the highlighted area would involve engineering issues to determine the actual savings, which is outside the scope of this report. The following table highlights the key areas of expenditure reduction, which, if implemented would enhance the revenue surplus position of the municipality.

Table 17: Areas of expenditure reduction

Department	Sector	Area	Estimated reduction in O&M cost
Engg. Department	Water	<ol style="list-style-type: none"> 1. The possible activities for reducing water losses include water leakage audit, installation of leak detection equipment and replacement of pipes 2. The possible activities for reducing operating costs include energy efficiency studies, employee training and appointment of competent private contractors through better scientific methods of bid process management 	25%
	Roads and drains	<ol style="list-style-type: none"> 1. Private Sector Participation (PSP) could be envisaged in project management at two levels viz. contract management and contract execution <ol style="list-style-type: none"> a. Contract management – This is an end to end service, wherein the private player would assist the municipality in selecting the bidders and then develop a project specific performance monitoring system to ensure optimal execution. b. Contract execution – This includes the selection of highly technical and experienced contractors with state-of-art technology and on time execution capability. 2. Municipal officials should be trained on the latest contract allocation and project monitoring techniques. 3. Computerization of records of the projects, current infrastructure, material details, contractor details, project evaluation systems, etc should be done. This would facilitate the process of project allocation and monitoring 	Roads: 30% SWD: 20%
	Sanitation	<ol style="list-style-type: none"> 1. Savings in usage of materials for sanitation works 	10%
	Street lighting	<ol style="list-style-type: none"> 2. Introducing telemetry system 	20%
Health department		<ol style="list-style-type: none"> 1. Energy conservation measures through higher usage of solar/wind energy, public awareness program on fuel efficiency, purchase of latest infrastructure 2. Study tour of several similar municipalities to identify potential reforms by adopting the specific best practices 3. Training sweepers on hygiene standards; medical professionals and other specialists in the department on the latest technology and equipment 4. Public awareness program on town cleanliness and 	10%

Department	Sector	Area	Estimated reduction in O&M cost
		citizens' responsibilities	
Revenue department		<ol style="list-style-type: none"> 1. Centralisation of the tax collection system to avoid over-lapping and duplication. For example, for one commercial property, the property tax collection responsibility lies with the revenue department, while water charges, the responsibility lies with the engineering department; again, trade license is with the health department. By amalgamating these departments on the basis of functionality, costs could be substantially reduced as well as pilferage in collection could be tracked. 2. PSP involvement in computerization, billing, collections and survey of properties. 3. Study to assess systems such as effective enforcement, out of court settlements, effective auctions. 4. Study to formulate an encroachment reduction and rehabilitation plan. 5. Training of employees 6. Computerisation of records of encroached properties, action taken, list of encroachers that would enable the linking to a comprehensive MIS/GIS system. 	
Town Planning		A cost benefit study should be conducted to evaluate the possibility of the introduction of remote sensing/GIS. Mirzapur Municipal Corporation successfully introduced the GIS system by integrating property tax mapping with the infrastructure and services database through the unique location codes system.	

6.10 Alternative payment structures and incentive structure

In order to undertake water investment, the corporation may consider alternative payment structures for services like water. It could offer one-time payment options, where the connection fee is bundled with usage fees for a number of years. The packages could be made attractive by offering suitable levels of discounts. The advantages of such a structure include reduction in collection risk and reduced cost of billing and collections. The same could be used for other services, where the collection requires the effort of the municipal staff. A substantial portion of this staff would then be used to carry out other activities, which would result in better service delivery.

To improve the collection levels, the municipality could look at providing an incentive and penalty structure for payment of the taxes and charges. The system in Karnataka could be a good example to emulate. The citizens are provided with a rebate of 5% of the total property tax, if it is paid within 30 days of the start of the financial year and then the normal charges are applied till 90 days. Subsequently, a penalty of 2% per month (24% p.a.) of the outstanding amount is applied. If this is communicated effectively to the citizens, there is a high possibility of increasing the collection levels. We have highlighted a list of actions in Annexure that could be incorporated to increase the collection efficiencies.

6.11 The town can sustain an investment of up to 151% investment in the 'Improved case' - Rs. 57.31 crores

The FOP, as mentioned above has been estimated under 2 scenarios viz. Base case and Improved case. Based on the demand-gap analysis and discussions with the town, the identified investment capacity, as mentioned in Section 5 is Rs. 3794 lakhs, which is based on the immediate requirement of the town, in the next 5 years. This investment can only be sustained, if the town undertakes the improvement measures identified in the 'Improved case' business scenario, while in a 'Business-as-usual' scenario, the town does not have an investment capacity. In the former case, the investment capacity is Rs. 5731 lakhs, while the requirement is only Rs. 3794 lakhs

6.11.1 Improvement measures mandatory to sustain the required investment

It is observed that Tiruchengode municipality cannot sustain the identified investment in the base case. The municipality can undertake the complete investments, if improvement measures are undertaken by way of collection efficiencies, better coverage, new tariffs and upwards revision of tariff. Moreover additional investment would facilitate wider coverage of the system and hence increase in the tax-base and further enhance investment sustainability.

In addition to this, the municipality is required to undertake steps towards improving its affordability by several means such as enhancing revenue collection; revising property, water taxes, shop rent, building license rates; introducing new taxes such as underground charge, SWM cess; collection of advertising fee, cable charges; innovation in the revenue generation.

Improved management information system, enforcement and appropriate communications are important to introduce the management innovations. The most important in the entire revenue generation process is the commitment and support from the elected representatives and administrators.

In order of criticality with respect to contribution towards improved scenario, the ULB will have to focus on property tax and water charges, as both these contribute largest share of revenue. Any improvement in these two items would result in multiple impacts on the revenue collection. Hence the ULB have to focus on improving collection efficiencies, improving coverage followed by revision in rates.

7. ASSET MANAGEMENT PLAN

The municipality has several assets that require regular maintenance in order to sustain reasonable service delivery levels. Tiruchengode's average O&M cost during the period 2000-01 to 2004-05 was Rs. 575 lakhs, which is almost 83% of its revenues. Given the high impact the O&M expenses have on the finances of the municipality, it is prudent to undertake a proper review of the assets under its control. This would aid in identifying the revenue generating assets as well as the ones that are causing a drain on the municipal revenues. A comprehensive asset management plan aids in achieving the same. The municipality has several assets, which, if maintained properly would generate higher revenues

Management of municipal assets is one of most essential part of urban management activity. Most municipal entities do not have proper database and hence creating and listing the assets is the first and foremost activities the municipality should carry out. Asset management plan typically involves developing and maintaining infrastructure asset portfolios. This also ensures:

- Asset requirement and management driven by defined service levels and performance standards
- Scarce financial resources allocated properly and optimally investment
- Long-term approach taken in determining asset operations, maintenance and renewal

7.1 Classification of Municipal Assets

Municipal assets are normally classified into movable and immovable assets. All the assets developed, operated and maintained by the Municipality are termed as municipal assets and comprise roads, bridges, culvert, water supply system (distribution network, transmission main, pump sets, WTPs, etc), UGD distribution network, STPs, drains, street lights, social infrastructure such as schools, hospitals, parks and playgrounds, community halls, shopping complexes, stadium, vacant land, etc.

7.1.1 Activities of Asset Management Plan (AMP)

Asset identification and facilities audit

Identify and trace all movable and immovable equipment, immovable municipal properties, assets of municipality that have been developed, handed over or acquired over time from various sources and departments. This would include the detection of unrecorded infrastructure facilities, properties, scrutiny of revenue records, land registers and land surveys etc.

Updating and reconciliation of records

Municipality should record all movable and immovable municipal properties and assets and infrastructure facilities. Maps and master plans should be crosschecked and an infrastructure facilities audit should be prepared or updated (if already existing). A municipal facilities asset register should be compiled with approximate replacement asset values assigned. Additionally present day asset values should be assigned based on a condition survey of the infrastructure facilities. Land and property records should be crosschecked and municipal registers updated to include previously undetected land, properties and development. A comprehensive list of municipal land, properties and development should be compiled with approximate valuations assigned.

Assessment of revenue earning potential

Municipality should review the existing revenue earning potential of all the assts. New projects or initiatives should be taken to maximise the revenue earning potential of assets including infrastructure facilities.

Computerisation of asset register

Focus should be on designing, testing and installing of database, management system for municipal assets. All data, once compiled should be classified based on analysis of the sector specific infrastructure facilities, land and properties. Specific software should be customized to local requirement and data should be translated into specified formats.

Training in database management

Training is the most important part of asset management plan. It should emphasize methods of simplified updation of data, methods of monitoring and follow up relating to infrastructure facilities management, land use, litigation, encroachment, values, expenditure and revenue flows.

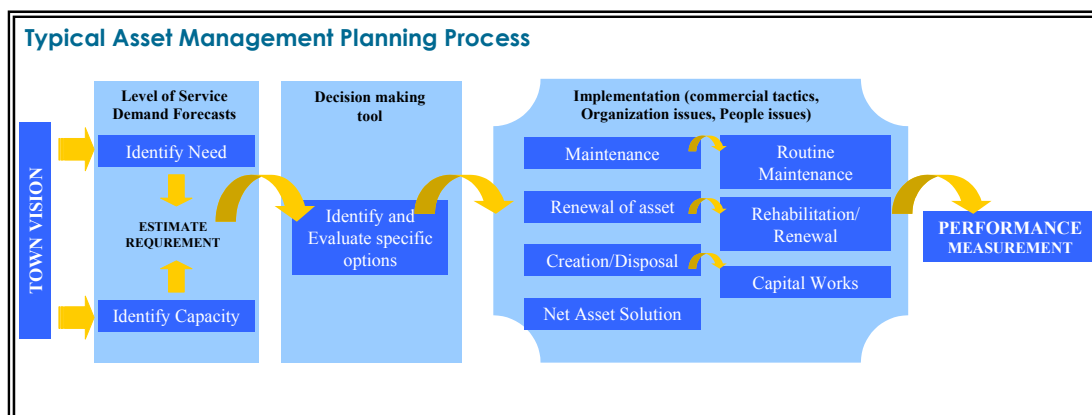
7.1.2 The Process

Management of asset is an evolving process that improves as the understanding of asset condition; its performance and operational costs improve. The benefits of improving asset management planning plan would include:

- Improved understanding of service level options and costs
- Improved decision making based on the benefits and costs of alternatives
- Proper justification of investments to stakeholders
- Proper timing and magnitude of investments
- Establish and evaluate performance benchmarks.

Some of the benefits associated with developing an **AMP** of mixed urban infrastructure assets are effective management of assets, optimisation of maintenance expenses, reduction of emergency interventions and introduction of the ISO 9000 concept

Asset Management Plan - Process



7.2 Planning of Tiruchengode municipal assets

In order to prepare the AMP, it is imperative to know the potential of these assets. The details of assets in Tiruchengode municipality are provided below.

7.2.1 Non-remunerative asset

The non-remunerative assets are in the form of vehicles, which are used by different departments of the municipality. In addition to these vehicles, the municipality also uses vehicles for SWM activity. The most important activity is to maintain the vehicles used by the health department, since they are utilised on a regular basis and have maximum wear and tear. The details of the vehicles are enumerated below

Table 18: Motor vehicles owned by the municipality

Number of motor vehicles owned	Number	Original value (In Rs. Lakhs)
General Administration	2	7.5
Water Supply	54	9.0
Public Health	8	25
Sanitation (Cess Pool Cleaning)	1	10.95
Details of conservancy vehicles	Number	Age (Years)
Mini Trucks	1	11
Tippers	3	7
Push carts	75	2
Others	1	11

Plan for vehicles maintenance

Vehicles owned by the municipality are poorly maintained. As a result, the life span of the vehicle gets reduced considerably. Hence, the municipality plan should draw up a plan to enter into a contractual agreement with the maintenance workshop for regular maintenance of the municipal vehicles. This should also include spot pick-up facility of vehicle in case of break down during its operation.

A register should be maintained that provides the maintenance works details of the vehicles on a daily basis. The register would also detail out the type of problems and the time taken for rectifying the same. The municipality should also specify the time frame for minor repairs and major repairs. These kinds of contracts would improve the productivity and life of the municipal vehicles. The register could be designed in the following manner.

Table 19: Typical structure of the register for maintenance contract

Sr. No	Vehicle No	Type of Vehicle	Municipal department	Problem	Cost involved for parts repair	Time in	Time out
1							
2							
3							

7.2.2 Remunerative asset

Most of the assets created by the municipality are under the central or state government supported schemes. Since the assets are remunerative in nature, it becomes more important for the municipality to maintain and utilise it optimally. The commercial complexes that form the most significant part of the asset base typically consist of shops, which are leased for a period of 3 years with a revision of 15%, which is less than the market rate. Hence it is imperative for the municipality to auction the shops in open market so as to get the optimum returns from its investment.

Table 20: Details of remunerative assets owned by the municipality

Description	Number	Area	Income
Bus Stand	1	8100	13.02
Office Buildings	1	4000	
Commercial Complexes	3	3000	13.50
Pay and Use latrines	3	300	8.70
Slaughter House	1	150	0.16
Markets – Local Body			
Daily	1	4500	5.40
Weekly	1	6000	17.93
Others			52.00

Note: Area in sq. meter, Income in Rs. Lakhs for 2004-05

7.2.3 Social and service related assets

Table 21: Social infrastructure owned by the municipality

Social infrastructure	Number	Area
School Buildings	17	17000
Office Buildings	2	1000
Pumping Stations	1	600
Service Oriented Assets		
Integrated Sanitary Complex	7	1100

Note: Area in sq. meter

The FOP considers the increments increase in the revenue potential from these sources. These are some of the elements that drive the business plan and ensure the timely availability of resources to sustain the assets in an acceptable condition to better service delivery. In addition to increase the revenue potential, it is equally important to manage the assets in terms of its maintenance and rehabilitation. This would ensure reducing costs, improving reliability, and ensuring sustainability. Hence it is imperative for the municipality to have a highly simplified approach with a long-term schedule of delivery of actions with a set of short-term measures.

8. ACTION AND IMPLEMENTATION PLAN

As in any project, the success of this business plan is also contingent on the action taken by key stakeholders of the municipality. The immediate onus lies on the council, who would need to approve the plan and pass the council resolution. Subsequently, the municipality needs to initiate action in terms of mobilising the funds from the users. Simultaneously, it should make available its sources of finance. This would provide the needed impetus to the financial institutions to initiate their course of action. Also, during the implementation phase, the town should be flexible to undertake some changes across its departments that would aid in easier and faster service delivery in the subsequent years

The implementation of the project requires the involvement of several stakeholders throughout the implementation period. The most critical of it is the financial involvement of the lending agency, the state government and the ULB. The amount would be released over a 5-year period from various agencies. The lending agencies provide the loan, while the state government provides the support through budgetary grant. The budgetary grant has been assumed at 30% of the total investment requirement.²² The ULB's contribution is assumed at 10%. The amount and the timing of the financial involvement is highlighted in the below table

8.1 Activity Chart

Table 22: Project phasing and key responsibilities

Stakeholders	Actions	Pre - Project	I year	II year	III year	IV year	V year	VI year
Financial								
TUFIDCO/TUFISIL	Release of loans		182.4	205.0	393.3	486.6	115.9	
Govt. of Tamilnadu	Release of grants		78.2	360.5	441.2	208.6	49.7	
Tiruchengode	ULB contribution			636.2	636.2			
Public	Initial contribution for new projects like							
Physical								
Council	Resolution to undertake the project							
Implementing agency	Implementation of the projects							
TUFIDCO/TUFISIL	Monitoring of the implementation							
Govt. of Tamilnadu	-do-							
Tiruchengode municipality	Monitoring of the implementation							
	Repayment of loans							
Self Help Group (Public)	Feedback/Highlighting pitfalls							
	Providing ground level support							

²² For Karnataka ULBs, under the World Bank aided projects, it has been assumed at 40%. Since, we would like to adopt a progressive approach in making the ULBs self reliant, the grant level has been reduced to 30% in this case

8.2 Activities and responsibility

Apart from the financial involvement, the stakeholders are also responsible for implementing the projects. In order to ensure an effective implementation, the involvement of the citizens is required. It would be more effective, if the citizens form SHG to represent their problems and provide regular feedback to the ULB.

8.2.1 Involvement of elected representatives

All these efforts would be effective only if there is a sustained co-operation from the council members, who would have to lay the path by adopting the business plan and adhering to the implementation schedule identified. Several of the revenue improvement initiatives would also need support from the councillors, while in other areas, the council would need to support the enforcement measures that are taken by the administration. Some of the key areas where active support is required are:

Provide minimum number of stand posts: The public fountains (174) in the town may be a limiting factor in adding water supply connections. Public fountains would need to be minimized in a phased manner so that the households are encouraged to opt for regular connections. Alternatively households that benefit from public fountains may need to be charged at regular rates. Such a measure, due to the inherent unpopularity, would need to be approved by the council.

Increase in water charges: Rate increases are inevitable in order to bridge the revenue deficit. The council support in this measure is vital

Coverage of unregistered properties: The revenue department has identified that some properties do not pay taxes. Council action can help in recovering revenues from these properties that are currently not registered in the property tax database. Including them in the property tax database can yield large one-time revenues in the form of penalties, building license fee and betterment charges. Also, these properties will be sources of regular property tax income.

SWM charges: The support of the council is required for the user charges.

Regularisation of unauthorized layouts: On account of the 36 unauthorized layouts, the municipality is losing substantial revenues. The recently issued G.O. for regularisation of unauthorized layouts needs to be incorporated by passing the council resolution. Discussions with the officials revealed that an indicative assessment of the cost involved in development of these layouts is not possible. Hence, it was unable to determine the cost-benefit of regularising these layouts.

Auctioning clearance: Auctioning of shops instead of the current allotment method based on pre-determined rent could be examined.

8.2.2 State government support

In addition to facilitating the above institutional measures, the state government's involvement would be necessary in removal/reduction of exemptions, if any. The state government may also facilitate and provide required support to enforce water rate hikes and imposing SWM cess.

8.3 Actions require during implementation of the Business Plan

8.3.1 Land management, urban economy and environment

There needs a strong coordinating mechanism between the municipality and the Local Planning Authority (LPA) of the area. For successful implementation of the business plan, the following actions would be necessary:

1. Constitution of a core planning team consisting of representatives of town administration, representatives of LPA, representatives of industry and commerce and representatives of civil society. The responsibilities for this team would be:
 - Firming a medium term (ten years) strategy plan for the LPA, clearly bringing out the relationship between the core town and its hinterland (Different from the conventional master plan)
 - Establishing the role of stakeholders in the implementation of this medium term plan
 - Identifying investments in the public sector to trigger private sector investments
 - Monitoring the implementation of the plan and carrying out course corrections as needed.
2. LPA to delegate the powers of issue of planning permissions to the ULB, retaining the power of supervision.
3. The municipality to set up a permanent interdepartmental infrastructure planning and development cell for continuing action on the business plan with dedicated staff. For this purpose the ULB should invariably associate professional consulting firm or specialists to bring in new innovations and cost effective practices.
4. The municipality should also constitute a town-level advisory committee (drawn from local chambers of commerce, NGO and responsible citizens) to provide inputs to the planning and development cell mentioned earlier.

8.3.2 Performance targets for revenue section

A clearly defined geographical responsibility with a target for improving coverage across all revenue sources and individual revenue targets for monitoring the performance would increase the productivity per staff. Supervisory staff like Revenue Inspectors (RI) and higher-grade officials should handle the accounts of chronic defaulters and high value customers (such as large commercial properties, government buildings).

8.3.3 Supervisory requirement for revenue section to handle issues

Given the large scale and width (activities across several departments of the municipality) of the revenue improvement program, substantial focus on systems related activities would also be required. Under this circumstance, the supervision needs to be at a senior administrative level within the municipality. A senior level officer at a rank below Commissioner could carry out this task. The supervisory activities would involve:

At the day to day level

- Supervise revenue functions.
- Interpret revenue MIS.
- Initiate required corrective actions.

For the medium term

- Understand the trends of revenue collections.
- Initiate long-term corrections such as inclusion of previously unassessed properties.
- Enforce and collect revenues that are slipping like advertisement fees.
- Manage the system and technology changes.

In the short term

- Oversee implementation of the revenue generation plan.
- Undertake survey of the entire town to assess the revenue generation potential.
- Create and update the revenue database linking it to various departments such as water, health, etc for automatic actions & enforcements.
- Identify unauthorized buildings (commercial & residential) within the municipal jurisdiction.

All the above functions can be housed within the revenue section, if the proposed integration of commercial functions occurs.

8.3.4 Need for an integrated commercial approach

Currently, the facility centre of the municipality carries out the billing functions for various departments. Additionally, the follow up action and enforcement measures are carried out independently without much coordination between the departments. This leads to duplication and also weakens the enforcement efforts. Additionally, it is difficult to generate effective MIS, as it is difficult to integrate the data from the respective sections.²³

It may therefore be useful to integrate the commercial functions of the various sections. This would both rationalise the requirement for staff as well as lead to greater co-ordination between the commercial activities of the various sections. It would greatly assist in the identification of unauthorised properties, disconnection of water to such properties and the properties not paying municipal taxes etc. The revenue section could take up this responsibility, as the revenue section would have a larger database of properties than the engineering or health sections and the daily operating load of the section has come down due to the computerised bill generation process that has relieved resources, which may be deployed for the integrated commercial activity. The integrated activities, which could be handled by the revenue section, could include:

Table 23: Integrated activities of the Revenue section

	Water supply related	Revenue section related	Health section related
Billing activities	Generation of water bills, delivery of water bills, collection, MIS generation	Shop rent bills, MIS of property tax, Building permissions	Trade License, SWM charge
Field activities	Detection of unauthorized connections, disconnection of water supply	Identification of unauthorised development	Detection of new trades, proceedings against trade owners
Co-ordination	Co-ordination within the municipal department for regular updation of the database (in co-ordination with building permissions issue) and for enforcement functions (disconnection of water supply, proceedings against property etc)		

The integration would yield several benefits. On the operational front, this would ensure an integrated database for all revenue related functions that would provide an impetus for the financial management function, as it would allow development of long-term financial plans. This would also provide an integrated approach to fund mobilisation for the municipality through better portfolio of rate increases. On the management front, it would provide the ability to integrate the commercial data with the accounts information and thereby provide relevant MIS

²³ To some extent property tax and water connection data can be integrated. But the utilisation is presently very limited.

On the service delivery front, it would provide an integrated billing to the customers and a single point customer grievance handling and it would also be easier to out source certain functions like bill delivery and collections in the integrated structure. On the human resources front, it would develop a common enforcement strategy and the staff required for billing and collections would also be rationalised. The revenue section could also draw on the existing staff of the engineering and health sections that would be freed up due to the transfer of commercial functions.

Given the nature of operations of the section; it is necessary that someone who is also fulfilling the financial management function head it. The current skills heading the revenue section may not be sufficient for the function. If an officer with the necessary skills cannot be dedicated from within the municipality, external recruitment may be required for the same, failing which the role may have to be carried out by the commissioner.

8.3.5 HRD improvement measures

For undertaking the changes, significant training needs to be provided. Unless, the employees undertake the identified projects, the success is suspect. In order to ensure the projects are implemented properly, proper capacity building measures need to be undertaken.

The training needs to be undertaken for the elected representatives and the ULB staff at various levels in various areas of urban governance. The training programme needs to be at different tiers i.e. at local level, at district level, at State level and out side the State for any specialised training. The CMA needs to prepare a detailed curriculum for each of training modules and in case, if the curriculum and the training material being prepared by the external consultants, it is better to involve the same group of consultants who are going to be involved in training. The training should be for a fixed number of personnel picked up from each department, who would then, in turn train the other employees. This, in effect would be training for the trainers.

The key areas of training required are

- Local Governance and Urban Management for Mayors, Chairpersons, other elected officials and other Senior ULB staff
- Financial Management for managers, revenue officers and accountants and related officials
- Improvement of Service Delivery for Town Planning Officers
- Office Management and use of computers for ULB office Management
- Social Safeguards and Environmental Management for Senior and middle level ULB staff

The key points to be covered in the training would be to highlight the best of reform initiatives from across the country viz. Specific reform initiatives such as property tax, solid waste management, revenue improvement and accounting reforms and showcase the 200 plus reform initiatives from the Indian cities that were a part of 'CRISIL Awards for Excellence in Municipal Initiatives'.

The following table highlights some of the training components required in the ULB

Table 24: Basic Training

Position/Designation	Area
Commissioner, Manager, Revenue department	Improvements in commercial orientation and customer service
Commissioner, Manager, Municipal Engineer	Transfer and redeployment strategies and implementation of the same
Commissioner	Review of performance management systems
Respective department clerks and officials	Functional areas like Commercial, Regulatory, Finance & Accounts, Internal Audit, Corporate Planning, Technical Operations, and IT etc.
Commissioner	Communication strategy to address key stakeholder and reform related issues
Commissioner, Manager	Change enablement and communication mechanisms to create awareness amongst various stakeholders' viz. employees etc.
Municipal Engineer	Private Sector Participation
Manager	Property survey and mapping
Municipal Engineer, Manager	Systems and procedures of utilizing the property survey database to increase revenues from property tax which will include setting up improved systems in terms of: billing, collection and receivables, monitoring and follow-up, accountability and transparency, human resource management and availability, and capacity building of the staff.
Commissioner	Reorganizing the Revenue Department for achieving better tax administration and training of revenue staff, Advise on reorganisation of Revenue Department, Training and Study Tours
Chief Accounts Officer	Analyse the prevailing fiscal status of the ULB
Manager, Chief Accounts Officer	Penal provisions & dispute resolution
Chief Accounts Officer	Available funding options and Accessing donors

Table 25: Specialized training

Position/Designation	Area
Commissioner	Organisation structure - Its roles and responsibilities, Developing a proper residual and successor entity
Commissioner	Identify the strengths, weaknesses and constraints of private sector participation in urban infrastructure, healthcare and education
Commissioner, Chief Accounts Officer	Credit enhancement options for the ULB, which would enable them to raise debt in the capital markets
Chief Accounts Officer	Asset inventory and valuation
Programming Officer	Software development and training
Commissioner	Prepare a vision document.
Municipal Engineer, Town Planning Officer	Project Preparation, Procurement Process, Sectoral and tariff issues, Contracts & risk issues, Managing consultants,
Commissioner, Manager	Formulation and implementation of communication strategy
Commissioner, Manager	Development of Role definition at each hierarchy

8.4 Some key measures that could aid in implementation of the business plan

Tiruchengode municipality can undertake a few of the highlighted initiatives that have been adopted by other ULBs that could aid in improving the efficiency levels. A detailed listing of other initiatives are highlighted in Annex

8.4.1 Professionalization of workforce – AMC

Ahmedabad took an important step towards the professionalization of its workforce by recruiting certified Chartered Accountants and graduates with Masters' degree in Business Administration.

8.4.2 Slum sanitation with community Participation - PMC

Municipal corporations have 'conservancy' departments whose duty is to clean and maintain toilet blocks, drains, streets and the like. However, it has been widely recognised that this staff is usually remiss in their duties and hence the toilets soon fall into disrepair and disuse. Since the local community does not have any control over the sanitation staff, the latter do not respond to their concerns. Often, communities have to pay additional money to the same workers to persuade them to clean the toilets. The city of Pune carried out a major experiment of building toilets in slums through community participation by giving contracts to non-governmental organisations. Advertisements were issued in the newspapers inviting NGOs to come forward and make bids for building toilets. They were expected to quote a lesser cost. A guarantee was also to be given that the NGO and the community would maintain the toilet block for thirty years by collecting contributions from the community.

Eight NGOs were selected to carry out the work. Weekly meetings, which were attended by the municipal commissioner, relevant staff, NGOs and community representatives, were held to monitor the progress of the work and deal with impediments. Slum dwellers, especially women, were actively involved by the NGOs in this project. Community members were trained in various aspects of maintenance like electrical issues, carpentry and so on. Several innovative features were incorporated in the toilet design. For example, a caretaker's room was provided over the toilet to house a family. This room was an incentive for the family that would take charge of maintenance. In some cases, where space permitted, a community hall was built that could be used for social and ceremonial purposes in the slum. More than 400 toilet blocks with over 10,000 seats were built at a cost of about Rs. 40 crores. Assuming that 50 persons use a toilet seat a day, more than five lakh people in the slums have benefited from the programme.

8.4.3 Park management committees - MCL

In Ludhiana, neighbourhood 'park management committees' undertakes the maintenance of around 70% of the parks. They hire gardeners and are reimbursed by MCL @ Re. 1 per sq. metre per month. This system has resulted in saving of around 80% for MCL and also avoids the hassles of absenteeism, unionism and continuous supervision.

8.5 Way forward

Several parallel initiatives need to be implemented by all the stakeholders (municipality, elected representatives and the state government) to fully realize the revenue improvement potential. It is proposed to discuss this report in a citywide discussion with the stakeholders and councillors to reach a consensus on the improvement measures that would be pursued. The supporting plan for these measures, including those identified in this report along with a time-bound plan with identified implementation responsibilities has been highlighted in the Memorandum of Association (MoA) for the town's discussion and approval.

9. DRAFT MEMORANDUM OF UNDERSTANDING BETWEEN TIRUCHENGODE MUNICIPALITY AND TNUIFSL

The council has evaluated the proposed implementation of business plan for possible funding by World Bank. The council has held discussions with all local elected representatives & officials in the stakeholder consultation workshop and noted that all were in agreement with the proposal for implementing the Business Plan.

The council took note of the following facts placed before it during the discussions:

- The Government of Tamilnadu (GoTN) had nominated TNUIFSL, Chennai as the nodal agency for the proposed funding from the World Bank
- After taking into account its present/potential financial status and capacity for O&M/repayment of loan, the following priority infrastructure works have been identified/proposed under the project for this town with the loan-grant-own contribution mix as indicated in the table below:

Item-wise Base Costs for Identified Components

S. No	Item of Works	Total	Loan	Grant	ULB Contribution
1.	Water Supply				
2.	Sewerage & Sanitation				
3.	Roads				
4.	Storm Water Drains				
5.	Street Lighting				
6.	Solid Waste Management				
7.	Social Infrastructure				
	Total				

(In Rs. Crores)

- All cost and time overrun burden is to be borne by this ULB and that the GoTN or TNUIFSL will not be responsible for the same
- Carrying out reforms and complying with pre project conditions/actions as suggested by the GoTN/TNUIFSL as mentioned in the **Service Level Agreement** that shall be the qualifying criteria for disbursal of the funds
- The terms of the loan will be
 - a. Interest rate - 8.5%
 - b. Term – 20 years
 - c. Moratorium – 5 years

The council agrees to the following points:

- Issues presented in the project report and to agree to follow all directions of GoTN/TNUIFSL towards execution of the project
- Assure and ensure utilization of assets created under the project
- Draw the loan part for the execution of the works and repay the loan with applicable interest as per schedule
- Open a joint account with Deputy Commissioner for the project and to agree to deposit the ULB's share every quarter (10 % of the cost of the tendered works) failing which to abide by action taken by GoTN/TNUIFSL
- Conform to the subsequent change, if any, in the loan-grant composition made by GoTN
- Undertake the following minimum reforms during the FY 2006-07 and to improve during the loan

period to achieve the target set for every year:

- a. Listing of assets of the ULB and maximizing efficient use of the same, revenue generation from municipal properties through collection of land rent/lease covering at least __percent municipal properties, improved collection of land rent to at least __ percent demand
 - b. Listing of all trade activities and improving collection of trade license fee to at least __percent of demand.
 - c. Revising water tariff as per __GO, identification/regularization of unauthorized water connections, improved collection of at least __ percent of water tariff.
 - d. Collection of at least __ percent of water and sewerage connection charges within a year and then invite the tenders for water supply and sewerage schemes.
 - e. Imposing solid waste management cess/fees.
 - f. Increasing coverage with respect to property tax collection - bringing at least __ percent properties into the tax net, increasing collection efficiency and ensuring arrears collection of at least __ percent and collection of at least __ percent of current demand for property tax.
 - g. Computerizing municipal systems and procedures.
- Undertake public awareness through ward-level consultation workshops, with NGO involvement, improving the image of the ULB and generating confidence among citizens regarding the ability of the ULB to deliver quality services
 - Acquire land, free from all encumbrances / encroachments, required for all identified projects before project loan effectiveness
 - Solve all problems (like agitation) during construction activity and to ensure timely completion of the work as per schedule
 - Offer necessary co-operation/coordination with consultants, PMU/Divisional Offices/NGOs and various other agencies involved in implementation of the project
 - Undertake full responsibility, in respect of civil works, for quality assurance and joint measurement of completed works and to assure full co-operation and co-ordination and to agree to all pre-qualification requirements and bidding procedures of World Bank and to impose penalty, if any, from the first bill itself;
 - Undertake that no variation order without citing reasons for variation as well as working out the time and financial implications, will be issued subsequent to tendering without prior approval of TNUIFSL
 - Carryout the all the directions of GoTN/TNUIFSL.

Finally, the Council agrees to bind itself to these terms, which would form part of future agreement with GoTN/TNUIFSL, and further resolve to authorize the Commissioner/Chief Officer to take necessary action to get the above mentioned infrastructure facilities to this town. The Council further agrees to authorize the Commissioner and Chairman to sign the sub-loan agreement with TNUIFSL.

Sd/

Chairman of the council

Date

Commissioner

Tiruchengode municipality

Service Level Agreement

Category	Description	Unit	Target - Year 5	Year 1	Year 2	Year 3	Year 4	Year 5	Reforms and Action Required by the ULBs
Demography									
	Population	Number							
	Annual Growth	%							
	Below poverty line families	Number							
	Developed Land Area	Sq. Km.							
	Undeveloped Land Area	Sq. Km.							
	Residential Land Area	Sq. Km.							
	Transportation Land Area	Sq. Km.							
Service levels									
Water Supply									
	Gross Per Capita supply	Litres							
	Net Per Capita supply	Litres							
	Elevated Storage Capacity/Total Supply	%							
	Ground Storage Capacity/Total Supply	%							
	Treatment Capacity/Total Supply	%							
	Length of Distribution Network	Km.							
	Transmission & Distribution losses	%							
	Public Stand posts	Number							
	Public Bore well	Number							
	Population having access to water sources	%							
	Supply	Hours/day							
Sewerage & Sanitation									
	Municipal area covered by sewerage system	%							
	Municipal area covered by Public convenience system	%							
	Municipal area covered by Septic Tanks	%							
	Treatment Capacity/Total Supply	%							
	Roads Covered by sewerage system	%							
	Population covered by sewerage system	%							

Category	Description	Unit	Target - Year 5	Year 1	Year 2	Year 3	Year 4	Year 5	Reforms and Action Required by the ULBs
SWM									
	Daily per capita waste generated								
	Primary Collection Capacity	MT							
	Secondary Collection Capacity	MT							
	Door to Door collection coverage	%							
	Total Rated capacity of vehicles/Total waste generated	%							
	Average Spacing between Dustbins	Meters							
SWD									
	Municipal Area covered with SWD	%							
	Population covered by SWD	%							
Roads									
	Municipal Area covered with SWD	%							
	Population covered by SWD	%							
	Per Capita Road length	Meters							
	Road Density	Km/Sq. Km.							
Street Lighting									
	Spacing between Streetlights	Meters							
Efficiency Levels									
Property Tax									
	Residential Properties	Number							
	Commercial Properties	Number							
	Industrial Properties (If any)	Number							
	Vacant Land	Number							
	Collection efficiency	%							
	Arrears as a % of the total	%							

Category	Description	Unit	Target - Year 5	Year 1	Year 2	Year 3	Year 4	Year 5	Reforms and Action Required by the ULBs
Water									
	Metered Residential Connections/Total Residential properties	%							
	Metered Commercial Connections/Total Commercial properties	%							
	Metered Industrial Connections/Total Industrial properties (If any)	%							
	Collection efficiency	%							
	Arrears as a % of the total	%							
	Unauthorized connections/Total Connections	%							
Sewerage & Sanitation									
	Sewerage connections/Total number of properties	%							
	Septic Tanks/Total number of properties	%							
	Low Cost Sanitation/Total number of properties	%							
	Number of Slum residents per seat of Public convenience	Number							
Solid Waste Management									
	Collection efficiency	%							
	Road length per staff	Meters							
	Disposal site capacity/Total Waste Generated	%							
	Area covered per conservancy staff	Sq. Meters							
Storm Water Drain									
	Road covered with Pucca Open Drain	%							
	Road covered with Pucca Closed Drain	%							
	Road uncovered with SWD	%							
	Pucca Drain/Total SWD	%							

Category	Description	Unit	Target - Year 5	Year 1	Year 2	Year 3	Year 4	Year 5	Reforms and Action Required by the ULBs
Roads									
	Roads Surfaced (any kind of surfacing)	%							
	Concrete Road/Total Road	%							
	Black Top Road/Total Road	%							
	Earthen & Other Road/Total Road	%							
Street Lighting									
	Tube lights/Total Lights	%							
	High power lights/Total Lights	%							
	Other Lights/Total Lights	%							

ANNEX

Assumptions adopted for FOP

Important assumptions adopted for FOP

Item	Assumption adopted for forecast		Base case	Improved case
A	General purpose/ property tax			
1	Forecast based on.	⇒ Growth in assessments ⇒ Tax demand ⇒ Periodic revisions and ⇒ Collection performance		
2	Growth in assessments	Current CAGR in assessments of 2.28% and Current CAGR in population of 1.54%	Minimum of current CAGR in population/ Household size (3)	Maximum of current CAGR in assessments /Household size (3)
4	Average Property tax demand	Computed based on current average demand per assessment- Rs.79.52. Last revision in demand was implemented in 1998.	The current level would continue	Increase by 30% every five years from 2006-07
5	Collection Performance	Collection performance in 2004-05 is: Arrears- 52% and Current- 68%	The current level would continue	Arrears- Reach 60% Current- Reach 90% (Both over a 5 year period)
B	Water tax/ charges			
1	Forecast based on:	⇒ Growth in connections, ⇒ Minimum monthly charge, ⇒ Periodic tariff revisions and ⇒ Collection performance		
2	Growth in connections	Coverage of House Service Connections to the number of properties in 2004-05 is 38%	The current level would continue	Gradual increase in number of connections from 2006-07 and would reach a coverage of 80%
3	Minimum monthly charge	Average demand in 2004-05 is Rs. 85 per connection per month.	The current level would continue	Increase by 30% every five years from 2007-08
4	Collection Performance	Collection performance in 2004-05 is: Arrears- 36% Current- 60%	The current level would continue	Arrears - Reach 60% Current- Reach 80% (Over a 5 year period)
5	New connection charge	New connection fee Domestic – Rs.6000/- Non-Domestic – Rs.12000/- Weighted average – Rs.6172/-	The current level would continue	To increase by 30% at every five years from 2007-08
C	Shops and Market rent			

Item		Assumption adopted for forecast	Base case	Improved case
	Forecast based on:	⇒ Growth in shops, ⇒ Minimum monthly charge, ⇒ Periodic tariff revisions and ⇒ Collection performance		
1	Growth in number of shops	Current level – 274 (CAGR of 11.23%)	Current level of growth in number of shops CAGR – 11.23%	Maximum of Current level of growth or Increase with respect to growth in non-residential properties – CAGR- 11.23%
2	Minimum monthly charge per shop	Average demand in 2004-05 is Rs.3688/shop / month.	Increase by 15% every 3 years from 2007-08 (As per the existing practice)	Increase by 30% every 3 years from 2007-08
3	Collection Performance	Collection performance in 2004-05 is: Arrears- 62% Current- 88%	The current level would continue	Arrears- Reach 75% Current- Reach 90% (Both over a 5 year period)
D Trade Licences				
1	Forecast based on:	⇒ Growth in trade licenses, ⇒ Minimum monthly charge, ⇒ Periodic tariff revisions and ⇒ Collection performance		
2	Growth in number of building licenses	Average for the last 5 years– 881 (Since the growth has not been consistent over the last 5 years)		
3	Minimum monthly charge per shop	Average demand in 2004-05 is Rs.41/license/ month.	The current level would continue	Upward revision of 8% assumed in 2007-08 and every 5-years thereon
4	Collection Performance	Collection performance is: Current- 100%	The current level would continue	
E Building Related Taxes (Building License)				
1	Forecast based on:	⇒ Growth in building licenses, ⇒ Minimum monthly charge, and ⇒ Periodic tariff revisions		
2	Growth in number of building licenses	Current level – 131	New properties based on growth in no of properties.	
3	Minimum monthly charge per shop	Current average demand: Rs.193/license/ month.	The current level would continue	Upward revision of 8% assumed in 2007-08 and every 5-years thereon
F Other Tax				
1	Basis of Growth assumption	⇒ Base Case: Forecast adopting current average growth rate, subject to minimum of 7% and maximum of 10%. ⇒ Improved Case: Forecast adopting current average growth rate, subject to minimum of 8% and maximum of 12%.		
G Non-tax income				
1	Income from comm. activity, Inst., fees and contribution, user charges & Others	⇒ Base Case: Forecast adopting current average growth rate, subject to minimum of 7% and maximum of 10% ⇒ Improved Case: Forecast adopting current average growth rate, subject to minimum of 8% and maximum of 12%.		
H Revenue grants				

Item	Assumption adopted for forecast	Base case	Improved case
1 SFC grant	⇒ Base Case: Forecast adopting current average growth rate, subject to minimum of 7% and maximum of 10% ⇒ Improved Case: Forecast adopting current average growth rate, subject to minimum of 8% and maximum of 12%. ⇒ Net grant after deduction is considered for projection		
2 Other grants and contributions	⇒ Base Case: Forecast adopting current average growth rate, subject to minimum of 7% and maximum of 10% ⇒ Improved Case: Forecast adopting current average growth rate, subject to minimum of 8% and maximum of 12%.		

Important assumptions made for Project terms

Project terms	
Ratio of loan: grant :ULB contribution	30% grant, 10% ULB contribution and 60% loan
Loan terms (flexibility to vary the rates)	Loan period: 20 years (5+15) Moratorium period: 5 years on principal repayment Year of disbursement: 2006-07 (1/4/2006) Repayment method: Equal annual instalments Interest rate: 8.5%
Sectoral deployment of investment	All sectors, as per the ratio in the CCP investment
Debt Service Coverage Ratio ²⁴	At least 1.25 in all years
O & M expenditure (arising from new assets)	
O & M expenditure rates as % of investments	Public health - 5% Others – 12%
Year additional O&M expenses commence	2008-09
Growth rate in expenditure	Based on the current CAGR with a min of 6% and max of 8%

		Costing Rs. Lakhs
A	Roads	
1	Upgradation	
i	BT to Concrete	50.00
ii	WBM to Black Top	4.50
iii	Earthen to Black Top	10.00
2	New Formation	
i	Concrete	60.00
ii	Black Top	10.00
iii	WBM	7.00

²⁴ DSCR=(current year revenue- non-debt service expenses, but including addition O&M expenses)/debt service obligation.

Current Financials

To facilitate analysis, we have recast the financial statements provided by the Tiruchengode Municipality. Hence the individual heads of accounts above may not match with the annual account statements of the municipality.

Items	2000-01	2001-02	2002-03	2003-04	2004-05
Opening balance	41	-156	-535	-836	-926
Municipal receipts	498	491	845	802	838
Municipal expenditure	695	870	1,146	891	934
Municipal Surplus/deficit for curren	-197	-379	-301	-90	-96
Final closing balance	-156	-535	-836	-926	-1,022
RECEIPTS					
Own Sources					
Revenue Fund	185	222	245	268	380
Property tax	13	14	17	21	22
Professional tax	14	15	15	18	19
Entertainment tax	0	0	0	0	0
Trade licenses	2	3	5	5	6
Building license fee	2	2	3	4	3
Shops & market rents	57	76	87	95	92
Development charges	0	0	0	0	0
Others	97	112	118	125	238
Water Supply and Drainage Fund	123	127	162	196	210
Water tax	62	65	79	95	101
New Water Connection fee	59	60	80	98	106
New Charge- UGD	0	0	0	0	0
Fee from new UGD connections	0	0	0	0	0
Others	2	2	3	3	4
Elementry Education Fund	22	23	28	34	36
Revenue from education	22	23	28	34	36
Others	0	0	0	0	0
Sub-Total	331	371	436	497	626
Permanent Revenue Grants					
Devolution of funds (SFC)	77	67	207	156	112
Entertainment tax	33	15	41	30	19
Surcharge on Sales tax	57	18	146	99	75
TFC/EFC grants	0	20	14	19	6
Other grants	0	0	0	0	0
Sub-Total	167	119	409	304	212
TOTAL MUNICIPAL RECEIPTS	498	491	845	802	838

All figures in Rs. Lakhs

Items	2000-01	2001-02	2002-03	2003-04	2004-05
PAYMENTS					
Salaries					
<i>General Administration</i>	164	163	154	149	152
<i>Water Supply</i>	28	24	126	21	22
<i>Sewerage</i>	0	0	0	0	0
<i>Public Health (Sanitation)</i>	0	0	0	0	0
<i>Conservancy</i>	0	0	0	0	0
<i>Public Works (Engg. Staff)</i>	0	0	0	0	0
<i>Street Lighting</i>	0	0	0	0	0
<i>Discretionary Services</i>	0	0	0	0	0
Sub-Total	192	188	280	170	173
Operation and Maintenance					
<i>General Administration</i>	196	240	285	244	184
<i>Water Supply</i>	147	284	319	272	347
<i>Sewerage</i>	0	0	0	0	0
<i>Conservancy</i>	9	9	9	9	8
<i>Roads</i>	0	0	0	0	0
<i>Storm Water Drains</i>	0	0	0	0	0
<i>Miscellaneous Items</i>	11	9	14	26	18
Sub-Total	397	576	669	607	624
Loan & Interest Payments					
<i>Loan repayment</i>	106	106	197	115	137
Loan & Interest Payments	106	106	197	115	137
TOTAL MUNICIPAL PAYMENTS	695	870	1,146	891	934

All figures in Rs. Lakhs

Tiruchengode Business Plan

Base Case Projections

All figures in Rs. Lakhs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Opening balance	(1,022.04)	(1,370.32)	(1,692.63)	(2,601.69)	(3,606.23)	(4,249.04)	(5,277.46)	(7,326.57)	(9,375.69)	(11,370.46)	(13,352.41)	(15,315.76)	(17,244.62)	(19,138.98)	(20,884.69)
Municipal receipts	899.66	985.95	1,100.03	1,200.10	1,307.63	1,424.02	1,550.73	1,689.44	1,894.21	2,067.21	2,256.41	2,464.05	2,692.12	3,047.02	3,335.93
Municipal expenditure	1,247.95	1,308.25	1,372.91	1,369.97	1,444.30	1,524.00	1,594.98	1,684.07	1,782.39	1,887.87	2,001.01	2,113.85	2,244.10	2,383.85	2,533.82
Impact of debt servicing		-	-	-	-	-	1,012.42	1,012.42	1,012.42	1,012.42	1,012.42	1,012.42	1,012.42	1,012.42	1,012.42
Impact of additional O&M			-	198.49	506.15	928.43	992.44	1,042.06	1,094.17	1,148.88	1,206.32	1,266.63	1,329.97	1,396.47	1,466.29
ULB contribution		-	636.18	636.18											
Final closing balance	(1,370.32)	(1,692.63)	(2,601.69)	(3,606.23)	(4,249.04)	(5,277.46)	(7,326.57)	(9,375.69)	(11,370.46)	(13,352.41)	(15,315.76)	(17,244.62)	(19,138.98)	(20,884.69)	(22,561.29)
RECEIPTS															
Own Sources	361.44	395.65	456.01	499.86	547.80	600.33	658.27	722.44	846.28	931.20	1,024.45	1,127.33	1,240.95	1,470.91	1,623.19
Property tax	36.29	40.32	42.63	44.10	45.18	46.07	46.87	47.63	48.39	49.15	49.91	50.68	51.46	52.25	53.06
Professional tax	20.77	22.43	24.22	26.15	28.24	30.50	32.93	35.57	38.41	41.48	44.79	48.37	52.23	56.41	60.91
Trade licenses	4.82	5.36	4.36	4.85	5.40	6.00	6.67	7.42	8.26	9.19	10.22	11.37	12.65	14.07	15.65
Building license fee	9.76	9.91	10.06	10.21	10.37	10.53	10.69	10.86	11.02	11.19	11.37	11.54	11.72	11.90	12.08
Shops & market rents	137.98	150.62	191.03	212.45	236.32	262.71	292.12	325.09	414.74	462.19	514.36	572.19	636.38	812.12	904.91
Others	151.83	167.01	183.72	202.09	222.30	244.53	268.98	295.88	325.46	358.01	393.81	433.19	476.51	524.16	576.58
Water Supply and Drainage Fund	203.94	226.44	247.90	268.93	290.11	312.06	335.08	359.67	386.08	414.62	445.53	479.26	516.13	556.28	600.26
Water tax	72.88	83.18	91.15	97.37	102.34	106.40	109.83	112.81	115.47	117.92	120.21	122.41	124.54	126.64	128.71
Water Charges	116.90	128.59	141.45	155.59	171.15	188.26	207.09	227.80	250.58	275.64	303.20	333.52	366.87	403.56	443.92
New Water Connection fee	10.21	10.33	10.52	10.71	10.84	11.03	11.16	11.37	11.56	11.75	11.87	12.07	12.32	12.45	12.64
Others	3.95	4.34	4.78	5.26	5.78	6.36	7.00	7.70	8.47	9.31	10.24	11.27	12.39	13.63	15.00
Elementary Education Fund	39.49	43.44	47.78	52.56	57.82	63.60	69.96	76.95	84.65	93.12	102.43	112.67	123.94	136.33	149.96
Permanent Revenue Grants															
Devolution of funds (SFC)	167.86	184.60	203.01	223.26	245.52	270.00	296.93	326.54	359.11	394.92	434.30	477.61	525.24	577.62	635.22
Entertainment tax	29.50	31.56	33.77	36.14	38.67	41.37	44.27	47.37	50.68	54.23	58.03	62.09	66.43	71.09	76.06
Surcharge on Sales tax	84.65	90.58	96.92	103.70	110.96	118.73	127.04	135.93	145.45	155.63	166.52	178.18	190.65	204.00	218.28
TFC/EFC grants	12.78	13.68	14.63	15.66	16.75	17.93	19.18	20.53	21.96	23.50	25.14	26.90	28.79	30.80	32.96
TOTAL MUNICIPAL RECEIPTS	899.66	985.95	1,100.03	1,200.10	1,307.63	1,424.02	1,550.73	1,689.44	1,894.21	2,067.21	2,256.41	2,464.05	2,692.12	3,047.02	3,335.93
PAYMENTS															
Salaries															
General Administration	160.94	170.60	180.83	191.68	203.18	215.37	228.30	241.99	256.51	271.90	288.22	305.51	323.84	343.27	363.87
Water Supply	22.89	24.26	25.71	27.26	28.89	30.63	32.46	34.41	36.48	38.66	40.98	43.44	46.05	48.81	51.74
Operation and Maintenance															
General Administration	195.51	207.24	219.67	232.85	246.82	261.63	277.33	293.97	311.61	330.30	350.12	371.13	393.40	417.00	442.02
Water Supply	375.16	405.17	437.59	472.59	510.40	551.23	595.33	642.96	694.39	749.95	809.94	874.74	944.72	1,020.29	1,101.92
Public Health (Sanitation)	19.71	20.89	22.15	23.47	24.88	26.38	27.96	29.64	31.41	33.30	35.30	37.42	39.66	42.04	44.56
Conservancy	8.10	8.75	9.45	10.20	11.02	11.90	12.85	13.88	14.99	16.19	17.48	18.88	20.39	22.02	23.79
Street Lighting	51.53	55.65	60.10	64.91	70.10	75.71	81.77	88.31	95.37	103.00	111.24	120.14	129.75	140.13	151.34
Miscellaneous Items	19.80	21.38	23.09	24.94	26.93	29.09	31.41	33.93	36.64	39.57	42.74	46.16	49.85	53.84	58.15
Loan & Interest Payments	394.32	394.32	394.32	322.07	322.07	322.07	307.57	304.98	304.98	304.98	304.98	296.43	296.43	296.43	296.43
TOTAL MUNICIPAL PAYMENTS	1,247.95	1,308.25	1,372.91	1,369.97	1,444.30	1,524.00	1,594.98	1,684.07	1,782.39	1,887.87	2,001.01	2,113.85	2,244.10	2,383.85	2,533.82

Tiruchengode Business Plan

Improved Case Projections

All figures in Rs. Lakhs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Opening balance	(1,022.04)	(1,065.25)	(1,017.95)	(1,022.01)	(901.81)	(491.17)	(39.80)	119.03	233.04	618.58	1,153.51	1,856.40	3,067.88	4,693.61	6,632.26
Municipal receipts	1,204.74	1,348.28	1,639.86	1,841.19	2,047.31	2,345.93	2,595.72	2,647.13	3,023.41	3,283.85	3,569.54	4,194.42	4,741.03	5,194.32	6,174.71
Municipal expenditure	1,247.95	1,300.98	1,357.35	1,345.00	1,408.67	1,476.34	1,533.78	1,607.65	1,688.93	1,775.34	1,867.20	1,956.31	2,060.15	2,170.56	2,287.96
Impact of debt servicing	-	-	-	-	-	-	456.06	456.06	456.06	456.06	456.06	456.06	456.06	456.06	456.06
Impact of additional O&M	-	-	-	89.41	228.00	418.22	447.06	469.41	492.88	517.52	543.40	570.57	599.10	629.05	660.51
ULB contribution	-	-	286.57	286.57	-	-	-	-	-	-	-	-	-	-	-
Final closing balance	(1,065.25)	(1,017.95)	(1,022.01)	(901.81)	(491.17)	(39.80)	119.03	233.04	618.58	1,153.51	1,856.40	3,067.88	4,693.61	6,632.26	9,402.45
RECEIPTS															
Own Sources	462.05	486.11	588.11	650.08	716.84	877.16	987.89	1,090.24	1,362.14	1,508.83	1,669.94	2,157.86	2,395.90	2,660.18	3,447.21
Property tax	46.90	67.24	74.55	78.59	81.04	82.73	102.35	104.13	105.82	107.48	109.15	140.83	145.00	148.04	150.64
Professional tax	20.77	22.43	24.22	26.16	28.26	30.52	32.96	35.59	38.44	41.52	44.84	48.42	52.30	56.48	61.00
Trade licenses	4.82	5.36	4.89	5.44	6.04	6.72	7.48	8.31	10.46	11.64	12.95	14.40	16.02	20.17	22.43
Building license fee	48.32	12.73	13.96	14.18	14.40	14.62	14.84	15.07	16.59	16.85	17.11	17.37	17.64	19.42	19.71
Shops & market rents	137.98	150.69	215.52	240.14	267.26	384.35	429.07	477.78	687.55	767.69	854.59	1,229.77	1,373.03	1,529.15	2,200.06
Others	203.26	227.65	254.97	285.57	319.84	358.22	401.21	449.35	503.27	563.66	631.30	707.06	791.91	886.94	993.37
Water Supply and Drainage Fund	406.61	442.10	596.00	696.31	792.89	884.35	972.07	864.88	907.60	953.74	1,004.19	1,059.82	1,279.17	1,370.26	1,456.15
Water tax	81.47	130.90	209.58	284.52	353.36	414.50	468.86	541.23	550.46	559.29	568.03	576.85	727.37	759.81	780.02
Water Charges	119.02	133.31	149.30	167.22	187.28	209.76	234.93	263.12	294.70	330.06	369.67	414.03	463.71	519.35	581.68
New Water Connection fee	202.10	173.39	232.08	238.92	245.92	253.01	260.35	51.64	52.50	53.25	54.00	54.96	72.43	73.55	74.80
Others	4.02	4.50	5.04	5.65	6.33	7.09	7.94	8.89	9.96	11.15	12.49	13.99	15.66	17.54	19.65
Elementary Education Fund	40.21	45.03	50.44	56.49	63.27	70.86	79.36	88.89	99.55	111.50	124.88	139.87	156.65	175.45	196.50
Permanent Revenue Grants															
Devolution of funds (SFC)	167.86	184.60	203.01	223.26	245.52	270.00	296.93	326.54	359.11	394.92	434.30	477.61	525.24	577.62	635.22
Entertainment tax	29.77	32.16	34.73	37.51	40.51	43.75	47.25	51.03	55.11	59.52	64.28	69.42	74.97	80.97	87.45
Surcharge on Sales tax	85.44	92.28	99.66	107.63	116.24	125.54	135.59	146.43	158.15	170.80	184.47	199.22	215.16	232.37	250.96
TFC/EFC grants	12.78	13.80	14.91	16.10	17.39	18.78	20.28	21.91	23.66	25.55	27.60	29.80	32.19	34.76	37.54
New Charge SWM	-	52.20	53.00	53.82	54.65	55.49	56.34	57.21	58.09	58.99	59.89	60.82	61.75	62.70	63.67
TOTAL MUNICIPAL RECEIPTS	1,204.74	1,348.28	1,639.86	1,841.19	2,047.31	2,345.93	2,595.72	2,647.13	3,023.41	3,283.85	3,569.54	4,194.42	4,741.03	5,194.32	6,174.71
PAYMENTS															
Salaries															
General Administration	160.94	170.60	180.83	191.68	203.18	215.37	228.30	241.99	256.51	271.90	288.22	305.51	323.84	343.27	363.87
Water Supply	22.89	24.26	25.71	27.26	28.89	30.63	32.46	34.41	36.48	38.66	40.98	43.44	46.05	48.81	51.74
Operation and Maintenance															
General Administration	195.51	207.24	219.67	232.85	246.82	261.63	277.33	293.97	311.61	330.30	350.12	371.13	393.40	417.00	442.02
Water Supply	375.16	397.67	421.53	446.82	473.63	502.05	532.17	564.10	597.95	633.82	671.85	712.16	754.89	800.19	848.20
Public Health (Sanitation)	19.71	21.29	22.99	24.83	26.82	28.96	31.28	33.78	36.48	39.40	42.55	45.96	49.63	53.60	57.89
Conservancy	8.10	8.58	9.10	9.65	10.22	10.84	11.49	12.18	12.91	13.68	14.50	15.37	16.30	17.27	18.31
Street Lighting	51.53	55.65	60.10	64.91	70.10	75.71	81.77	88.31	95.37	103.00	111.24	120.14	129.75	140.13	151.34
Miscellaneous Items	19.80	21.38	23.09	24.94	26.93	29.09	31.41	33.93	36.64	39.57	42.74	46.16	49.85	53.84	58.15
Loan & Interest Payments	394.32	394.32	394.32	322.07	322.07	322.07	307.57	304.98	304.98	304.98	304.98	296.43	296.43	296.43	296.43
TOTAL MUNICIPAL PAYMENTS	1,247.95	1,300.98	1,357.35	1,345.00	1,408.67	1,476.34	1,533.78	1,607.65	1,688.93	1,775.34	1,867.20	1,956.31	2,060.15	2,170.56	2,287.96

Recast of Annual Accounts

Analysing the financial strength and making long-term financial projections for ULBs is complicated by the following:

- Budgets are not prepared in a standard format. Variations are observed between ULBs and from year to year within the same ULB. Thus, the financial reports/budgets need to be standardised before analysis.
- The budgets are the only financial document/report prepared by ULBs. The budget is more a statement of receipts and payments than a statement of income and expenses.
- Separate capital and revenue accounts are not maintained.
- The different funds of a ULB are not clearly demarcated. Some receipts and payments of a municipal body do not represent or do not affect its financial health. Hence, these need to be ignored for the purposes for making long-term projections.

Owing to the variations in the preparation of budgets, we have recast them in a standard format as explained below:

Receipts/Income/Revenue

The objective of recasting the income side is to estimate the receipts that are under the control of the ULB and/or which are utilised for meeting the core expenditure of the ULB. The ULB receives funds from various sources such as:

Own tax and non-tax revenues

Items under these heads, among others, include property tax and water charges, which the ULB levies and appropriates. It has more or less complete freedom on exploiting these sources, subject only to certain restrictions by the state in the form of maximum tax rates, etc.

Grants and transfers from the state

Grants that are utilised towards meeting the core expenditure of the ULB are included under this head. Examples are TFC, EFC, SFC grants, city development grants, transfer of stamp duty, etc.

Tied/specific grants

These include items like funds under MP/MLA grant, IDSMT, SJSRY, Housing scheme, etc. These funds are received from external entities and are used for non-core activities like constructing shops, houses. In the absence of these grants, the ULB is unlikely to incur any expenditure on these activities. Hence, they are not included in the core receipts and payments. A qualification is that some of these tied grants (Low Cost Sanitation Scheme) are for core functions. In such cases, a case-by-case approach is employed.

Loans, deposits, advances, extraordinary items, accounting items

Deposits and advances are amounts that have to be repaid and hence cannot be considered as ULB receipts. *Notional receipts* include receipts from the SFC deducted towards dues owed to EB, TWAD and so on. The subcomponents of property tax like Library Cess, Health Cess etc. that are transferred to the state are shown under the head of *Extraordinary Items*. Similarly, *Loans* are not considered as income for the ULB and hence their receipt should be distinguished from other receipts.

Only items 1 and 2 are considered while making projections.

Payments/Expenditure

The objective of recasting the expenditure figures is to estimate the expenditure that is under the control of the ULB, or is incurred in meeting the cost of core functions of the ULB.

The ULB incurs expenditure on the following broad categories of expenditure

General municipal expenditure, salaries and capital expenditure

Administrative expenses (revenue collection, etc.) and cost in providing services (water supply, street lighting) are included under this head.

Expenditure on government schemes

Non-core expenditure items like IDSMT, SJSRY, Housing scheme, etc are included under this head.

Extraordinary expenditure

Items like repayment of loans, deposits, advances, transfer of cesses collected as sub-component of property tax and so on are included under this head. Repayment of debt is an exception in this category, as it has to be factored into long-term projections.

Only item 1, as given above, is considered while projecting a ULB's expenses.

Norms & Benchmarks for municipal services

Solid waste

Parameters	NIUA norms	Remarks
Per Capita Waste generated/day (grams)	250-450	<ul style="list-style-type: none"> ◆ ORG has stated a norm of 380 grams • KCL adopted a norm of 700 grams
Collection Performance	100%	<ul style="list-style-type: none"> • KCL adopted a norm of minimum 90%
Vehicle Capacity adequacy ratio	68%	
Staffing	2.8 *	

* Sanitary workers per 1000 population

Public works department

Parameters	NIUA	Remarks
Road Density (km/sq. km.)	17.50%	
Black Topped (BT)/Concrete Surface	92.93%	
Street Lighting	N.A.	Norm of 25-30 meters spacing between posts

Water supply and sewerage

Parameters	Zakaria Committee	CPHEEO	MoUAE	COPP	NIUA	TCPO	National Master Plan	Eight Five Year Plan	Remarks
Water Supply									
Water Supply daily per capita (LPCD)	270 LPCD (202.5 LPCD)	150-200 LPCD (125-200 LPCD)	150 LPCD	180-225 LPCD	170-210 LPCD	180 LPCD	70-250 LPCD	125 LPCD	ORG has suggested a norm of 180 LPCD
Population coverage	N.A.	N.A.	N.A.	N.A.	100%	N.A.	N.A.	N.A.	
Distribution network coverage	N.A.	N.A.	N.A.	N.A.	79%	N.A.	N.A.	N.A.	
Total storage required	N.A.	N.A.	N.A.	N.A.	40%	N.A.	N.A.	N.A.	
Storage capacity ratio	N.A.	N.A.	N.A.	N.A.	199	N.A.	N.A.	N.A.	KCL adopted a storage norm of 35% of supply
Total treatment	N.A.	N.A.	N.A.	N.A.	100%	N.A.	N.A.	N.A.	KCL adopted a norm of 100% of supply
Sewerage									
Coverage of sewerage system (With treatment facilities)	100%	N.A.	N.A.	N.A.	100%	N.A.	100%	N.A.	ORG has also suggested a min norm of 100%
% Water supply expected to reach the sewers	Domestic- 80% Industrial- 90%	80%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	WHO norm is 130LPCD water supply for effective functioning of the sewer system
Minimum Capacity of underground sewerage (LPCD)	N.A.	150 LPCD water supply level	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
Storm Water Drains	N.A.	N.A.	N.A.	N.A.	130% *	N.A.	N.A.	N.A.	KCL adopted a norm of 130% *
UGD network coverage (% area)					78%				

* Of road length where UGD is available

Expenditure (Rs/capita/annum)

Parameters	Zakaria Committee *	NIUA	Remarks
Core Civic Services (1990-91 prices) (per capita /annum)	560.55	Rs.351.55	
Water Supply (treatment storage and distribution)	193.70	N.A.	HUDCO** has suggested a norm of Rs. 150-200/Capita
Sewerage and Sewerage disposal and storm water drainage	225.98	N.A.	
Underground Drainage System (unit cost/capita)	N.A.	Rs. 2,500	
Construction of Roads and Paths	41.77	N.A.	
Street lighting and Electric distribution	54.12	N.A.	
Education	94.95	N.A.	
Medical & Health Services	37.98	N.A.	
Fire Services	7.59	N.A.	
Horticulture operations	7.22	N.A.	
General Municipal Administration	75.96	N.A.	

*Adjusted at 1994-95 prices by using consumer price Index for Urban Non-manual Workers **in its study of cost analysis of urban infrastructure projects

Primary education and health care

Agency	Physical standard
Primary Education and Health Care	
COPP	⇒ One primary school for 3500 population ⇒ Area: 3 acres Seats: 400-500 per school
Bureau of Public Enterprises	⇒ One primary School for 3000-4000 population ⇒ Area: 3 acres ⇒ Seats: 300-400 per school
TCPO	⇒ One nursery school for 1250-1500 population ⇒ Area: 0.25 acres ⇒ Seats: 75-90 per school
	⇒ One primary school for 4000 population ⇒ Area: 2-2.5 acres ⇒ Seats: 450-500 per school
Primary Education and Health Care	
Minimum Needs Programme & Report of the Working Group on district Planning (1984)	⇒ One PHC for a population of 30,000 in plains and 20,000 in tribal and hill areas ⇒ One sub-centre for population of 5,000 in plains and 3,000 in tribal and hilly areas ⇒ Distance: +5 Kms. ⇒ One Community Health Centre for 1 lakh pop.
COPP	⇒ One Health Centre for population of 20,000. ⇒ Area: 1-1.5 acres ⇒ 3 beds for every 1000 persons
TCPO	⇒ One health centre for population of 36,000. ⇒ Area: 1-1.5 acres ⇒ One Health clinic for population of 12,000. ⇒ Area: 1-1.5 acre

Source: NIUA (August, 1996), Kanpur Municipal Corporation A Study of its Finances

Best practices

Introduction

This section lists the Best Practices undertaken by various Urban Local Bodies or as proposed by various nodal agencies. The Best Practices have been classified into the following categories:

- Planning Processes
- Governance
- Financial Management
- Service Delivery
- Support Systems
- Legal/Tax/Tariff reforms

Planning Processes

An Urban Local Body should ideally prepare the following plans:

a) Development/Master Plan for each major urban service provided by the Corporation

These are long-term spatial plans (for a period of ten to twenty years) and include a projected land use plan for the city. These plans are based on detailed socio-economic surveys and population projections.

Case Studies

(i) Physical Development and Financial Planning - Baroda Municipal Corporation (BMC)²⁵

BMC has taken a number of steps to create a formal long-term planning machinery. In 1991, the corporation carried out an exhaustive exercise of listing all the ongoing and proposed work to know the pending development work and the resource gap. On the basis of this information, the corporation prepared a long-term development plan for the period 1991-2001.

This plan was then broken down into annual plans. The corporation worked out the resource requirements for undertaking changes for each service. This planning exercise also developed a long-term financial plan wherein it assessed the funds available from external (loan, subsidy etc.) as well as internal (savings/surplus) financial sources; it also contained a resources augmentation plan, which included increase in tax rates and other measures to bridge the resource gap.

- In April 1994, the corporation created a formal 'Planning and Estimates Cell', headed by the executive engineer, and co-supported by the chief accountant, under the direct control and supervision of the Municipal commissioner, which was responsible for:
- Preparation of long-term development plans for all the services and their revision every year
- Preparation of estimates of each development work pertaining to basic urban services
- Scrutiny of budget, financial outlay required etc
- Creation of database on all the urban services
- Review of all the works in progress
- Preparation and submission of loan proposals to outside agencies etc

²⁵ Best Practices Catalogue, CMAG/September, 1999

Governance

Good governance implies inclusion of all groups in urban society and accountability, integrity and transparency of local government actions, in defining and pursuing shared goals.

Case Studies

(i) Report Card on Urban Services²⁶

Report Card on Public Services is a strategic tool developed by a Bangalore based not-for-profit institution, Public Affairs Centre (PAC), with an aim to help citizens provide direct feedback to improve public service delivery and governance.

Feedback is collected from users of each service about key issues such as availability and quality of service, problems or deficiencies encountered, effectiveness of grievance redressed mechanisms, behaviour of the staff with whom they interact etc.

This has led to increased public awareness, stakeholder responsiveness and public accountability. The Report Card system has now been introduced in Ahmedabad, Bangalore, Chennai, Delhi, Kolkotta, Mumbai and Pune.

(ii) Participatory budgeting in Porto Alegre, Brazil²⁷

The history of the performance of public budgeting and accounting in Brazil shows severe problems related to waste of resources, political interference and corruption. For decades, due to the presence of high inflation rates municipal budget estimates proved unrealistic. The citizens were not in a position to exercise control. This trend changed in Porto Alegre due to the innovations carried out by the municipality.

The municipality created an innovative system to adopt and execute the municipal budget. The city was divided into 16 regions based on geographic, social and community organisation criteria. For each region, a popular council, consisting of representatives of community associations and other local groups, was set up. A citywide organisation of residents and the council of representatives with two representatives from each of the popular councils were formed.

The council of representatives sets the agenda for municipal spending after preparing a list of priorities for public works. This is done in close coordination with the popular council, which also compiles a list of demands for projects in their region. Then the popular council and the council of representatives meet with the municipal officials and they assign a weight age to each project request and make the final decision on public spending. Community representatives who actively monitor the spending of the funds supervise the progress of each project.

In the 'participatory budget' system, the technicians and the leaders are responsible for making decisions about public revenues and expenditures. Also, the population decides on investment priorities, actions and public works that should be implemented by the government. This is done through a process of debates and consultations. The participatory budget has proved that the democratic and transparent management is the best way to avoid corruption and mismanagement of public resources. Popular participation has favoured an efficient management of public expenditure resulting in important investments and action plans to the benefit of the population.

Since its implementation, projects approved by the Participatory Budget have represented investments of more than US\$ 700 million, which has been applied primarily in urban infrastructure and to the improvement of quality of life of the population.

²⁶ Good Urban Government Campaign-September, 2001

²⁷ Good Urban Governance Campaign-September, 2001

Financial Management

Most Urban Local Bodies in India do not have up-to-date accounts or records of assets owned by the ULB. Further, the budgeting exercise is based on historical rather than futuristic projections. The cash management and resource mobilisation processes also require drastic improvements. In this section, the accounting and budgeting-related best practices have been listed.

a) Accounting Reforms

The traditional accounting system followed by ULBs is based on single-entry cash-based accounting, which poses the following three problems:

- a. It does not facilitate a clear understanding of the actual position of debits and credits and hence matching of accounts becomes difficult.
- b. It does not support the maintenance of ledgers and income and expenditure statements. Hence it is difficult to analyse the financial performance of a period.
- c. The traditional accounting system also does not support the assessment of assets and liabilities at any point of time.

These flaws are overcome by the fund-based accounting system adopted by certain municipal bodies in India such as Jaipur and Vadodara. The fund-based accounting system allows the municipalities to maintain funds in accordance with their specific characteristics including sources, purposes and statutory requirements and supports double-entry accounting system. This system improves the bank ability and fund-raising capabilities of the municipality.

Case Studies

(i) Fund Based Accounting System following Double-entry accrual method of accounting-Vadodara Municipal Corporation (VMC)²⁸

VMC reformed its accounting system from the single entry method of accounting to a fund based accounting system following the double entry accrual method of accounting.

The fund based accounting system also yielded various operational benefits to VMC as it facilitated the division of accounting work into homogenous, manageable and identifiable units, which could be handed over to a specific person or group of persons.

A matrix structure of budget and accounting heads was also evolved such that for every account code there was at least one budget code or more. At the same time, there was no more than one accounting code for a single budget code/item. This avoided duplication of work.

This reform has facilitated a proper understanding of the financial position of the corporation.

b) Budgeting Reforms

The current budgeting system of ULBs possesses a number of drawbacks:

- Absence of scientific budgeting methods like performance budgeting and zero based budgeting
- Reliance on incremental method for budgeting,
- Lapse of unutilised budget allocation,
- Expenditure independent of resource realisation

²⁸ Municipal Accounting Reforms-Dr. Ravikant Joshi

Case Studies

(i) Budgetary cum financial reforms undertaken by Vadodara Municipal Corporation (VMC)²⁹

VMC undertook a number of budgetary cum financial reforms over a period from 1992-2002, which entailed the adoption of performance budgeting coupled with zero-based budgeting that brought about scientific approach to the budgeting exercise. Also, expenditure was made contingent to actual resource realisation. This implied that capital/development works was to be undertaken as per actual receipts.

- ◆ Centralised financial control was introduced which required all the payment bills to be routed through the accounts department to the audit department. Every payment was scrutinised from the point of view of budget availability, appropriateness of expenditure and financial availability. This measure ensured that actual expenditure remained within the limits of budgetary allocation. Advances were brought under centralized budgetary and financial control. Earlier, advances taken for purchase or payment of works were not booked against the respective budget items. As per the new system, each and every advance taken is debited against the respective budget item. Thus, budget availability reduces, whenever an advance is drawn. Advances are allowed only if sufficient budget allocation is available; if not, advances can be drawn only after the prior permission of the general board of the corporation.
- ◆ This reform ensured that all expenditure incurred by the corporation, whether by the regular budget mode or by the advances mode, had to be made within the budgetary allocation. The tendering procedure was improved with a switch to a system of item-rate tendering and consolidated annual works tendering. Earlier, each time any work had to be carried out, tenders were called for the same. Thus, the corporation was required to carry out the entire tender-sanctioning procedure every time.

Under the new system, tenders are called for a particular type of work, to be carried out throughout the city or in a particular area of the city during the year. Once a contract is finalised with a particular contractor, he is simply asked to carry out the works at various places in the city as and when the need arises and he is paid as per the itemised rates finalised in the original common tender. This not only reduced administrative work and time lag but also brought uniformity in prices and costs.

Service Delivery

The principal function of any ULB is provision of basic services to its citizens. Municipal services have a direct and immediate effect on the quality of the lives of the people in the city. Poor municipal service can also make it difficult to attract business or industry to an area and thus limit job opportunities for residents. Capability building, corporatization and partnerships in municipal services are some of the key reforms, recommended for improving municipal service delivery.

a) Capability building

It is possible for a municipality to improve and expand the delivery of services by improving its own ability to do so. By improving a number of skills, municipalities may be able to deliver services effectively and more efficiently. These skills are explained below:

1. Better **communication** between the municipality and citizens will help the municipality determine the needs of the community and decide whether these are being met.
2. Improved **financial planning** will help in finding the best possible way to use available funds.
3. Better **technical skills** will improve delivery of municipal services.

²⁹ Municipal Budgetary and Financial Control Reforms-Dr. Ravikant Joshi

Case Studies

(i) Professionalization of workforce – Ahmedabad Municipal Corporation (AMC)³⁰

AMC took an important step towards the professionalization of its workforce by recruiting certified Chartered Accountants and graduates with Masters' degree in Business Administration.

Corporatization of departments/utilities³¹

In some cases, a municipality can improve the delivery of a service through corporatization of some of its utilities, such as the water department can benefit from the creation of a municipal company that would provide the service. In this set up, the company belongs to the council and is accountable for its performance. The council usually appoints a board to oversee the work of the company management.

The company is able to function more independently than a municipal department whilst acting under the overall control and supervision of the council. As municipalities have to deliver different services, it is not always possible to focus on the best way to deliver certain specialised services. A company acting independently, would experiment with new techniques and technology and be able to provide better services at lower costs.

Support Systems

To enable municipal bodies to function effectively and efficiently, its support systems need to be improved and strengthened. The organisation structure should be streamlined for effective and efficient working. Computerisation, MIS and GIS that aid decision-making are some of the support systems that need to be developed within ULBs today.

Case Studies

(i) Computerisation of Property Tax records - Vishkapatnam Municipal Corporation (VMC)³²

In 2000, the VMC computerised property assessment records and transferred them to the server in the corporation office. The server is linked to the local bank branches where assesses not only pay their dues but also get full updated information of demand as well as arrears (along with the interest). The system also enables the corporation to get demand and collection ward wise.

This resulted in the increase of VMC's tax collection by over 50 per cent in one year and enabled clear monitoring of pending cases.

(ii) Computerisation of Records – Indore Municipal Corporation (IMC)³³

Since 1999, the IMC has computerized records of property tax, water charges, trade licenses, rental properties, and municipal accounts. IMC contracted a private computer agency to computerise its records on a build-operate-transfer basis. Using information from the newly computerized programme and special collection drives, IMC increased its own revenues by nearly 45% during 2000-2002.

(iii) Computerisation by Mirzapur municipality³⁴

The Mirzapur municipality developed a new information system with the Indo-Dutch integrated community development project. It computerized all existing property assessment and demand registers, and set them up on the local area network. By the third year, tax revenue had more than doubled. The municipality created property tax maps for the first time in the city and this tool increased the number of registered properties by 44%.

³⁰ Urban Finance-NIUA

³¹ www.etu.org.za

³² Urban Finance-NIUA/June, 2002

³³ *ibid*

³⁴ *ibid*

Legal/Tax/Tariff Reforms

Taxes and tariffs are the main source of revenue for ULBs, apart from government grants. However, most of these taxes and tariffs are set without understanding their full implications or without any justification. Therefore, there is a need to analyse the present system and rationalise procedures, tariff rates and structures for improving revenues.

Case Studies

(i) Unit Area Method base for Property Tax Collection-Patna Municipal Corporation³⁵

The Patna Municipal Corporation applied the Unit Area Method (UAM) to replace the Annual Rental Value (ARV) method. Under the ARV method, the concept of 'standard rent' froze the rateable value at historical value. As a result, gross variation in the tax burden was observed within the same premises for identical use and between old and new buildings on the same street. Collection costs were mostly higher than the revenue yields. Excessive use of discretionary powers by the tax officials for individual assessment was also observed under the ARV method.

The application of UAM as base for Property Tax computation brought about transparency in assessment and also increased tax compliance. Even with a reduction in tax rate from 43.75% to 9% of ARV, the tax demand went up from Rs. 4 crores to Rs. 17 crores. In appreciation of this method, MoUDPA issued detailed guidelines to all the state governments. Based on these guidelines, the governments of Madhya Pradesh and Tamilnadu have simplified the property tax following the area-based approach.

(ii) Self-Assessment System for Property Tax – Bangalore Mahanagar Palike³⁶

For the Bangalore Mahanagar Palike (BMP), after the abolition of octroi, the property tax became the single largest revenue source. An optional Self-Assessment System (SAS) was introduced in April 2000. Under this scheme, the citizens were allowed to determine their property tax on the basis of explicit guidelines. The purpose of this scheme was to provide user friendly, transparent tax assessment to citizens as well as to augment corporation's revenue.

Approximately 60% of the taxpayers took this option. Coupled with rate revision, it contributed to a quantum jump in tax collection from Rs.113 crores in 1999-2000 to Rs.157 crores in 2000-01.

(iii) Self-Assessment System for Property Tax – Municipal Corporation of Hyderabad (MCH)³⁷

MCH introduced SAS for property tax in 1999-2000. The corporation published advertisements in newspapers about the new system and involved the public in determining the tax by consulting resident welfare associations.

Through this measure, the city increased its property tax collection from Rs. 57 lakhs in 1998-99 to Rs. 100 lakhs in 2000-01.

³⁵ Good Urban Governance Campaign-September, 2001

³⁶ Urban Finance-NIUA/June, 2002

³⁷ *ibid*

Possible key actions for increasing collection levels

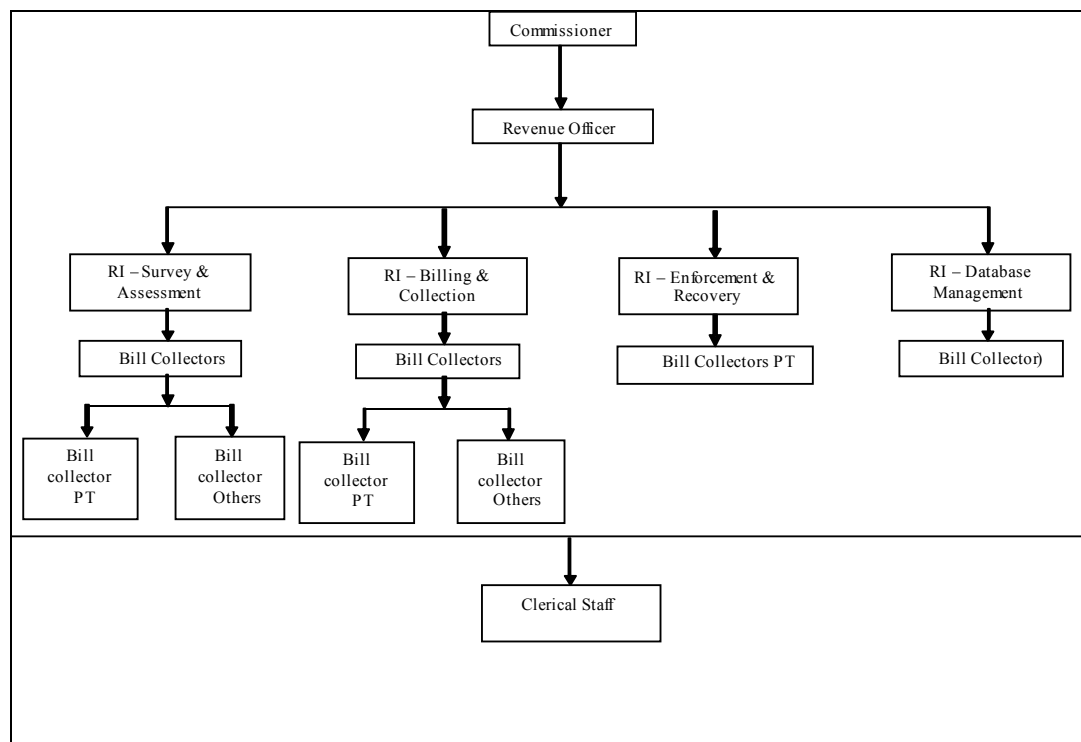
There are certain action points highlighted below for establishing a strong tax administration process in the municipality to cover the entire value chain of property tax right from coverage, assessment, billing and collection to enforcement and are detailed in the following sub-sections. The main focus of this section is on improving the property tax collection, as it is the primary source of any ULB's own revenue source. Even a marginal improvement in this area would improve the revenues significantly. The action points provides for reorganising the revenue department as the first activity, followed by recommendations on the measures to be followed for improving all areas of tax administration.

Reorganising the revenue department

There are several inefficiencies in the existing structure of the revenue department. The thrust area identified is that the structure should be reorganised based on the functions of the department, which are:

- Assessment
- Billing and collection
- Database management and MIS
- Dispute resolution
- Enforcement

Although the activities of the revenue department extends beyond property tax collection (to include water charges, other fees and levies), it would be appropriate to suggest a reorganised structure keeping in view the large contributions of property tax to the total revenue of the municipality. The revenue department could be restructured as given below.



It can be seen from the above figure that the hierarchy remains the same while the assigned functions for the Revenue Inspectors have been modified. In addition, the role of the Revenue Inspector has been enhanced. The overall number of people and posts remain the same, while the functions of the bill collectors are delineated from the existing roles.

The important functions are grouped into the following: a) Survey and assessment, b) Billing, collection and receivables, c) Enforcement and recovery and d) Database management. Each of the Revenue Inspectors would be responsible for a particular function who would report to the Revenue Officer. The Revenue Officer would oversee all the functions and would report to the Commissioner.

A separate division for enforcement is warranted in order to tackle the arrears. While the collections division would be involved in collecting property tax for the current year, the enforcement and recovery division would concentrate on arrears. For the purpose of role clarity, it can be assumed that non-payment for over two years (consecutive or otherwise) would be deemed as defaulters and the enforcement and recovery division would be responsible for collections from this category.

The above structure takes into account the tax calendar. Upon completion of the survey, each function would become robust as a result of increase in number of properties and since each revenue officer would handle multiple wards, the workload for each function would almost be equal throughout the year.

As the proposed structure is based on the functions of the department and there are no modifications to the hierarchy/ number of posts, government approvals for effecting the same are not envisaged. It may however be necessary to obtain a council resolution.

In addition to the above, the municipality could undertake the following measures.

Area	Recommendation	Activities
Employment status	Introduce incentive system of payment. Incentives are to be linked directly to collections as a percentage of collections. Refer note below.	Ascertain the amount of incentive based on discussions with the revenue department staff
Allowances	Increase reimbursement limits for conveyance	Prepare monthly budget for conveyance Decide limits in consultation with survey engineers and bill collectors
Job rotation	Shift to systematic rotation. Undertake job rotation on a yearly basis for bill collectors based on the proposed department structure	Initiate discussions with bill collectors Effect rotation at the start of every financial year

Note:

The ULB could look at the option of creating an incentive fund that would be a surplus pool created from a part of the own revenues. This could be shared amongst the revenue department personnel such that it provides an incentive to all the employees to contribute to increase in revenues. However, this needs to be backed by a proper control system that measures the revenue with proper monthly and yearly targets. Incentives could be paid upon reaching the targets. Even at a 0.25% contribution to the fund out of the own revenues (at 2005-06 levels), this would mean a substantial additional income to the employees of the revenue department.

The **Municipal Corporation of Hyderabad** has adopted this type of incentive system for the revenue department. The monthly targets for all the bill collectors could be based on a carry-forward system, where the previous months balance gets carried forward in the event of not achieving the targets.

Assessment system

The following measures could be looked at for improving the assessment system.

Area	Actions	Tasks
Work flow	Define the work flow process for the department	<ul style="list-style-type: none"> Define objectives, functions and role of this department Draw the work flow for the division Allocate tasks amongst the people Prepare job description for each cadre and circulate the same amongst the revenue department staff
Vacant land assessment	Trace vacant land owners by devising a communication strategy	<ul style="list-style-type: none"> Advertise through national newspapers giving specification of area, ward number and neighbouring property details. Indicate time limit for payment as 90 days, failing which owner would be treated as defaulter. Extend the same methodology used for enforcement
Widening the assessment base	Link property database to other departments like water supply	<ul style="list-style-type: none"> Provide inputs while database is created such that automatic triggers are created to identify new properties
	Initiate periodic survey (on a half-yearly or yearly basis) to check increase in number of properties	<ul style="list-style-type: none"> Assign the role to one Bill collector for survey and updation to database
	Link additions to number of properties to town planning	<ul style="list-style-type: none"> Ensure town planning department in the municipality collects a building plan from the property owner and provides information to the revenue department Until such time the computerised database is complete, a format for providing the details can be given to the town planning department To motivate the town-planning department to provide all information on all newly added properties, work out an incentive structure based on the number of additions every month. This can be done consultatively with the town planning department official.
	Tie up with utilities for database sharing on a regular basis	<ul style="list-style-type: none"> Prepare a format of information requirement / use utilities formats if found appropriate Initiate dialogue with TNEB, BSNL, Sub-registrar, Slum Clearance Board and TWAD for all properties Additionally initiate dialogue with Registrar of Companies (ROC) for industrial properties In case these utilities are reluctant to share information, arrange to procure data on a 'subscription' basis for a monthly / yearly fee

Billing, collection and receivables management

The tax collection activity needs to be carried out as a commercial function. Although other tools like database and MIS are lacking in the municipality, the lack of a commercial approach is not highlighted. With the proposed revenue department structure, the Revenue Inspector in charge of billing, collection and receivables management would now be able to closely follow up collections for every tax demand. It is expected that with this background and by drawing valuable inputs from entities that have successfully implemented collection mechanisms, a commercial orientation can be initiated in the municipality. The action plan for the billing, collection and receivables function could be on line as mentioned in the following table.

Area	Action	Tasks
Work flow	Define the work flow process for the department	<ul style="list-style-type: none"> • Define objectives, functions and role of this department • Draw the work flow for the division • Allocate tasks amongst the people • Prepare job description for each cadre and circulate the same amongst the revenue department staff
Despatch of demand notices	Outsource despatch activity	<ul style="list-style-type: none"> • Employ a courier agency for despatching notices to the properties • Direct the courier agency to note the change of address (where applicable) and inform the same to the revenue department
Collection efficiency	Define specific targets for this division including the Revenue Officer for increasing collection efficiency	<ul style="list-style-type: none"> • Discuss and debate allocation of targets taking the bill collectors, revenue inspector and revenue officers into confidence. • Communicate the agreed mechanism to all the department staff (considering the opportunities for job rotation)
Collection	Target high potential tax payers and ensure regular follow-up Identify additions at the time of registration / transfer itself	<ul style="list-style-type: none"> • Prepare list of high potential clients like industries and major commercial establishments. • Attach responsibility to the Revenue officer to personally involve in collection • Create a separate property tax counter³⁸ at the sub-registrar's office to ensure that all properties are verified for tax compliance at the time of registration/transfer. • Hire one or two people on a contract basis for this purpose.
Payment mechanism	Simplify payment process by ensuring that payment at any of the collection counters is deemed as the final payment (if not practised now)	<ul style="list-style-type: none"> • Intimate the collecting bank regarding change in process • Put up a communication notice in banks informing citizens of the change • Put up a communication notice in the premises of the municipality • Reiterate the need for regular updation of information to the collecting banks
	Extend reach to citizens	<ul style="list-style-type: none"> • Initiate dialogue with postal department to facilitate in collections. • Share the existing processes and formats for banks with the postal department • Put up notices in the postal department, banks and municipality premises regarding additional collection centres

³⁸ This method has been adopted by Indore Municipal Corporation and has yielded favourable results

Database management

As computerisation of property database is underway, the MIS generated using this database would be a good starting point in effecting tax administration measures. Leveraging on this, the following action points are recommended for utilising the database in an efficient manner.

Area	Action	Tasks
Work flow	Define the work flow process for the department	<ul style="list-style-type: none"> • Define objectives, functions and role of this department • Draw the work flow for the division • Allocate tasks amongst the people • Prepare job description for each cadre and circulate the same amongst the revenue department staff
Scoping	Define the contours of database management system	<ul style="list-style-type: none"> • Include all the functions of the revenue department and certain key departments for establishing linkages (like engineering division, accounts, town planning department) • Initiate dialogue with CMA to assess the modules of the computerised database and MIS that is being developed • Identify gaps and agree on standardisation, inclusions / deletions
Interim measures for creating database	Initiate a MIS as an intermediary step until such time the computerised database is complete	<ul style="list-style-type: none"> • Classify and categorise properties ward wise and potential wise • Prepare formats for listing the top potential payers / largest defaulters that would act as a MIS tool (See note below)

Note: A sample format that could be used to maintain list of top 50 or 100 defaulters is given below.

Ward No	Type of property	PIN ³⁹ /Name of the owner/property	Demand per year (Rs. Lakhs)	Arrears status

Enforcement and recovery

The enforcement and recovery department as per the proposed structure would be responsible for implementing the following action plan relating to their department

Area	Action plan	Tasks
Work flow	Define the work flow process for the department	<ul style="list-style-type: none"> • Define objectives, functions and role of this department • Draw the work flow for the division • Allocate tasks amongst the people • Prepare job description for each cadre and circulate the same amongst the revenue department staff
Delay in payment and arrears	Initiate measures to follow the methodology for enforcement as prescribed at the time of SAS implementation	<ul style="list-style-type: none"> • Initiate dialogue with the software vendor to include provision for creating automatic triggers in the form of notices of default and warrants for delayed payment • Create a communication strategy for dissemination of information on the existing enforcement mechanism, its benefits and its implications <ul style="list-style-type: none"> ▪ Advertise in newspapers, local cable network, journals ▪ Put up notices in collection banks, sub registrar office,

³⁹ Property Identification Number

		major utility offices, ROC and municipality
Arrears recovery	Introduce categorisation, based on value of property tax	<ul style="list-style-type: none"> • Prepare list of defaulters • Divide database of properties (when complete) into categories A – Very high value B- High value customers C – Medium value customers D- Low value customers • Allocate recovery responsibility based on the value of property tax. Recovery from very high value defaulters may require the Commissioner's involvement

Others

There are some additional action points not specifically falling into any of the categories of tax administration specifically, but could aid in improving the collection levels.

Area	Action plan
Grievance redressal	Establish a separate grievance redressal cell outside the scope of revenue department such that the cell functions independently without the influence of any divisions
Internalise communication as an activity	Communication within the revenue department personnel needs to get internalised as if it is a regular activity of the department. This would enable information dissemination and clarification to the grievance cell to aid redressal of complaints
Capacity building	<ul style="list-style-type: none"> • Impart training to the revenue department regularly such that the objective is well understood and the concept of commercial orientation gets ingrained as a system within the department • Organise workshops every time a new system of tax is introduced or the state government carries out major changes to the processes. • Conduct open house sessions to discuss best practices in tax revenue
Communication strategy	<ul style="list-style-type: none"> • Outsource the activity of developing a communication strategy to an NGO or similar organisations. • Define the objective of communication strategy to include dissemination of information on property tax related matters to the citizens • The scope should cover necessary tools for communication: <ul style="list-style-type: none"> ▪ Within the municipality ▪ Between the government and DCMC ▪ Between other departments / utilities ▪ With the citizens • Define the areas where there is a need to communicate to the citizens - like assessment, change in system, new procedures, enforcement measures and recovery methodology

Comparison of CCP projects and BP projects

Sector	Description	Cost (Rs. Lakhs)	
		CCP	BP
Water supply			
	Pumping machinery and electrical installation	5.0	
	Alternative source		1500.0
	Storage	10.0	
	<i>OHT (2, 3 and 5 ML capacity)</i>	<i>10.0</i>	
	Distribution network	105.0	120.0
	<i>Replacement of existing lines</i>		<i>60.0</i>
	<i>Installation of new lines</i>	<i>105.0</i>	<i>60.0</i>
	Treatment facilities	0.8	35.0
Total		149.5	1655.0
Sewerage and Sanitation			
	Sewage treatment plant	65.0	300.0
	Public convenience	100.0	90.0
	Sanitary complex	80.0	40.0
Total		341.5	430.0
Road & Traffic management			
	BT roads	643.0	255.0
	<i>Formation</i>	<i>107.0</i>	
	<i>Restoration</i>	<i>425.0</i>	<i>255.0</i>
	<i>Widening</i>	<i>111.0</i>	
	WBM roads		110.0
	<i>Upgradation to BT</i>		<i>110.0</i>
	Ring road	1200.0	
	CC pavement	3.0	
	Roads in unauthorised layouts		200.0
	Traffic management systems	1.8	20.0
Total		670.9	585.0
Storm Water Drains			
	Kutchra drains	1610.0	
	<i>Construction</i>	<i>1610.0</i>	
	Pucca	4.0	535.0
	<i>Construction</i>	<i>4.0</i>	<i>535.0</i>
	Treatment plant	65.0	
Total		287.0	535.0
Street lighting			
	Installation of new lights	17.1	8.0
	<i>Tube lights</i>	<i>7.7</i>	<i>8.0</i>
	<i>Sodium Vapour</i>	<i>9.4</i>	
	<i>High mast</i>		
	<i>Mini Mast</i>		
	Timer switches	8.5	
	Energy savers		16.0
Total		35.5	24.0
Solid Waste Management			
	Secondary collection		100.0
	<i>Mini trucks/lorries</i>		<i>28.0</i>

	<i>Trucks</i>		24.0
	<i>Tippers</i>		16.0
	<i>Tractors</i>		32.0
	Secondary transportation		50.0
	<i>Dumper Placer</i>		25.0
	<i>FEL/JCB</i>		25.0
Total		72.4	150.0
Others			
	Shopping complex - New construction		20.0
	Market - Improvement & new construction		200.0
	Parks and playfields - Improvement		30.0
	Hospitals – Improvement		30.0
	Office building construction		30.0
	Rain water harvesting		100.0
	Studies		5.0
Total		126.0	415.0
Grand total (In Rs. Crores)		15.52	37.94

Source: CCP details – CCP for Tiruchengode municipality prepared by Matt Macdonald consultants. Extract from chapter 5,6 and 7. The totals as per section 13.1