





e-Governance in Coimbatore Corporation

## **Synopsis**

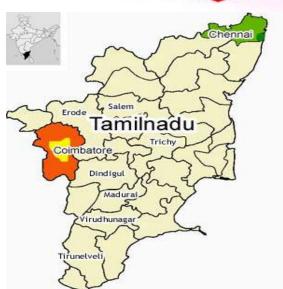


- Coimbatore City
- Coimbatore City Municipal Corporation (CCMC)
- Before E-Governance
- CCMC : E-Governance
- Internet Payment Gateway
- Payroll Management System
- Hand-held Meter Reading Device for Property Tax and Water Charges Collection
- E-Tendering
- Biometrics and Waste Truck Management
- Auto-DCR and BPAMS
- E-Auction
- Asset Management System
- Financial accounting system
- Unified Communication system

## Coimbatore City

phrib store Ocy Municipal Corporation

- 257.04 Sq Kms
- Current Population ~ 16 Lakhs
- Coimbatore City was Constituted as a Municipality in November 1866
- Upgraded into a Municipal Corporation in May 1981



- Coimbatore is popularly known as "Manchester of South India"
- Well known for Textile Industries, Engineering,
   Water (Siruvani), Climate and Proximity to Ooty



## Coimbatore City Municipal Corporation



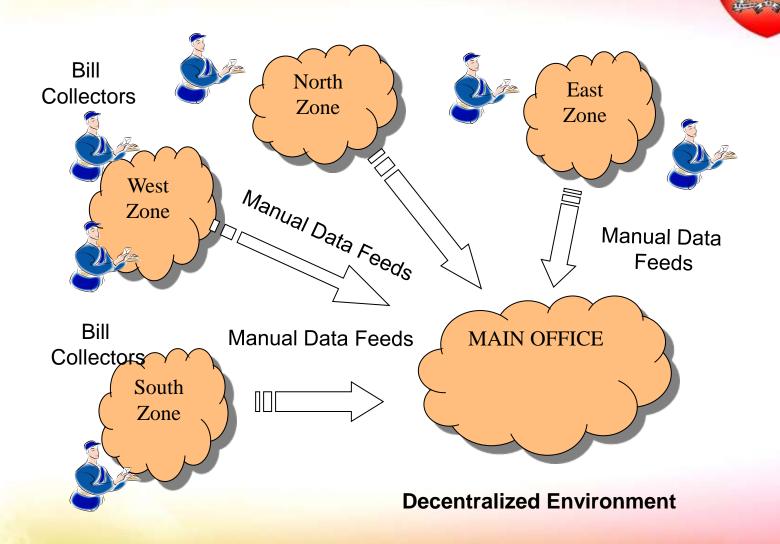
- 5 Zones and 100 Wards
- Elected Council with a Mayor
- 4,03,743 Property tax assessments
- 2,49,749 Water supply connections

#### Four Major Departments

- Engineering
- Revenue
- Health and
- Town Planning



## Before e-Governance



Colin to accore City Municipal Corporation

## e-Governance Goals



- Effective, efficient and transparent system to the citizens
- "Anything Anywhere" Concept
- Maximum transparency & faster service
- Process tracking & better citizen interface with administration
- Improve revenues for the Corporation

## CCMC: e-Governance

# Collection of the Collection o

#### **Facilities Offered**

Registration and issue of Birth & Death certificates

Online Property tax and Water Charges Collection

Financial Accounting system

Electronic Grievance handling system

Non-tax, Professional Tax, Dangerous and offensive trade License

Payroll Management System, Building Plan approval

Online RFID based and bio-metric based attendance system

Payment through collection centers, banks (Anything Anywhere)

Online Credit Card/Debit Card based payment system

Online Portal, e Auction, e Tender
Online File tracking system

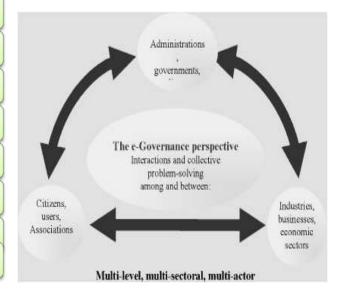
#### **Implementation Summary**

The e-Governance modules were implemented in 2004

The Corporation's e-Governance Initiatives won two national awards

The Corporation's e-Governance won four awards and G2C Champion 2012 at the inaugural edition of the Janaagraha Urban G2C Awards

All the 5 zones and 100 wards were covered



## CCMC: Services Offered through e-Governance



#### Through the website

- Status tracking of all applications
- Status of all development works in real time
- Facility to know the demands raised for water supply and property tax for citizens
- Grievance redressal
- Tender documents, Tender status, contract award, status tracking of works, pending bills and payments
- Top defaulters list
- Birth and Death certificates
- E Auction
- Online submission of Building Plan approvala
- Online Tax Payment for Property and Water Charges
- Getting to know how tax is calculated

### e-Governance Benefits



#### To the Public

- Effective, efficient and faster service
- Real time status tracking, getting to know their dues
- Efficient grievance addressal system
- Process Visibility
- Visibility into new development works, status of work in progress
- Transparent functioning of the Corporation
- Online Payment facilities for Property Tax and Water Charges

#### To the Administration

- Real time MIS
- Online demand collection balance
- Reduced paperwork and work load, better functioning
- Development work tracking
- Better contractor management
- Effective grievance handling
- Implementation of better work-flow processes
- In summary, effective, efficient and transparent administration

## **Awards**



- This e-governance effort has won two National Awards for Coimbatore City Municipal Corporation
- Award 1: Team Leadership in Implementing the e-Governance Initiative



### **Awards**



Award 2: Team Leadership in Design, Development & Management of the website





Coimbatore corporation Bags 4 Awards and Overall championship at the inaugural edition of Janaagraha Urban G2C Awards on 31.10.12 presided over by Union Minister of Urban Development Kamal Nath who delivered the inaugural address and also gave away the awards

• Award 1 : Best G2C website 2012

Award 2 : Best G2C website 2012 – 1 to 2 Million Cities

Award 3 : Citizen Voice

Award 4 : User Experience

#### Press Release

#### THE HINDU

## Coimbatore Corporation bags awards for its website

Civic body also bags the overall championship

Karthik Madhayan

COIMBATORE: It has been raining awards on the Coimbatore Corporation. After receiving the Best Corporation' award from Chief Minister Javalalithaa on August 15. the civic body has bagged four awards for its website.

Union Minister for Urban Development Kamal Nath gave away the award, which has been instituted by Januagraha, a Bangalore-based non-profit organisation. The Corporation emerged winner in the Best G2C Website 2012' and Best G2C Website 2012' for cities between one and two million population categories and was the runner-up in the 'Citizen Voice' and 'User Experience' categories, G2C stands for government to citizens.

On account of winning four



PROUD MOMENT: The Coimbatore Corporation has bagged four awards for its website.

- PHOTO: S. SIVA SARAVANAN

of the six eligible awards, the Chennai, Indore, Bhubanescivic body also bagged the overall championship, said Commissioner Ponnusamy.

clude Pune. Hyderabad, Prime Minister of India on

war. Thiruvananthapuram. Surat, Bangalore and a few T.K. others.

Mr. Ponnusamy said that Other award-winning city the jury panel that included municipal corporations in- Sam Pitroda, Adviser to the

Public Information, Infras- municipal corporations' webtructure and Innovations, sites through the lens of citi-Arun Maira, Member, Plan- zens and that resulted in ning Commission, M. Rama- increase weightage for frontchandran, former Secretary, end, user-oriented aspects, Ministry of Urban Develop- etc. over back-end technoloment, and Sanjeev Bikhchan- gv. Executive Vice-Chairman, Info Edge (India) Limited, selected the Coimhatore Corporation ofter analysing various param-

countability, online services, and outcomes were the parameters, said D. Sowdhamini. Information Technology officer, Coimbatore Corpora-

Janaagraha had said that the fundamental tenet that it 2012 followed in the evaluation of websites was citizen centric-

It evaluated and ranked

The organisation also said that it included global cities such as New York City, London, Singapore, Sydney and Johannesburg to serve as peer benchmark for Indian Transparency and ac- cities And also to be geographically to be representacitizen voice, user experience tive, eminent for digital governance, having population comparable to Indian

It further said that it carried out the evaluation during December 2011 - January

Mr. Ponnusamy said that the award was a recognition for the Corporation's e-governance initiatives.



#### THE INDIAN EXPRESS

#### City Bags E-Governance Award

by Senthill Kumar

Coimhatore: The City Corporation has bagged 'Best E. Gevernance Award, anpeanced by a Bangalorslusted NGO. Resident Commissioner of Tamil Nada, on behalf of the Corporation, mcoived the awards from Union Minister Kamal Nath at a function hold in New Delhton October 33. The corporation also bugged four awards out of the total eight categories in the competition.

Januagraha gives out the Januagraha Urban G2C Awards' to cities Isssed on the data available from Google Analytics. Various

municipal corporation websites of major cities were evaluated based on parameters such as transparency, acresontability and online services.

"We received the government to citizen (G2C) champion assurd for maintaining best website of 2012," T K Ponnussmy, commissioner Combatore City Municipal Corporation, said.

The city also begged first place in the category of maintaluing best website among the one to two million population cities in the country alread of Indone city which is the patiener up in the category, the commissioner said.

Moreover, Chimbatore was the runner up in the Citizen Voice and User Experience following Pune and Kolkata propectively.

Chennal was the runner up in the best GgC website 2013 on State capital catego-

Colmbatory Corporation second 19ff out of 350 marks in which corporation scores 50 for transparency and accountability, 30 for online services, 40 for Olium Voice, 29 in user experience 50 for unificomine.

However, officials of the Seems too Shoo and attend the ceremony for want of

TABLE SHOWING THE SCORES GIVEN BY AN NGO JANAAGRAHA								
BRAK	cimes	TRANSPAR- ENCY & AC- COUNTRIBILITY	DATEMENT	VOICE	EXPERIENCE	OUTCOMES	TOTAL SCORES	
1	Coimbatore	50	30	40	29	53	198	
20	Pane	38	32	56	25	48	197	
1	Hyderebad	43	33	36	38	45	177	
4	Chennut	34	33	.26	22	40	157	
5.0	Numbel	34	44	38	26	25	48	
163	Dangature	37	-C36TI	33	26	30	150	
7	Sust	34	21	13	22	40	150	
10.	incom	31	14	38	21	40	143	
8.	Kalkete	38	27	35	- 31	12	135	
30	Ohunaneswar.	40	-25	18	35	-115	125	

## Internet Payment Gateway



Coimbatore City Municipal Corporation enables "Online Payment Facility" through Credit/Debit Cards for Property Tax and Water Charges.

- Physical presence of the card is not needed
- Idea is to make public or tax payers "Pay from their Desk"
- 24 x 7 access
- Information is secure and confidential
- Process saves time
- Easy online access and payment of bills
- Gives tax payer's option of paying on time even right up until the deadline time
- Ease of use (i.e.) no extra paper work
- Easy view of collection details



## Payroll Management System



A unique, comprehensive Payroll Management System caters CCMC's 3948 employees and 2424 Pensioners on-time by processing their Salaries and Pension.

- Employer / Employee Information Repository
- User Definable and Functional Payroll Calculator provides flexibility
- Scalability in both vertical and horizontal limits in terms of Employee Strength and Processing
- Database Flexibility
- Shorter Process Time and High Process Accuracy
- Eliminates re-work
- Unique option of Pay Formula Builder
- Feature Rich Solution



#### Handheld Meter Reading Device – A New Initiative



CCMC's New Initiative for Tax collectors to use hand held meter reading devices for door to door collection of various taxes levied to the residents of Coimbatore city.

- Service at door steps to Residents
- Secured Payment Transaction thru the device
- Faster Turn around time during process
- Immediate demand generation for Water
- Initiates early realization of Taxes to CCMC
- Improves revenue for CCMC
- MIS Reports for Decision Making to CCMC Top Management



## e-Tendering

Developed by NIC - Chennai, Tamil Nadu Government e-Tendering System "TANGETS" is a process by which physical activity of tendering is carried out using Internet and associated Technologies.

E-Tendering System is a must for 152 Municipalities and 9 Corporations in Tamil Nadu, out of which Coimbatore City Municipal Corporation has recorded and achieved the highest in number of tenders published through this System - 1351 as on date.

**Digital Signature Certificates (DSC)** form an Integral part of the entire e-Tendering Process, as per IT Act 2000 for authentication and non-repudiation at all levels for Security reasons.

#### **Main Features of E-Tendering System:**

- Registration of Government officials & bidders
- Tender creation & Publishing
- Publishing of Corrigendum
- Publishing of pre-bid meeting documents
- Online bid submission/re submission as many times as required
- Facility for Online payment collection thro' bank payment gateway
- Encryption of bids submitted by the bidder
- Facility for single/two/multiple cover bid system
- Withdrawal of online bids
- Tender opening online
- Automatic evaluation of the financial bid
- Updation of the committee recommendations at each stage of the tender process
- Award of the Contract (AOC)

## e-Tendering (contd.,)



#### Benefits of Implementing e-Tendering system:

- Fast & efficient process, reduces the procurement cycle time.
- The complete procurement transaction thro' TANGETS happens in a transparent manner. The system captures the justification and comments of approvers at each stage and thereby enables users and approvers associated with a transaction to justify their decision.
- Encryption ensures integrity of the bids submitted.
- eTendering brings down the cost of doing business for the suppliers which in turn will reduce the prices quoted by the suppliers.
- eTendering enables a creation of centralized data base of procurement process, which will help to bring out any reports on the procurement activities.

## e-Tendering (contd.,)



#### **Benefits to bidders:**

- Information on all tenders is available at one place to the suppliers.
- The bidder need not make unnecessary trips to the Organization to collect details on the tenders published.
- The bidder need not submit bulky multiple copies of his bid in paper form.
- 24X7 access enables the bidder to submit his bid and access to tender status, from anywhere and anytime
- After online bid submission, the bidder can know the status of his bid online
- e-Tendering system allows the bidder to modify his bid even after his bid is submitted online.
- Increased reach as the bidder has access to the tenders of all the depts.
- Lower bidder development cost as various depts. will have new suppliers on the web application.
- The system inspires confidence among the bidders as being fair & transparent

#### Biometrics



- Biometric scanning devices use the unique identity of human body parts such as an iris, fingerprint ,face etc and convert it into digital information for a computer to interpret and verify.
- The advantages in using biometrics for attendance management is that the reproduction of another's identity for proxy and misplacement of the ID is not possible.

#### The Corporation:

Sanitary workers: 2635

Sanitary staff: 706

Sanitary vehicle drivers: 42

Medical Centers: 20



- Biometric installations: 44 numbers in different 44 locations
- RFID card reader installations: 31 numbers in 31 locations

#### **Biometrics Benefits**



- No proxy punching, working hours and attendance more disciplined, so a cleaner city
- Quicker, easier and accurate preparation of attendance report, so savings on manpower cost.
- Better and Professional control over employees, so better employee vs. employer relationships.
- Lesser dependency over clerical staff to prepare daily attendance reports, so savings on supervisory cost.
- On-line attendance reports available on CCMC website.



## Waste Truck Monitoring System using Radio Frequency Identification (RFID)

#### Radio Frequency Identification (RFID)?

The basic RFID system consist of three components:

- An antenna or coil
- A transceiver (with decoder)
- A transponder (RF tag) electronically programmed with unique information
   The antenna emits radio signals to activate the tag and read and write data to it.

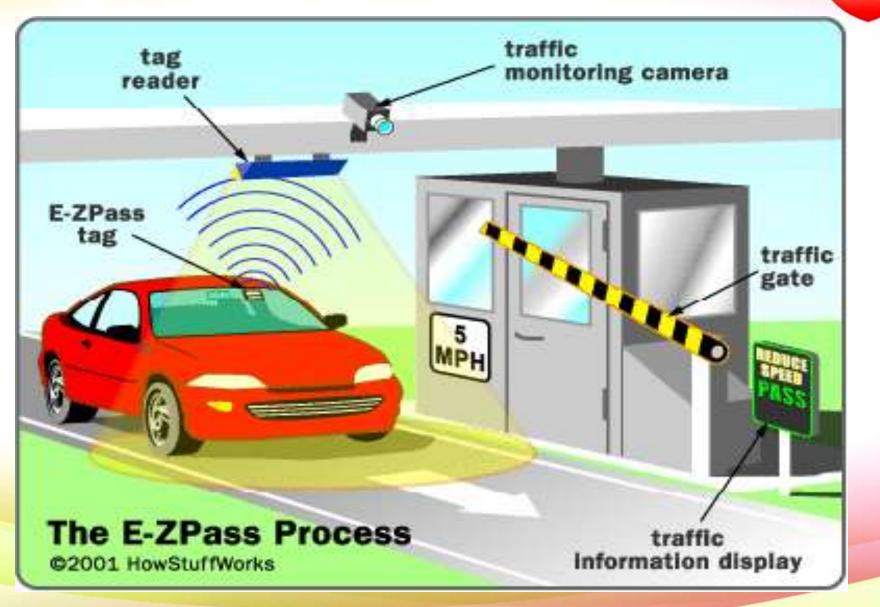
When an RFID tag passes through the electromagnetic zone, it detects the reader's activation signal. The reader decodes the data encoded in the tag's integrated circuit (silicon chip) and the data is passed to the host computer for processing.

## Waste Truck Monitoring System using Radio Frequency

- The Corporation for the first time has introduced the online Waste Truck Monitoring System using Radio Frequency Identification (RFID)
- This RFID arrangement has been linked with the Weigh Bridge installed at the Waste Transfer Stations and the Landfill site.
- The system has the connectivity with the Corporation's official website
- All the trucks deployed for Solid Waste Management activities have been fitted with Transponders (RF tags) which are electronically programmed
- When the waste laden truck fitted with the tansponders passes through the electromagnetic zone at the Weigh Bridge, it detects the reader's activation signal. The reader in turn decodes the data encoded in the tag's integrated circuit (silicon chip) and the data is passed to the host computer coupled with the Weigh Bridge for processing
- It has been so programmed that as soon as the truck halts at the Weigh Bridge it automatically records the truck number, the ward from which the waste have been collected, name of the driver, the time of entry/exit of the vehicle, weight of the waste, etc.,
- By this system the Corporation is in a position to monitor the exact number of trips made by the trucks and the quantity of the waste transported, processed and disposed at the Landfill site on a daily basis

#### **VEHICLE TRACKING USING RFID**





## Waste Truck Management through RFID



- No proxy weighment, hence transparency ensured in payments.
- Quicker, easier and accurate preparation of weighment report, so savings on manpower cost.
- Better and Professional control over garbage
- Lesser dependency over clerical staff to prepare daily weighment reports, so savings on supervisory cost.
- On-line garbage movement reports available on CCMC website.
- Quicker, easier and accurate processing of transport bills.



## WASTE TRANSFER STATION WITH RFID BASED VEHICLE TRACKING







## **Coimbatore Municipal Corporation**

**Waste Truck Monitoring System** 

User Name:	cmcvt	
Password:	•••••	
		Login



## **Coimbatore Municipal Corporation**

#### **Waste Truck Monitoring System**

Change Password Logout

#### ▼ Links

#### ▼ Masters

- Driver Category
- Driver
- Load Type
- D Load
- D Zone
- b Ward
- **D** Location
- Reader Location
- Reader
- ▶ Tag
- Transporter Category
- ▶ Transporter
- Vehicle Category
- Vehicle Type
- ▶ Vehicle

#### ▼ Assignments

- Driver To Vehicle
- D Load To Vehicle
- Location To Vehicle
- Tag To Vehicle

#### ▼ Reports

Daily Status

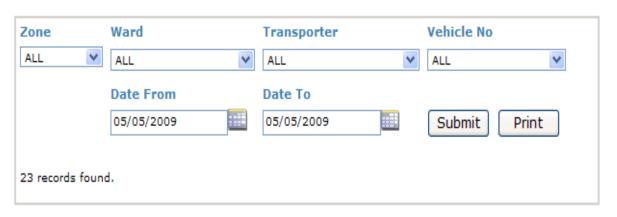


## **Coimbatore Municipal Corporation**

#### **Waste Truck Monitoring System**

Change Password Logout Main

#### Select criteria from the Dropdown lists to Generates Report.



Coimbatore City Municipal Corporation - Vehicle Tracking System										1
VehicleNo	Zone	Ward	Transporter	Driver	Material	InTime	OutTime	Net	Tare	Gre
05-MAY-2009										
TAB 4716	WEST	W48,50,51,57	CMC	T.SIVARAJ	GARBAGE	06:54:17	07:08:59	6150	3750	240
TAR 6916	SOUTH	W12,25,38,40,54	CMC	S.BASHA	GARBAGE	07:02:48	07:15:35	5960	3655	230
TAB 4720	EAST	W19,20,21,22,26	CMC	C.SELVARAJ	GARBAGE	07:25:47		6090	3545	254
TAB 4716	WEST	W48,50,51,57	CMC	T.SIVARAJ	GARBAGE	08:02:36	08:17:01	8410	3750	466
TAB 4720	EAST	W19,20,21,22,26	CMC	C.SELVARAJ	GARBAGE	08:17:56		5480	3545	193
TAR 6916	SOUTH	W12,25,38,40,54	CMC	S.BASHA	GARBAGE	08:39:09	08:49:23	5880	3655	222
TDM 1039	EAST	W4,5	PVT	M.VELUSAMY	GARBAGE	09:01:53	09:19:52	7630	7150	480
TAB 4720	EAST	W19,20,21,22,26	CMC	C.SELVARAJ	GARBAGE	09:23:19	09:37:01	5830	3545	228
TN 37 AW 8317	NORTH	w71,72	CMC	K.VELLI	GARBAGE	10:55:35	11:25:48	8970	4990	398
TAB 4720	EAST	W19,20,21,22,26	CMC	C.SELVARAJ	GARBAGE	10:59:16		5610	3545	206
TDL 7963	SOUTH	w41	PVT	DHANABAL	GARBAGE	11:15:52	11:43:20	9340	7200	214
TDW 7090	WEST	w62	PVT	M.SUBRAMANI	GARBAGE	11:48:07		9930	6930	300
TMK 2502	FAST	w30	PVT	P.BALLI	GARBAGE	12:09:35		9690	6650	304

#### Auto DCR and BPAMS



CCMC automates Automatic Development Control Regulation (Auto DCR) and Building Plan Approval and Management System (BPAMS) for the convenience of the residents of Coimbatore City.

- Reduces the Architect's/Authority's effort for drawing and calculations.
- Eliminates the Human Errors & Manipulation and produces accurate reports.
- Tremendously reduce the time cycle of approval
- Escalation of Alerts on unnecessary delays
- Standardize the drawing process.
- Detailed User Friendly dynamic reports.
- 7967 Applications were processed after
   Introduction of Auto-DCR since May 2008



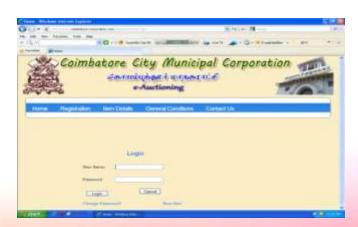
### e-Auction



Coimbatore Corporation is the first civic body to introduce this system.

- An e-auction is a means of carrying out leasing negotiations via the Internet. It is a real time event that occurs online, allowing multiple lessees in different geographic regions to place and modify bids simultaneously.
- The Coimbatore City Municipal Corporation introduce online auctioning of some public utilities such as parking lots, public toilets and markets etc., currently 243 different items to lessees are provided and 251 Registered Members are present.

- Total transparency in the system.
- Physical Presence of the Registered members are not required at the Corporation.
- Faster turn around time during Auctioning and Result Announcement.



## Asset Management System



Coimbatore Corporation Introduces Asset Management Software to track all its Assets, which enables CCMC to Automate record maintenance, remove record duplication, Consolidate its assets for financial reporting, Real time access to information on Corporation's net worth and to provide MIS reports to Top Management.

#### **Salient Features:**

- Provision to store asset photographs, purchase bills and Maintenance contracts.
- Reminders for AMC, F.C, Warranty and Insurance Expiry.
- Provision for Asset Disposal Sale, Scrap / Write off.
- Capturing Guideline value of asset for valuation purpose.
- Provision for Revaluation of asset.
- Automatic Calculation of Depreciation and amortization .
- Provision to Calculate Income Generating Asset to Total Assets.
- Physical verification of asset and Provision for reconciliation.
- Interface to financial accounting system.
- Multi-user version with full security and access only to registered user.

## Financial Accounting System



CCMC initiates FAS to computerize and interface with various funds for reporting purposes in the system. This will avoid the duplication of entry and time consumption for preparation of Reports and Budgets

- Single stream of accounting process and the manual intervention is avoided.
- Integration between the zones and the main office will be the key advantage of the system.
- System can be integrated with any revenue module and the data can be directly downloaded in the system. Hence the finalization of accounts can be done easily.
- Though the details are available at different location the consolidation in the system will not consume time for overall financial reporting.
- The process of reconciliation is made easy with the statement download from banks enabled in the system

## **Unified Communication System**



As part of its e-Governance initiatives, Coimbatore City Municipal Corporation has implemented Unified Communication System & Information center which enables CCMC

- To provide services in a comfortable environment
- To provide services in a better turn around time
- To minimize the multiple interaction points for the citizen
- To save citizens valuable time and money consumed in traveling to CCMC offices.
- To take the administration closer to all the sections of the society.

## Unified Communication System



Unified communications (UC) is the integration of all communication devices such as telephony (including IP telephony), instant messaging (chat), video conferencing, web data sharing, voicemail, e-mail, SMS and fax in a single common platform.

The collection of elements includes:

- IP (Internet Protocol) PBX (Private branch exchange) IP PBX
- Web Portal
- Interactive Voice ResponseSystem
- Grievance Management System& Call Center
- EMail & Instant messaging
- SMS

## **Unified Communication System**



## IP (Internet Protocol) PBX (Private branch exchange)

- CCMC has completely modernized its communication system across its main, zonal and ward offices. All 5 zones are equipped with Video IP phones to facilitate video conferences. IP phones are connected for officials in Main office and Zones.
- An IP (Internet Protocol) PBX (Private branch exchange) is a business telephone system designed to deliver voice or video over a data network and interoperate with the normal Public Switched Telephone Network (PSTN).
- It enables CCMC to use the internet to help reduce long distance call expenses, enjoy the benefits of a single network for voice and data which give greater cost savings, greater mobility, and increased redundancy.



## Web Portal <u>www.ccmc.gov.in</u>

- CCMC web site has been moved from static based web site to Dynamic portal.
- Developed using latest in communication and software technologies, the Coimbatore Corporation E-Governance solution is one of the most advanced and unique E-Governance portals in India.
- The portal is powered by open source technology, Joomla.
- The content to the website can be updated by anybody authorized from anywhere, and doesn't have to depend on Software Vendors.



### **Interactive Voice Response System**

The major benefits of the system are automated access to information, 24 hour operations and consistent quality voice responses.

#### **System Flow**

- Citizen dials the CCMC 's IVRS service number 2334455
- IVR system asks for Language option
- IVR system responds with welcome message in the selected language
  - Welcome to Coimbatore City Municipal Corporation
  - Press 1 to know your Application Status
  - Press 2 to know your Tax Payments due
  - Press 3 to talk to Operator and register your Grievance



# **Grievance Management System& Call center**

CCMC has implemented the web based "Grievance Management system" software to effectively redress the grievances from the public. This system has been integrated with email, SMS, call center lines of the Unified Communication system.

- Grievance received through all the below channels are entered into this system.
   The various channels are
- People can dial to CCMC's call center 2334455 and inform their grievance
- People can send email to <u>grievance@ccmc.gov.in</u>
- People can send SMS to CCMC
- People can register their grievance on their own using the CCMC web site
- People can send their grievance using Post/Tapal
- The grievance received through Mayor's Grievance Forums
- The grievance that are being forwarded from Collectorate / MLA / CM cell
- Grievance that are reported in News papers/magazines



#### **Email Service**

CCMC has launched its own email server "mail.ccmc.gov.in" and provided email IDs for all its officials and staff. The Email server has advanced features like Calendaring for scheduling appointments and meetings, Chat services,

- The Features and Benefits of E-Mail System are as given below
- Eliminate manual processing of correspondence and improve response time.
- Work schedules and assignments.
- Drafts of documents can be circulated for approval or comment.
- Initiate, authorize or complete a transaction.
- Send Final reports or recommendations to all.
- Correspondence, memos or messages about corporation.
- Protect confidential information in e-mails from disclosure.
- Propose Agendas and send Meeting minutes.
- Full support of huge mailing lists.
- Strong security to CCMC data sharing process.



#### **SMS Services**

SMS is a very suitable technology for delivering alerts and notifications of important transactions / events.

- The Following Services are rendered through SMS in CCMC
- Tax Payment Reminders and payment confirmation messages through SMS
- Citizen can register their grievances through SMS
- Public and Health awareness messages through SMS
- SMS alerts for CCMC staff on various tasks and meetings
- SMS notifications for CCMC Staff on critical issues



# Computerization of 70 MLD Sewage Treatment Plant at Ukkadam, Coimbatore



#### Fully automatic operation

- Plant operation is fully automatic through PLC & SCADA
- All important plant data is logged and stored to trace history
- Instantaneous and continuous analysis of parameters like Flow, Dissolved Oxygen, Level etc.
- Plant performance is independent of operator capability
- Automatic generation of alarms under any fault condition

# Corp of acore City Municipal Corp of action

#### **Automation** system

STP automation System shall monitor the following continuously in each SBR Basin:

- Filled Volume
- Decanted Volume
- Temperature
- Liquid Level
- Dissolved Oxygen Level
- Air Blower Speed
- Decanter Speed
- Running Hours for all Drives
- Energy Consumption



#### REMOTE MONITORING OF PLANT

- Plant can be monitored from any location worldwide through internet connectivity
- Plant MIMIC can be viewed online with present status of plant operation
- Historic data of plant with trends can be viewed online
- SMS alerts on plant operation & maintenance
- Online daily/ weekly/ monthly reporting



#### **Plant Operation Modes**

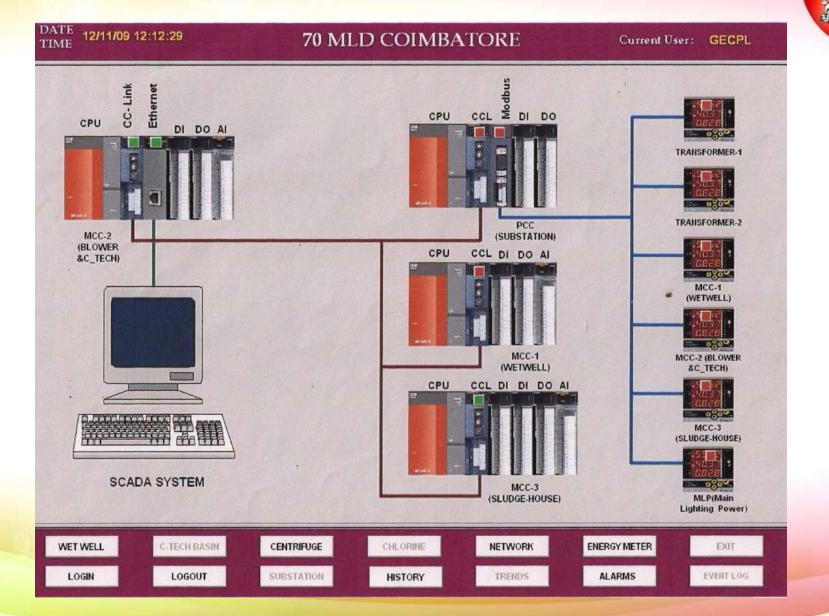
The plant shall be operated in three modes:

- 1. Automatic Mode i.e. when there is no operator required for the plant and all sections of the plant are to operate only in the auto mode only.
- Non Automatic (Manual) Mode- i.e. operator normally will be required for all operations.
- 3. Semi Automatic Mode i.e. for certain component/module requiring manual operation when auto system is not functioning. Provision shall be made for isolation of each automatic mode locally.

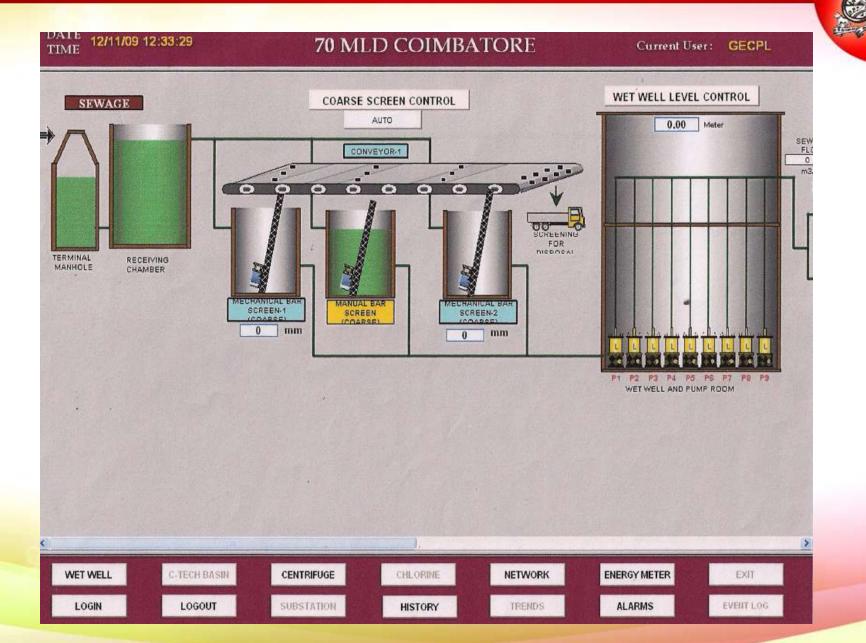




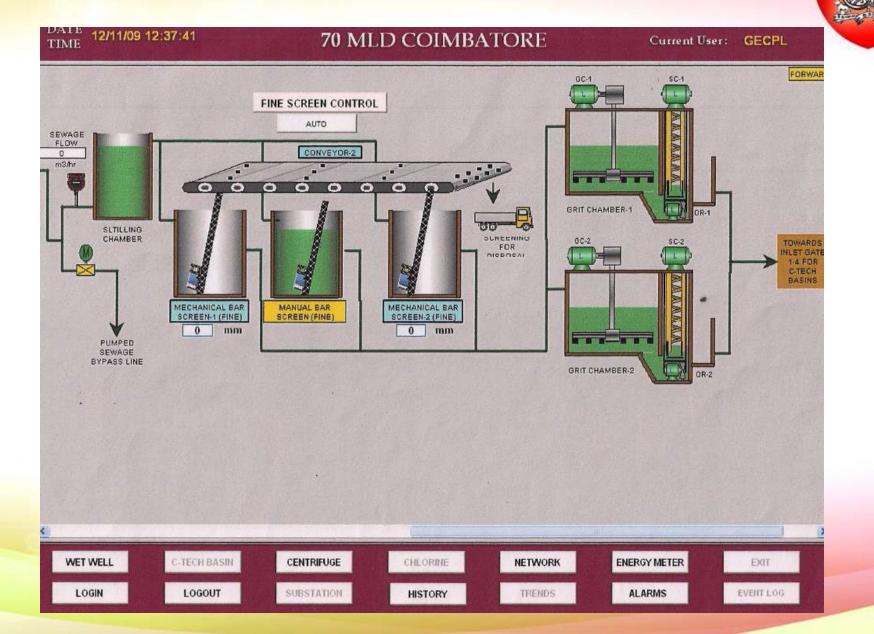
View of PLC panel and SCADA Computers 47



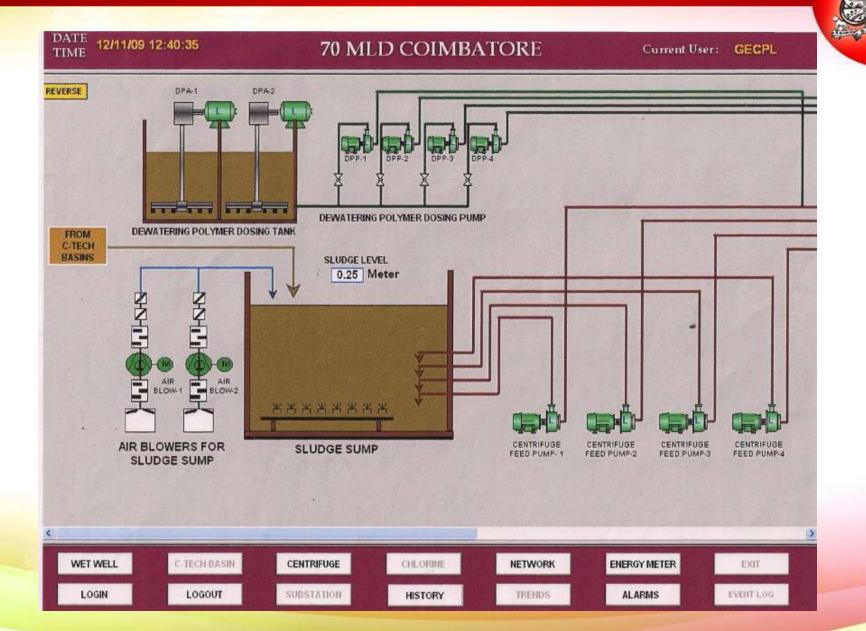
Coimb atore City Municipal Composition



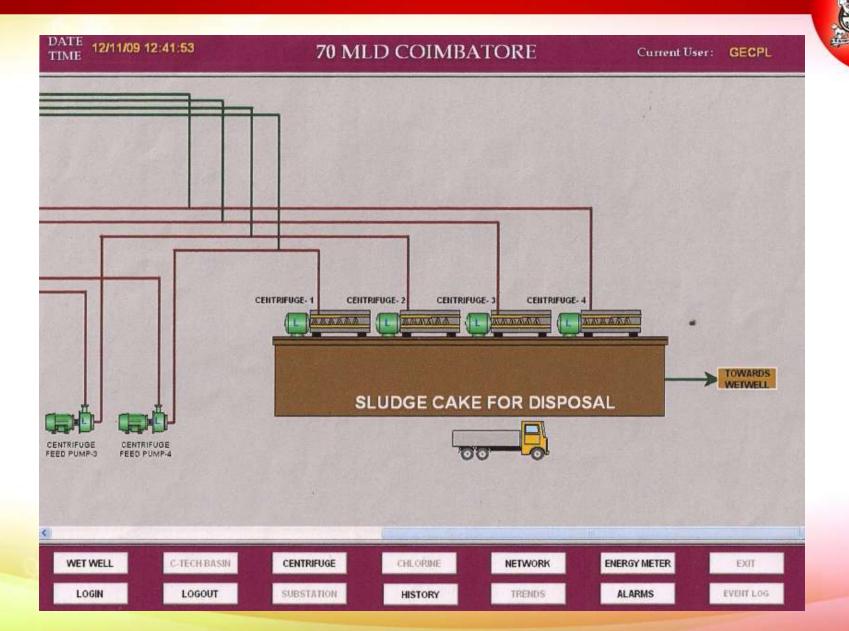
Coimbatore Ony Municipal Corporation



Coimbatore Ony Municipal Corporation

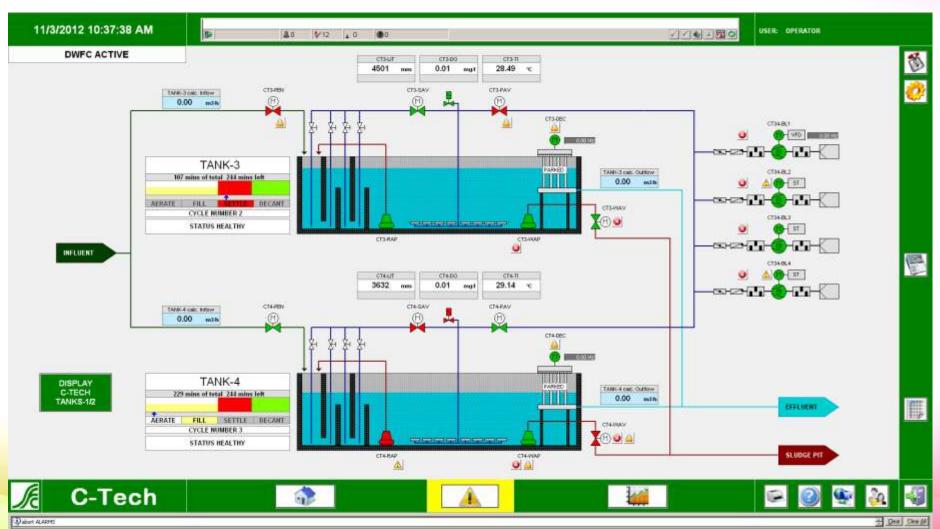


Comb atore City Municipal Corporation



Coimbatore Ony Municipal Corporation





#### DATE 12/11/09 12:47:58 70 MLD COIMBATORE Current User: GECPL TIME TRANSFORMER-2 TRANSFORMER-1 PECET RESET Phase-1 Phase-2 Phase-1 Phase-2 Phase-3 Parameter. Phase-3 Parameter Current 0.0 A Current 0.0 A 0.0 A 0.0 A 0.0 A 0.0 A Phase To Neutral Voltage 0.0 V Phase To Neutral Voltage 0.0 V 0.0 V 0.0 V 0.0 V 0.0 V RY YB BR RY YB BR Phase To Phase Voltage Phase To Phase Voltage 0.0 V 0.0 V 0.0 V 0.0 V 0.0 V 0.0 V Freguneov Frequnecy 0.00 Hz 0.00 Hz Active Power Active Power O KW 0 KW Active Energy 0.0 KWh Active Energy 0.0 KWh Power Factor Power Factor 0.00 0.00 Yesterday Last Month Current Month Today Last Month Current Month Yesterday Today Unit-Consume Unit Consume MCC-1 (WET WELL) MCC 2 (BLOWER & C TECH) PECET DECET Phase-3 Parameter Phase-1 Phase-2 Phase-3 Parameter Phase-1 Phase-2 Current Current 0.0 A 0.0 A 0.0 A 0.0 A 0.0 A 0.0 A Phase To Neutral Voltage 0.0 V 0.0 V Phase To Neutral Voltage 0.0 V 0.0 V 0.0 V 0.0 V YB BR RY YB. BR RY Phase To Phase Voltage Phase To Phase Voltage 0.0 W 0.0 V 0.0 V 0.0 V 0.0 V 0.0 V Active Power Active Power 0 KW 0 KW Active Energy 0.0 KWh Active Energy 0.0 KWh Current Month Yesterday Today Last Month Current Month Yesterday Today Last Month Unit Consume 0 0 0 Unit Consume MCC-3 (SLUDGE-HOUSE) MLP(Main Lighting Power) RESET RESET Phase-1 Phase-3 Parameter Phase-1 Phase-2 Phase-3 Parameter Phase-2 Current 0.0 A 0.0 A 0.0 A Current 0.0 A 0.0 A 0.0 A Phase To Neutral Voltage Phase To Neutral Voltage 0.0 V 0.0 V 0.0 V 0.0 V 0.0 V 0.0 V YB BR RY YB BR RY Phase To Phase Voltage Phase To Phase Voltage 0.0 V 0.0 V 0.0 V 0.0 V 0.0 V 0.0 V Active Power Active Power 0 KW D KW Active Energy Active Energy KWhi 0.0 KWh 0.0 Today Last Month Current Month Yesterday Today Last Month Current Month Yesterday Unit Consume Unit Consume Total Ative Energy KWA Total Ative Power 0 WET WELL C-TECH BASIN CENTRIFUGE CHLORINE NETWORK **ENERGY METER** EXIT

HISTORY

TRENDS

**ALARMS** 

LOGIN

LOGOUT

SUBSTATION

Count of a Cory Municipal Corp of attended



# Thank You

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