

# Chapter 1

*Preface*

*ITC Situation in Tanzania*

*Administrative structure of Dar es*

*Salaam*

## **PREFACE**

The experimental work of this master thesis was carried out in UCC, University Computing Centre Ltd, a limited liability company; wholly owned by the University of Dar es Salaam, Tanzania. UCC was originally established to offer lectures in all computer related courses, to conduct researches in informatics and to provide computing services and consultancy in ICT to both the university and the rest of the country. UCC is acting as a competency centre, promoter and multiplier of Tanzania's ICT development and is committed in enforcing the national ICT policy. According to the enhanced emphasis that the Tanzanian Government is putting in the utilisation of e-Governance UCC, it strives to act as reference consultant and solution provider for the public agency.

The objective of my work is to review the current state of ICT resources at City Council and the three municipalities of Kinondoni, Temeke and Ilala, assess the information needs of the local governments and map the way forward with regard to ICT development and deployment.

After reviewing recent government developments for establishment of an ICT infrastructure and information systems relating to Local Government Authorities, I prepared a draft framework for implementing e-Government for local authorities in Tanzania and conducted a case study in the application of the proposed framework for the City of Dar es Salaam.

During my experimental work, I had to face the following challenges:

### **1. Lack of the official approval of the e-Government project for the City of Dar es Salaam from the decision makers.**

The approval for e-Government projects up to date has been done only in the respective local authority, municipalities or city council.

Since the services offered to the citizen from the different municipalities are practically the same, there is also no reason of independent development of different solutions. This fragmentation of the e-Government project is intrinsically inefficient, just regarding repetition of efforts, ignorance of already existing solutions, duplication of licensing costs, difficulty in supporting the many island solutions, higher personal costs and practically no possibility of effective communication and data exchange between different public agencies.

UCC strives the promotion of a coordinated e-Government project for all local authorities in the city of Dar es Salaam, but has not the decisional power to approve it. One of the aim of this master thesis is to be inserted in a proposal for potential donors in order to animate such a coordinated e-Government effort.

The framework suggests the steps to follow in implementing e-Government and is still valid. Since the decision makers had not approved the e-Government project, in my case study I had to stop following it relatively soon, at the step “setting up the e-Government project, official announcement, appointment of the e-Government team” of the first phase. I anticipated the work in the following phases, but the situation was not at best: neither the members of the e-Government team had been freed up from his day-to-day responsibility nor any financial resources had been allocated for this project. Without this clear commitment from the decision makers, my work has been limited in the collection of data and recommendation of a cost effective strategy for he implementation of e-Government.

## **2. Time constraints**

Typical e-Government projects need years to be performed and involve a team of dedicated employees. The limited time at my disposition compelled me to concentrate to some main aspects

### **3. Changes due to the Local Government Reform Program**

During the case study, all local administrations had to undergo reorganisations in the frame of the Local Government Reform Program (LGRP)<sup>1</sup>. In particular, the following two changes had affected the e-Government project:

1. Kinondoni and Ilala municipalities: the ICT division has been recognised as an independent unity
2. City Council: The existing independent ICT division has been incorporated in the “Planning, Statistic and Follow up” unit.

This is not only a formal difference of the management line followed, it is rather more a basic decision on which will depend approved budget and allocated human resources. The disappearance of the ICT independent unit in the City Council is in countertendency from the strong commitment of the central government towards the facilitation of the usage of ICT and shows how the decision makers still are not sensitised on the importance of this powerful development facilitator.

### **4. Difficulty in the collection of information**

Collecting information has proved to be very time-consuming. On one hand, this is related to the previous point: since no personal had been dedicated for the project, so the contributors to the research had to do so in their free time. On the other hand, not all the time I noticed the cooperative attitude which would have been needed from representatives of the public administration.

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<sup>1</sup> PORALG, *Local Government Reform Program*, 1998

## 1.1. ITC SITUATION IN TANZANIA

Tanzania is the largest of the East African nations, with an estimated population of 33 million of people, of which 50% is living below the poverty line<sup>23</sup>. The East African country has developed a stable and peaceful environment with a considerable record of economic reforms and clear commitment towards modernisation in the public sector. Tanzania was among the first African countries that was committed to telecommunication sector reform. The Central Government has recognised the important role of ITC in particular for the development of the country :

“Since ICT is a powerful development facilitator, the Government will embrace ICT as an integral part of its development strategy and empower all citizens to use it to fight poverty, ignorance and disease so as to improve the quality of their lives.”<sup>4</sup>

This is the latest development and marks a noticeable success in the process of paradigmatic changes which from the early government attitude of autochthony a self-reliance (Prohibition Order on Electronic Computers and Television Sets, 1974) achieved through various adjustments since the early nineties in policy, regulatory and commercial facets, both macroeconomic and within ICT’s converging sectors.

Despite the rapid improvements of Tanzania’s economic environment there is still a very evident inequality of distribution. ICT is still concentrated in Dar es Salaam with little deployment or access in other urban centres or in rural Tanzania. In general, there is a shortage of well-qualified professionals of ICT in Tanzania.

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<sup>2</sup> [www.tanzania.go.tz/humanf.html](http://www.tanzania.go.tz/humanf.html)

<sup>3</sup> [www.cia.gov/cia/publications/factbook/geos/tz.html](http://www.cia.gov/cia/publications/factbook/geos/tz.html)

<sup>4</sup> MCT, *National Information and Communications Technologies Policy*, March 2003, page15

Tanzania nowadays is highly committed in the restructuring of its public sector with the introduction of e-Government. This term indicates the utilisation of ICT technologies to improve the public administration and allow electronic interaction with the citizens

## 1.2. ADMINISTRATIVE STRUCTURE OF DAR ES SALAAM

Dar es Salaam has a unique status, being the major City of Tanzania, its major port and the centre of Government administration, industry, commerce and banking activities. Despite of the Government's decision to move its capital to Dodoma in 1973, the vast majority of federal government employees have remained in Dar es Salaam and most major political figures maintain residences here, making Dar es Salaam de facto the current capital



Figure 1: Dar es Salaam region and its three districts: Kinondoni, Ilala and Temeke

Courtesy Dar es Salaam City Council

of Tanzania. In January 2005 the population of the city has been estimated to be 2.700.000.

The city of Dar es Salaam is the capital of the region of Dar es Salaam, from which it is administratively distinguished. The city is governed by a City Council administration, headed by the Mayor of Dar es Salaam.

The region is one of the 27 regions of the United Republic of Tanzania and is governed by the Regional Administration headed by the Dar es Salaam Regional Commissioner. This region is divided into three districts, namely the Municipalities Kinondoni, Ilala and Temeke governed by the respective Municipal Councils

Each district is headed by a District Commissioner. The districts are divided into divisions, which are in turn divided into wards. Wards are divided into villages in the case of rural areas and streets in the case of urban areas. At times the villages are divided into hamlets which are the smallest units.

The Dar-es-Salaam City Council and the three Municipalities operate in the same jurisdictional areas having different competencies.

The responsibilities of the municipalities include:

- Maintaining peace and security of residents as well as that of public and private properties;
- Providing social and economic services to their residents;
- Taking measures to improve and accelerate performance of key sectors of the local economy notably, commerce and industry;
- Improving and maintaining quality services in health, education, culture and entertainment for residents; and
- Creating conditions conducive to poverty reduction and assisting the youth, elderly, disabled and other disadvantaged groups to be productive in the economy.

The municipalities provide the following services:

council affairs, health, solid waste management, infrastructure including roads, natural resources, trade and informal sector development, urban development, legal issues, education, culture, agriculture and livestock, water, cooperative development, community development information and communication technology development.

The City Council is responsible for issues spanning over the whole city:

fire brigades, construction, waste management, finance, administration, health services, urban planning, environment, transport, planning and statistic.<sup>5</sup>

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<sup>5</sup> Information courtesy of Dar es Salaam City Council



## Chapter 2

### *Assessment of the ICT infrastructure*

## 2. ASSESSMENT OF THE ICT INFRASTRUCTURE

### 2.1 KINONDONI MUNICIPAL COUNCIL

#### 2.1.1. Network Plan of Kinondoni Municipality

Kinondoni utilizes UTP cabling, 64 MB Link, TCP/IP protocol. The external provider is COSTECH, which provide one channel of VSAT at 11 Mbps

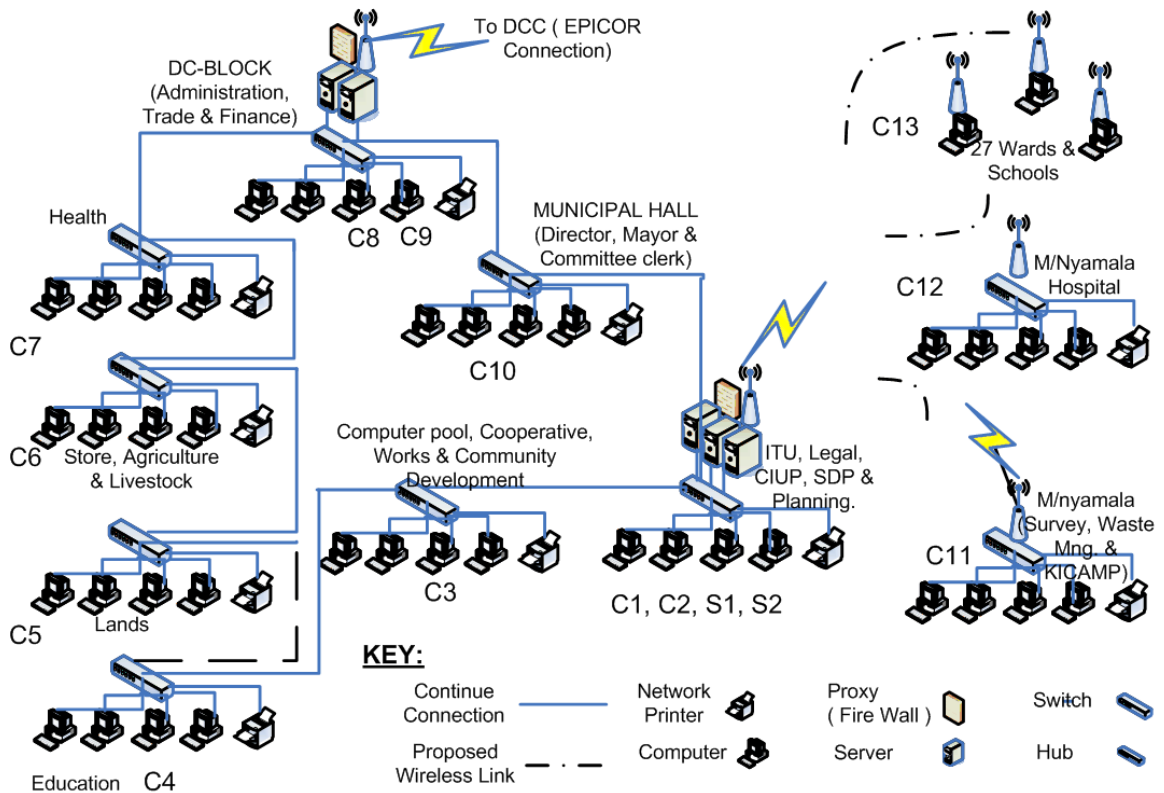


Figure 2: Network plan for the Kinondoni Municipality

#### 2.1.2. IT Structure Analysis of Kinondoni Municipality

As part of the activity “Surveying the existing ICT infrastructure, IT plans and in-house standards” I proceeded in the IT structure analysis for the different

local authorities. The aim is to prepare a list of the existing and planned IT systems in tabular form. a unique name for the IT system, noting down particularly the following aspects.

- description (type and function),
- platform (e.g. hardware architecture/operating system),
- number of IT systems included in each group,
- installations site of the IT-system,
- status of the IT system (operational, in test stage, in planning stage)
- user/administrator of the IT system.

It is then important to reduce the complexity by identifying groups of similar assets and assign to each group a name, (In this case study the names are S1, S2, S3, C1, C2, C3... C13, N1, N2, N3, P1)

For the description of the used methodology the author refers to the IT Baseline Protection Manual<sup>6</sup>

**Table 1: IT structure analysis of Kinondoni Municipality**

	Description	Platform	No.	Hardware characteristics	Status	User(s) / Admin.
<b>S1</b>	Mail server	Windows NT	1	Pentium 3 20 GB HDD 262 MB RAM	Operational	U: employees A: IT Section
<b>S2</b>	Database and application server	Windows 2000 Professional	1	Pentium 5 40 GB HDD 524 MB RAM	Operational	U: database administrator A: IT Section
<b>S3</b>	File server	Windows 2000 Server	1	Pentium 3 8GB HDD 128 MB	To re-deploy	U: employees A: IT Section
<b>C1</b>	Clients for ITU, Legal, CIUP, SDP & Planning.	Windows 2000 Professional	6	Pentium 4	Operational	U: employees A: IT Section

<sup>6</sup> BSI, *IT Baseline Protection Manual*, 2004, page 34

<b>C2</b>	Clients for ITU, Legal, CIUP, SDP & Planning	Windows 98	3	Pentium 3	Operational	U: employees A: IT Section
<b>C3</b>	Computer pool, Clients for Cooperative, Works & Community Development	Windows XP Windows 98 or Windows 2000 Professional	13	1xPentium 1 3XPentium 2 6xPentium 3 3xPentium 4	Opera	U: employees A: IT Section
<b>C4</b>	Clients for education	Windows XP or Millennium	3	1xPentium 1 2xPentium 4	Opera	U: employees A: IT Section
<b>C5</b>	Clients for Lands	Windows XP or Windows 2000 Professional	9	3xPentium 3 6xPentium 4	Opera	U: employees A: IT Section
<b>C6</b>	Client for Store, Agriculture & Livestock	Windows 2000 Professional	5	2xPentium 2 3xPentium 3 5xPentium 4	Opera	U: employees A: IT Section
<b>C7</b>	Clients for Health	Windows 98 or Windows XP	6	2xPentium 3 4xPentium4	Opera	U: employees A: IT Section
<b>C8</b>	Clients for the DC-BLOCK (Administration, Trade & Finance)	Windows 98	3	3xPentium1	Opera	U: employees A: IT Section
<b>C9</b>	Clients for Epicor Application	Windows NT 4.0	5	Pentium 3 20GB HDD 128 MB RAM	Opera	U: finance dept A: IT Section
<b>C10</b>	Clients for the MUNICIPAL HALL (Director, Mayor & Committee clerk)	Windows 2000 Professional	7	1xPentium 2 3xPentium 3 3xPentium 4	Opera	U: employees A: IT Section
<b>C11</b>	Clients for Mwananyamala (Survey, Waste Mng. & KICAMP)	Windows 98	3	1xPentium 3 2xPentium 4	Opera	U: employees A: IT Section
<b>C12</b>	Clients for the hospitals	Windows 98	3	1xPentium 2 2xPentium 4	Opera	U: employees A: IT Section
<b>C13</b>	Clients for the wards		13	1xPentium 2 12xPentium4	Operational	U: employees A: IT Section
<b>N1</b>	Switch	Switch	5		Operational	A: IT Section
<b>N2</b>	Hub	Hub	3		Operational	A: IT Section
<b>N3</b>	Firewall	Firewall	1		Operational	A: IT Section
<b>P1</b>	Printers		35/ 40		Operational	A: IT Section



Application no.	IT application information	Software	Criticality	No. of users	S1	S2	S3	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
A11	Loan Manager DB Ext. devel.		H	3		X	X			X									
A12	LIS CAD	Standard SW	L					X	X	X			X	X	X				
A13	ArcView GIS	Standard SW	L					X	X	X							X	X	X
A14	Auto CAD	Standard SW	L					X	X				X	X	X				
A15	Office Application	Standard SW	L					X	X	X	X	X	X	X	X	X	X	X	X
A16	Municipal Prospect	Standard SW	L					X	X	X					X		X	X	X

Table 2 contains important information, as the name of the available application for the Kinondoni Municipality, their criticality, if it is a standard software, external or internal development, the number of users and in which of the groups identified above

The available data flow for each application and the database technology is as follows:

- A1 Sent to the database (available centrally at the City Council) or printed out
- A2, A3 Sent to the Databases, using Access and SQL.
- A4, A5, A6, A7, A9 sent to the database, using My SQL

In Kinondoni Municipality the following software have been developed for the e-Government project and is available:

- Epicor (software dealing with for financial aspects)
- LGMD (Local Government Monitoring Database, planning tool and database)
- Plan Rep (software for budgeting of rural areas)
- MTUHA, HMIS (Health Management Information System)
- HRIS (Human Resources Information System)
- Asset Register System
- Business License Information System
- Education Information System
- Property Tax
- Loan Manager DB

#### **2.1.4 ICT Operations in Kinondoni Municipality**

Organisational structure: ICT was not formally recognized as one independent unit, but de facto it was one. After the Local Government reform it has been officially established and installed as an independent unit reporting directly to the Municipal Director.

Staff: three permanent employees, three temporary employees for supporting issues, five persons to convert analog documents in the digital form, students.

Manager: Joash E. Nyitambe.

### **2.1.5 Remarks on the Existing IT infrastructure in Kinondoni Municipality**

Kinondoni started the e-Government project in 2001<sup>7</sup>. Since then it could achieve impressive results, having developed solutions in-house or by external commissioning which cover a wide spectrum of online-capable services, listed above.

Kinondoni arose to be a model for e-Government project all around the country. Different workshops had been organized to reproduce the success in other districts all around the country, the most recent ones organized by the Commission of Science and Technology (COSTECH), the International Institute for Communications and Development (IICD) and the University of Dar es Salaam Computing Centre (UCC) in May and August 2005.

The success experience of Kinondoni is due to the support of decision makers, particularly the Municipal Director and in the ability of obtaining adequate budgeting for ongoing maintenance and new ICT projects. This allowed to hire and retain qualified staff, the acquisition of hardware and software, the cooperation in international development projects and the efficient computer-literacy training policy.

The past and ongoing e-Government projects of Kinondoni Municipality have been taken as basis to develop a framework for the implementation of e-Government for Tanzania.



## 2.2 ILALA MUNICIPAL COUNCIL

### 2.2.1 Network Plan of Ilala Municipality

Ilala utilizes twisted pairs for the LAN (100 Mbps), TCP/IP protocol. The external provider is COSTECH, which provide one channel of VSAT at 11 Mbps

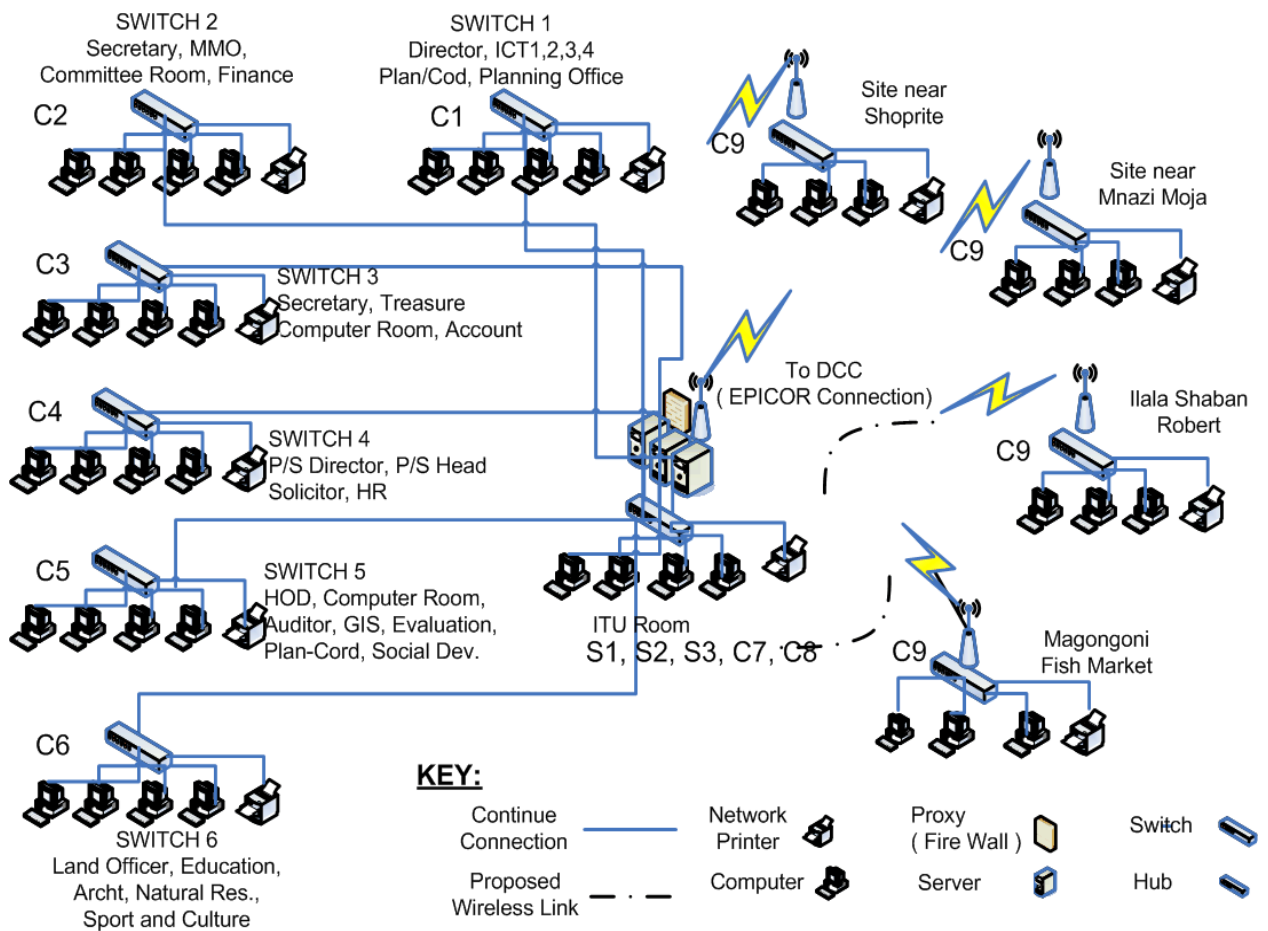


Figure 3: Network plan of Ilala Municipality

## 2.2.2 IT Structure Analysis of Ilala Municipality

**Table 3: IT structure analysis of Ilala Municipality**

#	Description	Platform	No..	Status	User(s) / Admin.
<b>S1</b>	Mail server	Linux Fedora	1	Operational	Users: all employees Admin: DCC (Appl. & HW)
<b>S2</b>	Database server	Linux Fedora	1	Operational	Users: one person per each dept. Admin: DCC (Appl. & HW)
<b>S3</b>	File server	Windows 2000 Server	1	Operational	Users: employees Admin: DCC (Appl. & HW)
<b>C1</b>	Clients for MMO, Committee Room, Finance	Windows XP or Windows 2000	7	Operational	Users: employees Admin: DCC (Appl. & HW)
<b>C2</b>	Clients for Director, ICT Plan/Cod, Planning Office	Windows XP or Windows 2000	9	Operational	Users: employees Admin: DCC (Appl. & HW)
<b>C3</b>	Clients for Secretary, Treasure Computer Room, Account	Windows 2000	6	Operational	Users: employees Admin: DCC (Appl. & HW)
<b>C4</b>	Clients for P/S Director, P/S Head Solicitor, HR	Windows XP	6	Operational	Users: employees Admin: DCC (Appl. & HW)
<b>C5</b>	Clients for Land Officer, Education, Archt, Natural Res., Sport and Culture	Windows 98 or Windows Millennium	17	Operational	Users: employees Admin: DCC (Appl. & HW)
<b>C6</b>	Clients for HOD, Auditor, GIS, Evaluation, PlanCord, Social Dev.	Windows XP or Windows 2000	10	Operational	Users: employees Admin: DCC (Appl. & HW)
<b>C7</b>	Linux Workstations	Linux Fedora	1	Operational	Users: employees Admin: DCC (Appl. & HW)
<b>C8</b>	Clients for Epicor Application	Windows NT 4.0	1 PC, 8 terminals	Operational	Users: employees Admin: DCC (Appl. & HW)
<b>C9</b>	Clients for the remote sites	Windows XP		Operational	Users: employees Admin: DCC (Appl. & HW)
<b>C10</b>	Clients not connected to internet	Windows XP or Windows 2000	13	Operational	Users: employees Admin: DCC (Appl. & HW)
<b>N1</b>	Switch	Switch	10	Operational	Users: employees Admin: DCC (Appl. & HW)
<b>P1</b>	Printers		35/40	Operational	Users: employees Admin: DCC (Appl. & HW)

### 2.2.3 IT Applications of Ilala Municipality

Table 4 IT applications for Ilala Municipality

Application no.	IT application information	Software	Criticality	Confidentiality	Availability	data integrity	No. of users	S1	S2	S3	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
A1	Epicor	Ext. devel.	H	M	H	H	8													X
A2	Plan Rep	Ext. devel.	M				6/8						X*							
A3	Proper Tax	Ext. devel.	M				6/8						X*							
A3	Skype	Standard SW	L	L	L	L	na				X	X	X	X	X	X		X		
A4	Messenger	Standard SW	L	L	L	L	na				X	X	X	X	X	X		X		
A5	VNC	Standard SW	L	L	L	L	8						X				X			
A6	Net Sniffer		H				2						X*				X			
A7	MS Office	Standard SW	L	M	L	L	na				X	X	X	X	X	X	X	X	X	X
DB1	LGMD	Ext. devel.					Not in use				X	X			X					



A single entry point for each department, uniformity of usage and easy information exchanges between departments are the positive aspects.

This solution has the disadvantage of having very high requirements on the database: Being the only for all the public services in Ilala, on one database will depend the functioning of the whole municipal council. High availability is essential, as well as a clear strategy for a disaster recovery plan.

During the time of this research the database was still being populated of data. Its performance at that time was good. The question is how will be the response times when the database will be fully functional and if the performance will still be acceptable.

## 2.3 TEMEKE MUNICIPAL COUNCIL

### 2.3.1 Network Plan of Temeke Municipality

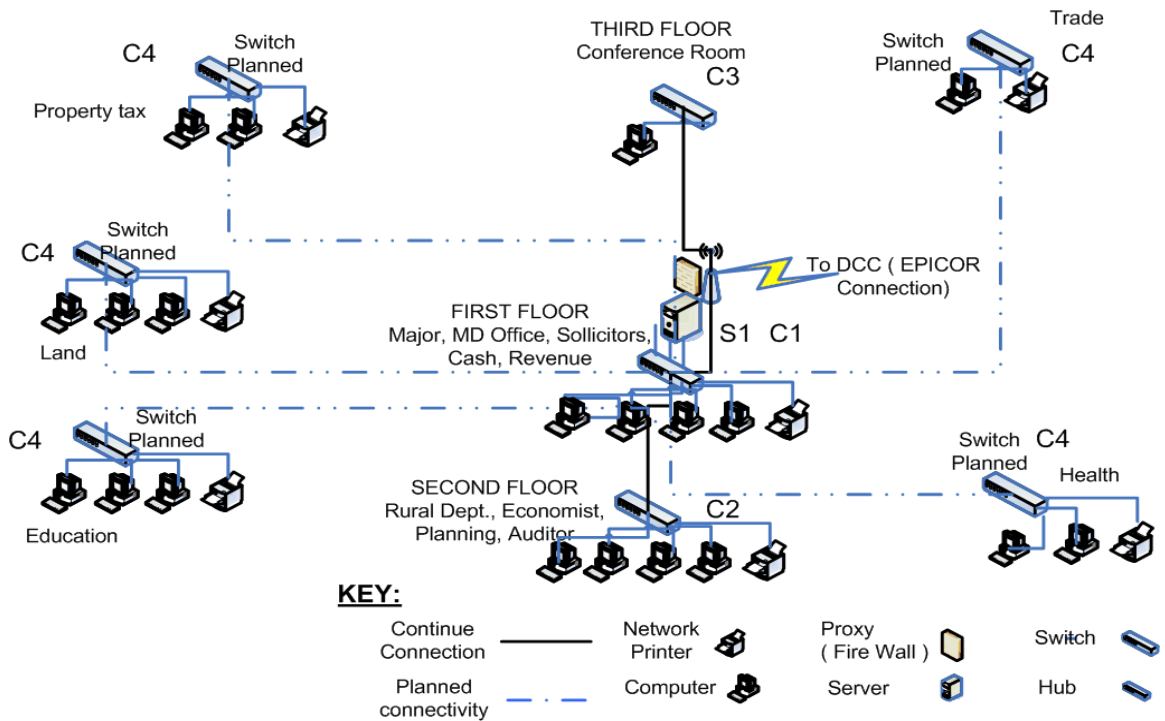


Figure 4: Network plan Temeke Municipality

Temeke utilizes twisted pairs for the LAN (100 Mbps), TCP/IP protocol. The external provider is COSTECH.

### **2.3.2 IT Structure Analysis of Temeke Municipality**

**Table 5: IT structure analysis of Temeke Municipality**

<b>#</b>	<b>Description</b>	<b>Platform</b>	<b>No.</b>	<b>Status</b>	<b>User(s) / Admin.</b>
<b>S1</b>	Database Server (DB Valuated ProFlat Rate)	Windows XP 2002 (SP I) Professional	1	Operational	Users: accountants Admin: SW: SOFTEC HW: Micronics
<b>C1</b>	1 <sup>st</sup> floor: Major, MD Office, Solicitors, Cash, Revenue	Windows XP 2000	9	Operational	Users: accountants Admin: SW: SOFTEC HW: Micronics
<b>C2</b>	2 <sup>nd</sup> floor: Rural Dept., Economist, Planning, Auditor	Windows XP 2000	8	Operational	Users: accountants Admin: SW: SOFTEC HW: Micronics
<b>C3</b>	3 <sup>rd</sup> floor: conference room	Windows XP 2000	3	Operational	Users: employees Admin: SW: SOFTEC HW: Micronics
<b>C4</b>	Clients not connected to internet:	Windows XP 2000	6	Operational	Users: employees Admin: SW: SOFTEC HW: Micronics
<b>C5</b>	Clients for Epicor and Proper Taxes elaboration	Windows XP 2000	1 PC, 6 terminals	Operational	Users: accountants Admin: SW: SOFTEC HW: Micronics
<b>N1</b>	Switch	Switch	1	Operational	Admin: SW: SOFTEC HW: Micronics

### 2.3.3 IT Applications in Temeke Municipality

Table 6: IT applications in Temeke Municipality

Applic. no.	IT application information	Software	Criticality	Confidentiality	availability	data integrity	No.of users	S1	C1	C2	C3	C4	C5
A1	Epicor	Ext. devel.	H	M	H	H	8						X
A2	Proper tax	Ext. devel.	H	H	M	H	8			X	X		
A3	DB Validated PRO	Int. devel.	M	M	M	M	3	X	X				X
A4	Flatrate	Int. devel.	M	M	M	H	3	X	X				X
A5	MS Office	Standard SW	L	M	L	L	25	X	X	X	X	X	X
DB1	MS SQL Client	Standard DB	H	M	H	H	8			X			
DB2	MS Access	Standard DB	L	M	L	L	3	X	X				

### 2.3.4 ICT Operations in Temeke Municipality

Organisational structure: ICT is not recognized as an independent unit.

Staff: one permanent employee

Manager: Mahunda Achenalika

### 2.3.5 Remarks on the Existing IT infrastructure in Temeke Municipality

Temeke, the largest municipality in Dar es Salaam, still lagging behind the two other municipalities for both lack of personal and of resources.

Given the situation, with comparatively very small efforts, it could be possible for Temeke to advance noticeably. Indeed since many solutions which are already available for the other two municipalities have already been

developed and successfully deployed, by networking with the other municipalities, Temeke could take advantage of those development.

Therefore the ICT unit should be recognized in its importance, not only as a cost factor, but as a mean of efficient utilisation of resources, obtaining considerable potential to save costs.

## 2.4 DAR ES SALAAM CITY COUNCIL

### 2.4.1 Network plan of Dar es Salaam City Council

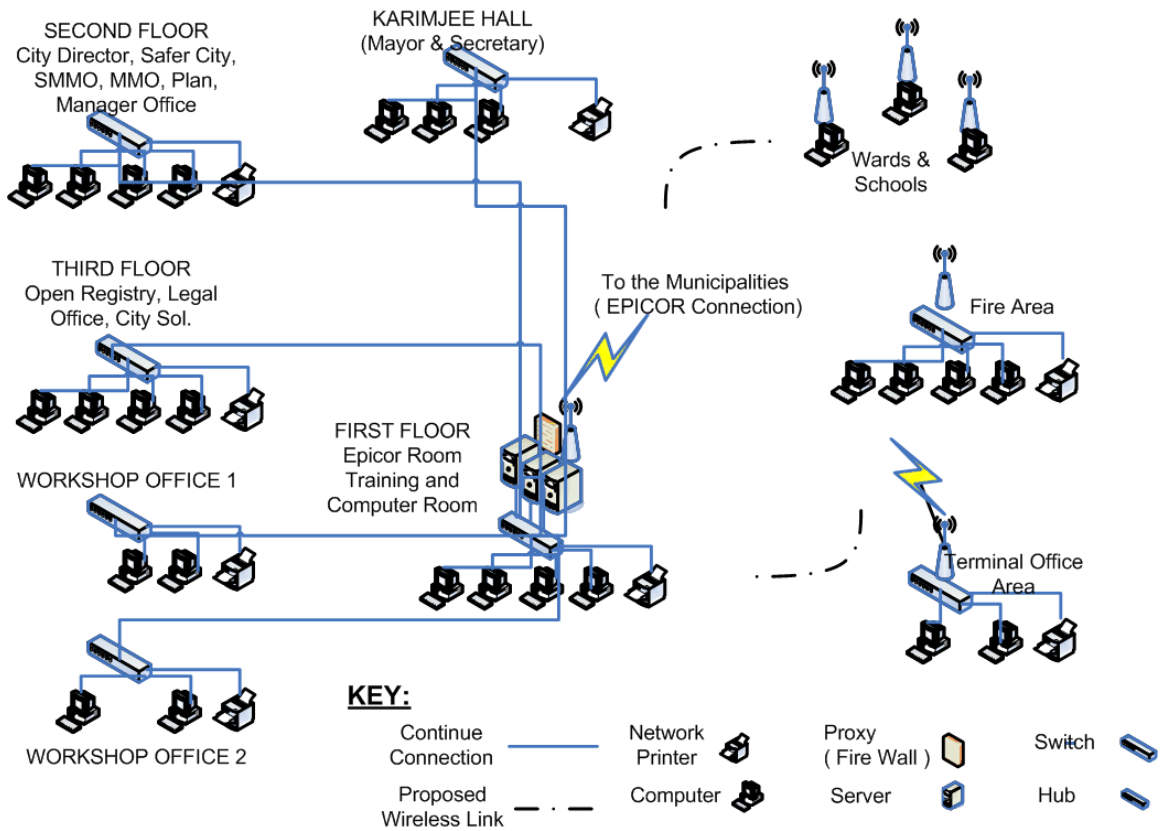


Figure 5: Network plan Dar es Salaam City Council



Dar es Salaam City Council utilizes coaxial twisted pairs cabling for the LAN infrastructure (transmission rate 100 Mbps) and wireless connection (D-Link routers) for the WAN infrastructure. The external provider is UCC.

### **2.4.2 IT Structure Analysis of Dar es Salaam City Council**

**Table 7: IT structure analysis of Dar es Salaam City Council**

<b>No.</b>	<b>Description</b>	<b>Platform</b>	<b>Numb.</b>	<b>Status</b>	<b>User(s) / Admin.</b>
<b>S1</b>	Epircor Server	Windows NT 4.0	1	Operational	Users: accountants from all LGAs Admin: ICT team
<b>S2</b>	Mail Server	Windows 2000	1	Operational	Users: Employees Admin: ICT team
<b>S3</b>	Application Server	Windows 2000	1	Operational	Users: Employees Admin: ICT team
<b>C1</b>	Clients for process payment	Windows XP	75	Operational	Users: Employees Admin: ICT team
<b>C2</b>	Clients for Epicor and Proper Taxes elaboration	Windows XP	10 PC	Operational	Users: Employees Admin: ICT team
<b>N1</b>	Switch	Switch	5	Operational	Admin: ICT team
<b>N2</b>	Hub	Hub	1	Operational	Admin: ICT team
<b>P1</b>	Printers	-	25	Operational	Users: Employees Admin: ICT team

### **2.4.3 IT Applications in Dar es Salaam City Council**

**Table 8: IT applications in Dar es Salaam City Council**

Application no.	IT application information	Software	Criticality	Confidentiality	availability	data integrity	Number of users	S1	S2	S3	C1	C2
<b>A1</b>	Epicor	Ext. devel.	H	M	H	H	15	X				
<b>A2</b>	COBIS	Ext. devel.	H	M	H	H	7			X		
<b>A3</b>	Plan Rep	Ext. devel.	H	H	M	H	4 (to be 6)			X		
<b>A4</b>	Exchange	Standard SW	M	H	M	L	75		X			
<b>A4</b>	MS Office	Standard SW	L	M	L	L	75	X	X	X	X	X

As it is possible to read in the table, the applications in use in the City Council are

- Epicor
- Plan Rep (still not in production)
- COBIS CD Library
- Office applications

### **2.4.4 ICT Operations in Dar es Salaam City Council**

Organisational structure: before the Local Government reform ICT was an independent unit but from August 2005 ICT has been consolidated under the Statistic Department.

Staff: one permanent employee and approved another permanent employee, not hired yet (will be employed to the day-to-day support and for the website optimisation).

Manager: Mheziwa Bundala

#### **2.4.5 Remarks on the Existing IT infrastructure in Dar es Salaam City Council**

The City Council hosts the Epicor Server, an important application for financial aspects, to which all municipalities connect via wireless connection to run the Epicor Clients. For this reason before the reform of the local government administrations ICT was recognized an important role as independent unit.

The City Council of Dar es Salaam needs to consolidate and increase its ICT activities for two important projects, which have been proved to be urgently needed:

1. Development of a web portal for the city of Dar es Salaam
2. Installation of a GIS

For this reason the consolidation of ICT under the statistical unit reduce the resources available for ICT operations and in consideration of the urgent needs of development seem to be short-sighted.

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<sup>10</sup> BSI, *e-Government Project Team, e-Government Manual*, March 2004