

BRIEF OF EXISTING IT LANDSCAPE OF KDMC



Smart Kalyan Dombivli Development Corporation Limited

Appointment of ICT consultant for preparation of detailed project report and providing supervision services for implementation of pan city solution under Smart Cities Mission

November 2017

Contents

1	IT landscape of KDMC	2
1.1	Available functions in the existing e-governance (KDNET)	2
1.2	Departments with partial operations incorporated in the KDNet.....	3
1.2.1	Water supply department	3
1.2.2	Town Planning Department.....	3
1.2.3	Accounts Department.....	4
1.2.4	Assessor & Collector’s Department	4
1.2.5	Market & trade license department	4
1.2.6	Fire Department	5
1.2.7	Garden Department	5
1.2.8	Computer department	5
1.2.9	City Engineer’s Department	6
1.2.10	Medical Health Department.....	6
1.2.11	Solid Waste Management Department	7
1.2.12	Electrical Department.....	7
1.2.13	KD Transport Undertaking Department.....	7
1.2.14	Education department	8
1.2.15	Controlling of encroachment & unauthorized construction Department	8
1.2.16	Stores department.....	8
1.3	Other Departments with no operations on digital platform.....	8
1.4	Details of Present Hardware	9

1 IT landscape of KDMC

KDMC has total 40 departments and 10 ward offices. Out 40, 10 departments have partial operations incorporated in the KNet modules developed by ABM. The following section provides a brief introduction to department wise services that have been incorporated in the respective modules and a brief on key operations carried out by various department that are to be incorporated in the e-governance module to be developed.

1.1 Available functions in the existing e-governance (KNET)

Sl. No.	Module	Key function
1	Accounts	For preparing the financial statements, maintaining the general ledger, paying bills, billing customers, payroll, and cost accounting.
2	Birth and Death	Birth and Death registration
3	CARE	Complaint and redressal management system
4	City Engineering	Module under development
5	Commissioner's office	EIS- enterprise information system: would reflect reports for all departments.
6	Garden	Permission for cutting of trees
7	Health Schemes	For tracking and reporting about funds and their usage for health related scheme as per formats shared by government
8	Legal	Case history assessment and monitoring Tracking appointments and court hearings
9	Municipal Secretary	Record of committee members and their operations.
10	Property tax Assessment	Assessment and generation of property tax bills
11	Town Planning	Building permission and approvals
12	Trade License (Market & Food)	Issuance and renewal of market and trade licenses
13	UWMS	User work flow management system for tracking movement of files and letters
14	Water Billing	Water connections and bill generation

15	Web services	complaint lodging and tracking; monitoring of application status; downloading of forms for all services; and application and issue of birth and death certificates
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1.2 Departments with partial operations incorporated in the KNet

1.2.1 Water supply department

The department is responsible for ensuring supply of water in KDMC limits through maintenance of existing water supply system including the treatment plant, service reservoirs and supply lines. The department also provides water supply connection.

Water supply department has a water module in place through KNet. Following is the list of services the department caters to through the module:

- Water Connection approval for ownership.
- Water Connection approval for construction before 1995.
- Water Connection approval for Business in Slum Area under 1971 Act (Person should have Slum Area I-Card).
- Licenses for Plumber.
- Payment of Water Bill.
- Issuance of Duplicate Water Bill.
- Closing of Connection(Disconnection)
- Re-Connection
- Transfer of Connection

Along with providing the above services the department plans to map the existing water supply network along with connection through GIS mapping.

1.2.2 Town Planning Department

The department is responsible for planning development of areas in KDMC limits, maintaining land related details like ownership, area etc, facilitating land acquisition, providing construction permission certificates like commencement certificate, completion certificate, etc.

Following is the list of services the department provides through KNet module:

- Layout Approval.
- Building Approval (Building Commencement)
- Plinth Completion Certificate
- Completion Certificate
- Balcony enclosure after Completion
- Revised Building Approval (Building Commencement)
- Zone Certificate
- Part Plan issuance

Apart from the above operations the department also provides Layout approval, zone certificate and Part plan issuance. But these services are provided manually. Also the services provide through the KNet module have partial operations carried out manually/on offline platform.

The department has suggested to incorporate issuance of TDR certificates, Development right certificate to be incorporated in the module. Also inter department linkages should also be developed

while developing entire e-governance system. And there should be provision for sharing information with citizens through website or application.

1.2.3 Accounts Department

The accounts department has a financial accounting system in place that follows a single entry system. The divisional office and ward office maintain their own books of accounts and centralized accounting for Entire Corporation is maintained at KDMC head office.

Corporation also maintains double entry accounting system, but it is not fully functional. This system is used by the CAs only for maintaining records for audit purposes only. The CAs use the information from single entry system, perform back calculation and update data in the double entry system. Receipts and Payments transactions are carried out in Head Office, Kalyan Collection Centre. All KDNet Modules are integrated with Accounts Module. Every receipt of other departments is posted into accounts tables.

The department undertakes the function of maintaining accounts for entire KDMC, Handling receipts made to KDMC and payments made against them, maintaining PF and loan accounts of KDMC employees, allocating payments and receipts against various accounts heads and keeping a track of budgeted and actual figures.

1.2.4 Assessor & Collector's Department

The key activity handled by the department is to maintain details of properties in KDMC, calculate the rateable value (RV) of the property and collection of property tax based on rateable value. Following activities are undertaken by the department through the property tax module:

- Property assessment certificate
- Property tax details
- No due certificate for arrears of property
- Permission for property transfer through heredity
- Permission for property transfer through other modes.
- Extract of property
- Issuance of duplicate tax bill
- Payment of property tax bill

Not all the stages of availing these services are incorporated in the module, they are to be handled manually through offline process.

1.2.5 Market & trade license department

The department issues licences under 2 categories

1. Trade Licence
2. Market License

Market licenses are issued for slaughter house and meat products.

Both these licenses are issued separately for Kalyan area and Dombivli area. The trade licence are issued as per the calendar year while market license are issued as per financial year.

The activities under taken by the department along with issuing licenses through the market and license module in KDNET are listed below:

- Occupation and storage certificate
- License for business / profession and for keeping animals & specific commodities and others
- License for selling food articles outside market
- License for slaughter and for selling meat and others
- Cancellation of license
- Transfer of license under nomination
- Renewal of all licenses (after every 1 year)

- Increasing or decreasing of business premises(area)/kilograms/Tonnes/litre in issued license
- Increasing or decreasing the partnership in the given license
- Issuance of duplicate copy market license
- Transfer of license under selling of business, partnership and by other means.
- occupation and storage certificate
- license for slaughter and for selling meat and others
- license for business / prof. And for keeping animals & specific commodity & other

1.2.6 Fire Department

KDMC presently has 2 fire stations one at Kalyan and other at Dombivli. As per RTS Act, the department is responsible for providing 2 services:

- NOC for fire protection – provisional (prior to construction)
- NOC for fire protection final (post completion of construction work)

List of Documents to be submitted-

For provisional NOC	For Final NOC
Prescribed application form	No due certificate (Property Tax)
Application by architect for NOC	Copy of KDMC sanction plan
Copy of KDMC sanction plans	'A' certificate by fire agency
Proposed plans	Provisional NOC and capitation fee receipt
No due certificate (Property Tax)	Lift license
Fire system installation drawing	Fire license agency's work order
	Fire material test report
	Fire extinguishing system drawing
	Self-declaration by developer/Architect
	Overhead tank and underground tank drawings

The fire module in KDNET has provision to raise request for the said service through CFC counter.

1.2.7 Garden Department

The garden department is responsible for undertaking following activities.

- Maintenance of KDMC gardens
- Maintenance of street plantation
- Permission of tree cutting

Currently only in the garden department module only operation for 'Permission for cutting of trees' is activated. Under the permission for cutting of trees, permission is issued for:

- Cutting of trees in private property
- Cutting of trees on streets

The permission issued by the department is valid for 6 months only.

1.2.8 Computer department

The computer department at KDMC handles the Citizen Facilitation Center. At present KDMC has 8 CFC counters in the ward offices including the head quarter office. All the aforementioned modules have a common user interface i.e. KDNNet that are facilitated through the Citizen Facilitation Centre (CFC).

The citizens can approach any of the CFCs and avail the services incorporated in the KDNNet module like payment of property tax bills, water bills, issuing NOC etc.

Along with CFC, Computer department also manages Complaint and redressal management system (CARE). Complaint and redressal management system is the only system that is linked to all the departments of KDMC. This system allows the citizen to register and monitor status of complaint. The citizens can register complaints through website or mobile app or through CFC counter. At CFC counter applicant has to fill a form relevant to his/her complaint department. The details of the form are entered in system and complaint number is generated. The complaint is then assigned to the concern department.

Third module maintained by computer department is User work flow management module (UWFM). It is used for keeping track of inward and outward letters. The module is of assistance in tracking inward and outward file. Once the details of a letter is entered in the system, it is forwarded to the login of respective department. Similarly for outward file, the departments enter the data for letter to be sent out.

Along with these modules, KDMC also has HRMS of SAP through which they maintain the Human resource data for all the employees of the corporation. The system process and maintains data on recruitment, transfer of employees, salary details of permanent employees, temporary employees and pensioners. The IT department is currently working on the method for integrating the HRMS with Biometric system in order to enable real time tracking of attendance of all the employees.

1.2.9 City Engineer's Department

The department is responsible for development work in the corporation like construction of roads, bridges, factories etc. as per provisions made in the budget and the maintenance of same. The departments controls and monitors all construction activities of KDMC, takes up repair works of municipal owned structures, certify and pass deposits, bank guarantees of vendors undertaking the various jobs. A city engineer module is under development by ABM with continuous consultation with the department. The module will incorporate all the aforementioned operation undertaken by the department.

1.2.10 Medical Health Department

The department is responsible for implementing various schemes of the central/state government, issuing birth/death certificate, marriage certificate, managing public hospitals, health posts and dispensaries. Currently birth/death and marriage certificate modules have been developed for department. But the services of birth/death certificate have now been discontinued and are available centrally at crsonline@gov.in. Apart from this a separate health scheme module was also developed for the department for tracking and reporting about funds and their usage for health related scheme as per formats shared by government. The usage the module was discontinued in 2010, as it was difficult for the developer to keep up with the revised formats of reporting that were being updated by the government. Currently the department is reporting on 11 online platforms as mentioned below:

- Daily Incoming & Outgoing Mails
- RCH PORTAL
- DHIS & HMIS
- Tally Accounting
- Public Financial Management System (PFMS)
- Inventory Stock
- Maternal Death Entry
- E-Aushadi
- Pradhan Mantri Surakshit Matrutva Abhiyan
- Vaccine Management
- National Identification Number (NIN)

1.2.11 Solid Waste Management Department

SWM department is responsible for collection, transportation and disposal of municipal waste generated in the city. Typically solid wastes is collected from the households in segregated manner, dumped at certain location, waste is picked up from those locations by bigger carriers and transported to the treatment plant or processing units and finally dispose the residues in the landfill site. But process being followed in KDMC involves collection of waste from source, transportation and disposal at dumping ground. The department currently maintains the data for its daily operations in registers at:

- For street sweeping and door to door collection at chowkies
- For vehicles at the garage
- For disposal at the dumping ground- entering data on no. of trips made by vehicle

The department is currently developing GPS based vehicle tracking module for monitoring the waste collection process in the city.

1.2.12 Electrical Department

The department is responsible for electrical works in KDMC. The department undertakes operations under two heads i.e. projects and maintenance. Under projects the department is responsible for preparing estimate for the project. The estimates are currently being prepared using city engineers module. These estimates are then submitted for administrative approval, if approved the department under takes the entire bid process management from tendering to issuing work order. Under maintenance the department has one person appointed in each ward office who is responsible for monitoring and allocating tasks related to complaints or maintenance to the respective contract on very day basis. Simultaneously the department is also responsible for processing the bills for contractor.

1.2.13 KD Transport Undertaking Department

The Kalyan Dombivli Municipal Transport Undertaking - KDMTU is a public transportation wing of Kalyan Dombivli Municipal Corporation, operational since 1999. KDMTU services the entire Kalyan Dombivli City. It also has operation outside city limits into neighboring Navi Mumbai, Panvel, Ulhasnagar, Badalapur & Bhivandi, Thane.

Since 2012, KDMT has been generating passenger tickets through Electronic Ticket Issue Machine (ETIM). Presently 250 ETIM machines are in operation along with the software & hardware of the system. The existing entire ETIM system is operated & maintained by the operator on BOT basis.

Information about bus service operation.	Present status	Remark
Total No. of Buses	171	
GPS installed buses	71	47 more buses are expected
No. of Routes	74	As per plan (79)
No. of Depot	1	1 more depot is being planned for
No. of Bus Stands	04	02 more bus stands will be added soon
No. of Bus Trips per Day	2061	
Expected Bus Travelers Per Day	45000	

KDMTU presently has ETIM system in place to record their daily operations data. Following data points are captured in the system for every ETI machine being used:

1. Conductor and driver details

2. Bus no.
3. Route no.
4. No. of trips
5. Time taken per trip (start time and end time)
6. ETIM and C-tray no.
7. Total cash collected
8. Total tickets sold (via ETIM and hard tickets)

Fresh data is updated in the device everyday as per the assigned route.

The department plans to develop an integrated transport management system for the bus services.

1.2.14 Education department

The department is responsible for providing primary education in KDMC. Its activities also include managing primary schools in KDMC and maintaining details of private primary schools. KDMC has 60 schools providing education upto class 8. The department is responsible for maintaining teachers' database along with record of daily attendance for teachers and students school wise. They also undertake activities in school as per the orders received from state government. The department has suggested to incorporate the aforementioned activities in the e-governance module that will be developed for the department and also check for the possibility of linking the same with state government portal for updates and notifications for the department.

1.2.15 Controlling of encroachment & unauthorized construction Department

The department is responsible for keeping a check on unauthorized constructions in KDMC limits, co-ordinating with town planning department to find the details of the construction, issuing notices/warnings to the respective parties and subsequent demolition of unauthorized constructions. The department also coordinates with legal department for court cases related with encroachments and demolitions. The department undertakes activities as per the GR issued by state government on 2nd Mar 2009. According the department has one ward officer assigned for each ward who is responsible for identification of unauthorized construction or encroachments and taking actions against them. The department has three SOPs (Standard Operating Procedure) drafted for Structure audit, unauthorized construction and encroachments.

The department is also responsible for tracking and monitoring of unauthorized mandaps/pandals, banners/posters, along with identification, demolition and relocation of unauthorized temples. The department also monitors hawkers in the city and takes action on them as the street vendor's act 2014 of GoM.

1.2.16 Stores department

The stores department of KDMC is responsible for maintaining stock of furniture, stationary, pesticide and equipment/tools required by sanitation department. All the other department like projects, It department, health and electrical department have their own stores section. The department prepares rate chart for the material maintained by the stores department, based on the same the department undertakes tendering process and a vendor is appointed. The department procures the required material from the vendor as per the rates finalized in the contract. The department maintains a detailed inventory of all material procured and supplied.

1.3 Other Departments with no operations on digital platform

1. Legal Department
2. Sanitation Department
3. Drainage Department
4. Vehicle department

5. Audit Department
6. Vigilance and Quality control department
7. Engineering accounts department
8. Local body tax department
9. Women and child welfare department
10. Public health department
11. Project department
12. Slum improvement department
13. Housing department
14. Estate department
15. Public works department
16. Record department
17. Security department
18. Public relation department
19. Social development department
20. Election department
21. General administration department
22. Labor department
23. Ward office

1.4 Details of Present Hardware

Servers at KDMC				
Sr. No.	Description	Nos.	Year of Purchase	Purpose
1	Infiniti GL 2700 BD-2 with 2*36 GB SCSI HDD 10K RPM , 2*512 MB DDRII PC2-3200 with RAID and Reduntant Supply with dual Xeon 2.8GHz CPU 1MB L2 Cache 800FSB	1	2005	MAInet application server
2	Infiniti GL 2700 BD-2 with 36 GB SCSI HDD 10K RPM , 2*512 MB DDRII with single Xeon 2.8GHz CPU 1MB L2 Cache 800 FSB	1	2005	KDMC WebServer
3	Infiniti GL 2700 BD-2 with 36 GB SCSI HDD , 2*512 MB DDRII with single Xeon 2.8GHz CPU	1	2005	Software Development server
4	Sun V240 Server with DVD ROM Drive- Redundant Power Supply (with separate power cords)- 17" Colour Monitor , Solaris 10	1	2006	KDMC ORACLE MAInet DATABASE
5	Intiniti Global Line 2700 HLN with Xeon 3.2 GHz CPU 2MB L2 Cache 800 FSB, 4* 512MB DDR2 400 MHz, 73GB HS Ultra320 SCSI HDD 10KRPM, RAID SCSI LSI	1	2006	GIS Development SERVER

6	Intel Xeon DP 5060 , Intel(R) Xeon(TM) CPU 3.20GHz 4MB L2 cache, 4.0GB FB-DDR2 , 488GB Seagate ST3500410AS (SATA) , 70GB LSI MegaRAID 8408E SCSI Disk Device (Fibre) 486GB LSI MegaRAID 8408E SCSI Disk Device (Fibre), HL-DT-ST DVDRAM GH22NS50,MS Windows Server 2003 "R2" Standard 32-bit SP2	1	2007	GIS LIVE server
7	Intel Xeon DP 5060 , Intel(R) Xeon(TM) CPU 3.20GHz 4MB L2 cache, 4.0GB FB-DDR2 , 488GB Seagate ST3500410AS (SATA) , 70GB LSI MegaRAID 8408E SCSI Disk Device (Fibre) 486GB LSI MegaRAID 8408E SCSI Disk Device (Fibre), HL-DT-ST DVDRAM GH22NS50,MS Windows Server 2003 "R2" Standard 32-bit SP2	1	2007	HRMS Development Server
8	Intiniti Global Line 2700 HLN with Xeon 2.0 GHz Dual CPU, 4GB DDR2, 143GB HS SCSI HDD , HL-DT-ST RW/DVD GCC-H23N , Windows Server 2003 R2	1	2008	Double entry accounting system (DEAS) Application server and Web Server
9	Intel Xeon 1.6 GHz Dual CPU, 8GB DDR2, 70GB HS SCSI HDD ,500GB HS , TSSTcorp CDDVDW SN-S082H ,MS Windows Server 2003 Enterprise 64-bit SP2	1	2008	HRMS Production server
10	Intel Xeon 1.6 GHz Dual CPU, 8GB DDR2, 70GB HS SCSI HDD ,500GB HS , TSSTcorp CDDVDW SN-S082H ,MS Windows Server 2003 Enterprise 64-bit SP2	1	2008	HRMS EPPRD