







In a century of rapid population growth, urbanization and climate change, the global challenge facing the management of natural resources requires multifaceted solutions.

These solutions must include enhanced supply, with many more customers in disparate urban and rural locations. In this environmental financial and operational efficiency is essential. Technology is necessary to drive dynamic systems and process control to achieve increased performance.



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About Earthview



Earthview is a Company established to provide technology solutions in the management of natural resources in four sectors-water, energy, land and transport.

The founders of Earthview include Directors of KAPS Limited which is the leading provider of car parking, access control and revenue management systems in the East African region.

Founded in 1999. KAPS has made several innovations including the development of its own proprietary world-class software; installation of specialized real world automation and data capture solutions which together have been both pioneering and marketing leading in their business structure, implementation and management.

In 2017, Earthview was launched to on the shoulders of KAPS with a first key focus on the automation of utility management in the water sector. To achieve this, Earthview's mission is to provide a unique and bespoke product suite of enterprise resource planning (ERP) software, communication modules and digital metering technologies developed as an integrated platform to WSPs and the private sector.

With this key focus on water, the Majisoft billing platform was also acquired and re-developed following its application in Kenya's water sector over 9 years during which it was proven as most established and robust platform of its kind.

The synergy of providing a billing platform such as Majisoft within an ERP was based on the need for WSPs to have an integrated solution. Further, this development built on Earthview's market leadership in the provision of smart water meters for bulk and domestic use that are now installed in 19 counties across Kenya to provide real time metering and data through a web-based portal.



With this history, Earthview takes the opportunity to present to you a tabulated comparison of performance overtime for WSPs who have entered into contract and deployed Majisoft in the last 9 years.

Earthview's ERP Historical WASREB Ranking and Performance

	Water Service Provider (WSP) using Majisoft Billing Platform	Date of Installation	WASREB Ranking in the Year of Installation	WASREB Impact 10 Score 2016/17	WASREB Impact 10 Rank 2016/2017
1	Nyeri Water and Sanitation Company Ltd	2/12/2009	1	183	1-Very
2	Gusii Water and Sanitation Company Ltd.	8/10/2010	56	56	46-Large
3	Murang'a Water and Sanitation Company Ltd.	5/9/2011	6	89	3-Large
4	Ngandori Nginda and Sanitation Company Ltd.	8/8/2012	7- Rural	120	14-Large
5	Muranga's South Water and Sanitation Company Ltd.	13/8/2012	32-Rural	92	24-Large
6	Ruiru-Juja Water and Sanitation Company Ltd.	6/5/2013	7	n.c.d	n.c.d
7	Export Processing Zones Authority (EPZA)	17/10/2013	N/A	N/A	N/A
8	Karuri Water and Sanitation Company Ltd	14/6/2014	86	114	22-Medium
9	Kiambu Water and Sanitation Company Ltd.	22/6/2014	96	100	34-Medium
10	Mathira Water and Sanitation Company Ltd	23/9/2014	69	42	19-Large
11	Gatanga Water and Sanitation Company Ltd.	9/11/2014	n.c.d	42	34-Large
12	Gitaru Self Help Water Project	16/12/2014	N/A	N/A	N/A

N.B Export Processing Zones and Gitaru Self Help Water Project are not WASREB Regulated

With the exception of Gusii Water and while the successful performance of these WSPs cannot be singularly placed at the door-step as the responsibility of the robust and

comprehensive billing capabilities of Majisoft, Earthview contends that the steady

improvement of these service providers in revenue, reduction in NRW, customer relations and expansion of their coverage and effective management in growth in connections.

Our mission is to create positive impact in the lives of our partners and citizen customers by providing smart technology that improves well-being.



EARTHVIEW'S IWMS SOLUTION BILLING AT THE HEART OF THE SOLUTION



Module 1-Majisoft Billing Solution

The heart of the Earthview IWMS is its Majisoft billing solution.

Beyond the generation of water bills, the Earthview IWMS, internal summary billing reports for regions, zones and routes are generated before actual bills are printed or sent for verification purposes. The billing module utilizes the tariff engine's set values to process bills. Billing can be done in groups of zone or sub-zone. Bills can also be sent via SMS, Email or hardcopy.

Earthview's IWMS has a key foundation in getting the billing data correct and then builds on this to provide a comprehensive utility and customer information management system with the following functionalities:

- 1. Graduated Tariff and user defined Flat rate tariff
- 2. Billing of water, sewerage, refuse and water kiosk rental fees
- 3. Billing of water tankers
- 4. SMS Billing/ E-Billing
- 5. Role Based Security Features
- 6. Production of water bills and summery bills for verification
- 7. Online Receipting
- 8. Meter Request and Issuance Management
- 9. Meters Inventor Management
- 10. UFW Monitoring and Management
- 11. Part payment management (legally arranged spread and payment plan for debt Graduated Tariff and user defined Flat rate tariff
- 12. Comprehensive and intuitive customer relations management module
- 13. Aged analysis by zone, overall and customer category
- 14. Work orders management
- 15. Automated reconnection fees generation
- 16. GIS Ready (Map customer GIS coordinates)
- 17. Integrates with financial institutions payment windows through RDBC or standard flat files



- 18. Seamless integration with data loggers (Personal Digital Assistants)
- 19. SMS Bills broadcast (SMS Billing)
- 20. Online authorization validation of financial transactions
- 21. Integrates with powerful independent report generator and data analysis tools
- 22. Filtered and general audit trails for user activities
- 23. Customer application and follow-up monitoring

Earthview's IWMS has a user friendly, simple and easy to use Graphical User Interface that allows easy and straight forward interaction with the system. The different modules are easy to access. The system was developed with the average user in mind. The system does not require a computer expert to operate thus having a short learning curve. The system guarantees much greater flexibility and access speeds and size due to the power and robustness of MS SQL Server

Billing Sub-Modules Overview

Customer application and follow-up Monitoring

This Earthview module allows monitoring of new customer application, customer relations approval, Technical approval, Commercial approval and connection of the customer.

This module is designed to help in monitoring of new connections with aim of quick follow-ups and approvals to hasten the process of new customer connection.

Meter Reading

This module is used for capturing and editing of meter readings prior to billing.

This includes definition and management of billing periods, download and upload of meter reading information to and from data loggers (Personal Digital Assistants), Calculation of consumptions, editing of readings and capturing of master meter readings for eventual Non Revenue Water reporting.

Customer Registration/Connection

This module is inter-linked with customer application monitoring to help route out duplication of roles. Once the customer's application has been approved, the customer data is electronically pulled into registration module and connection module for customer formal data capturing and connection.

The customer registration module is also used for customer data editing while the connection module can be used for connection editing.



Module 2-Hasibu Accounting Module

The objective of Hasibu as accounting is to provide information about the financial position, performance and changes in financial position of an enterprise that is useful to wide range of users in making economic decisions. To be useful the accounting information must possess the characteristic of reliability, relevance, understand-ability and comparability.

Reliability

Information is said to be reliable if it is free from error and bias and faithfully represents what it seeks to represent. Information must be believed and depended upon by the users for a given purpose. To ensure that information is reliable, it must be verifiable, neutral and faithful in representing the economic condition.

Understandability

The accounting information must possess the quality of economic significance to the user, i.e. to understand the content and significance of financial statements and reports. The qualities that distinguish between good and bad communication in a message are fundamental to the understandability of the message. A message is said to be communicated when it is interpreted by the receiver of the message in the same sense in which the sender has sent.

Relevance

Information is said to be relevant if it influences the decisions. To be relevant, information must be available in time, must help in prediction, and help in feedback.

Comparability

The quality of information that enables users to identify changes in the economic phenomena over a period of time, between two or more entities. Accounting reports should be comparable across the firms to identify similarities and differences. To be comparable, accounting reports must belong to a period, use common unit of measurement and common format of reporting.

Accounting Software Core Modules

Accounting software records and processes accounting transactions within functional modules such as accounts payable, accounts receivable and payroll together, these modules function as an accounting information system. You can use this list to see if a module may be useful for your business and then search for accounting software that has these modules.

General Ledger Module

A General Ledger is the central repository of the accounting records and data. Functionality of the General Ledger module:

- a) The general ledger is the central point for accounting information, receiving entries from
- b) The general ledger is the basis for creating key financial documents, including trial balance, balance sheet and profit and loss statement.
- c) The general ledger is used to record financial transactions not recorded in other modules.
- d) The general ledger creates a trail of information used for audit purposes.



Hasibu Sub-Modules

1) Chart of Accounts Sub-Module

A chart of accounts is a list of the accounts used by a business in the accounting process.

Functionality of the Chart of Accounts module

- •The chart of accounts uses a series of codes to identify assets, income, expenses and equity being tracked by the system by the accounting system.
- The chart of accounts determines the level of detail of the information tracked and the reports generated by the accounting system.
- •The chart of accounts can use sub-coding at the department, location, project, funding source, division, and work order or activity level to gather more detailed information if required.

2)Trial Balance Sub-Module

The trial balance is a listing of all accounts in the company's chart of accounts that lists the balances in each of these accounts at a particular point in time.

Functionality of the Trial Balance module

- The trial balance will have the balance for each account in the chart of accounts.
- The trial balance is used to create all other financial statements, including the balance sheet, income statement and cash flow statement.

3) Balance Sheet Sub-Module

A balance sheet is often described as a "snapshot of a company's financial condition".

Functionality of the Balance Sheet module

•The balance sheet is used to create reports on cash flow, budgets and conduct other financial analysis of the business's financial condition.

4) Accounts Receivable Sub-Module

Accounts receivable are the money owed by customers to the business.

Functionality of the Accounts Receivable module

- The accounts receivable module handles the invoicing of customers and processing of customer \ payments.
- The accounts receivable module is often used to create bills or invoices to send to customers.
- The accounts receivable module often has the ability to recognize deposits to bank accounts so that deposit information can be uploaded and applied to customer accounts automatically.
- The master files contain customer information, including name, address and phone number.
- The accounts receivable aging report will show all money due to the business by the customer and will be able to show how long the customer's balance has been outstanding.

5) Accounts Payable Sub-Module

Accounts payable are the money owed by a business to its vendors.

Functionality of the Accounts Payable module

- The Accounts Payable modules track money due to vendors, discounts, and payment terms for all invoices.
- This module has the ability to print computer-gener ated checks to vendors.
- The accounts payable master files contain vendor information, including name, address and phone number.



The Point of Sale Sub-Module

The point of sale is the place where a sales transaction takes place, which can be at a retail store, online, or in any other venue



Account Receivables (Revenue Collection/Receipting)

The receipting module is used to capture all account receivable ranging from customer bills payments to any cash collection by the organization. The module is designed to allow payments/collection from non customers. The system allows creation of chart of accounts and definition of the charts of account in regard to their purpose. Collections can range from Bill payments (Water sales, Deposits, tenders etc.). This is a very powerful and flexible account receivables module that will improve revenue collection efficiency



Debt Management

The debt management modules take over once the bills have become due after lapse of the due date. The system auto-generates disconnections list and reconnection list upon clearance of debts by clients. The system automatically posts reconnection fees to customers account. For huge debts, Part payment module is used to spread the debt to allow the customer flexible payment terms over an agreed upon period. Generation of defaulters' reports.



Meter Management

Meter Inventory module is used by the stores to capture, edit and issuance of meters. Capturing of meter statuses, removal from site. Tracking of meter movements including repairs, calibration, disposal, damages. Management of bulk and master meters. An additional Cascade allows for advanced metering infrastructure where hourly and/or daily readings can be captured on RF, GSM and IOT.



System Management, Monitoring and Supervision

This set of modules contains all relevant trails and reports and summery reports for monitoring and management. This allows the management to follow the important activities of various departments and generate summery reports for evaluation. The system reports can be exported to majority of export standards supported by windows platform for further analysis



IWMS interface/integration

These are sets of interfaces for integration with other standard applications used in utility companies to enable exchange of data. They include, financial interface for integration with financial systems i.e. pastel. Web Portal interface for export of data to web databases for online data. GIS interface for integration with GIS. SMS Interface for SMS Pushing. Bank payments interfaces.



System Administration

System administration modules are used by the system administrator to configure and maintain system users and general system administration, issuance of rights and roles to groups, activation and deactivation of users, user group transfers and user password resets.



Preset Modules

Earthview IWMS's preset modules are those modules that are optionally enabled or disabled depending on suitability. New Connection/change of tenancy (Name) charges – helps in automatic debiting applicable new connection or change of tenancy (Name) charges to the customer's account

- 1. Penalty charges helps in setup of applied penalties
- 2. Refuse charges set-up
- 3. Monthly structural rentals
- 4. Only sewer accounts for management of account that are billed sewer only
- Customer classification helps in creation of different customer classes for customer classification to help in customer grouping to put together and identify special customer like hospitals and Government institutions.

Financial Integration

Data migration between Earthview's IWMS and financial systems is done internally without requiring the use of an intermediate data source if the financial system supports standard relational database models like SQL Server, Oracle, and Dbase etc. simple selection of data and filtering is done for update of general ledgers in the financial system.

Summarization of data for transfer can be done on daily, weekly or monthly basis depending on the preference of the user. Transferable information includes receipts, adjustments, and bills.

SMS Interface

Majisoft has an interface for pushing the monthly bills through SMS. The SMS data is prepared in a format acceptable by the Bulk SMS System. The system allows for integration with third party Bulk SMS systems for SMS query application

Web Portal Interface

This tool provides an interface between the primary system database and the web portal database to allow flow of information to allow access of customer information via the company website. This can be implemented where the company has a corporate website.

Data Loggers (Personal Digital Assistant) Automated Meter Reading

Earthview has a seamless integration with PDA's (Data Loggers). The system allows upload of meter reading information to the gadgets and download of readings from the gadgets on a click of a button.

GIS Interface

Earthview's IWMS has a provision for exchanging Customer information and billing Data with GIS Software. The system has a pre-defined dataset that GIS Applications can utilize by connecting to Majisoft database. Other datasets can be created on the GIS Software. Majisoft can be integrated seamlessly to GIS through ODBC or data can be transferred through standard flat files

Payment Interfaces (Bank/POS/M-Pesa)

Majisoft is capable of receiving money from other points of sale like banks, M-Pesa or SACCOs. Majisoft updates customers' accounts directly as long as the information meets the required format standards. The system can receive data from any point of sale with standard form of reporting.

Online Financial Adjustments

The online financial adjustment module is used for authorization, verification of financial adjustments before posting to customers' accounts. This allows for appending of digital signatures to debit and credit notes to ensure no adjustment is posted without proper authorization and approval.

SMS Query

Majisoft has an interface for pushing the monthly bills through SMS. With integration with web Portal, the system allows pushing of customer information to an online database to allow customers to query their balances through websites or with their mobile phones through an online FTP Server. The system is ready for integration of third party SMS query applications



Software Architecture

The billing Software will be installed and operated on one site. Majisoft utilizes a client server architecture where the client(s) "user machines" are installed the Graphical User interface and the backend database is installed on a file server.

An optional general enquiries and point of sale is available for other stations outside the head office with minimal functionality. Information between the primary server and out station machines is done via encrypted standard flat files.

Back-end Database

The Back-end database is MS SQL Server 2005 standard edition or higher version. Microsoft SQL Server is one of the most robust Relational Database Management Systems. It runs on windows platform and accessed through ODBC or RDBC. MS SQL Can is optimized to hold large data with high speed data querying. It is a highly scalable platform.

Module 3- Huduma People Management - HR, Payroll and Benefits Management

Earthview's IWMS's People Management Module branded as Huduma brings out the best and highest in the productivity of employees in order to contribute to organizational success. The Huduma Module sets the tone to organize staff in organization/company. Human Recourse Department has an importance of back bone within the structure of organization. Its basic purpose is organizing company employee hiring, staff's management, employee's related issues like recruiting, hiring, departments assignments, department's collaboration salaries generation, performance management, allowances and increments.

Payroll a Sensitive Area of WSP Management

Payroll system is slightly different from HR System. Payroll is a process by which the employee of organization receives their salaries. For this system deals with the functions that involves balancing and integration of payroll data. It also includes depositing & reporting of payroll system information. Payroll system also takes care of wages generation, deductions and employee record keeping processes.

At the heart of Huduma is the HR Information Database which forms the employee information database.





The Huduma Module has 4 sub-modules as follows:

- People Management 1)
- Payroll Management
- Benefits Management
- 4) Biometric Attendance Management System

The Huduma People Management Sub-Module has the following features:

- Employee TA/DA Management System
- 2) 3) 4) 5) 6) Over Time Management System
- Payroll Center Management System
- **Employees Leave System**
- **Employee Allowances System**
- Report Generation System
- 7) Loan Term & Conditions
- **Employees Allocated Resource Management** System



Payroll Systems

Payroll systems are an important part of HR systems. Having an HR system allows an organization to keep employee data integrated with payroll data, which can be very helpful when it comes to making changes in pay, scheduling and keeping track of employee hours.



Employee Self-Service

Many companies find employee self-service to be an invaluable feature of HR systems. Employee self-service may allow employees to view and make changes to their information, submit time off requests, communicate with peers and HR professionals, and view schedule information. Self-service portals are often accessible through any mobile device, increasing convenience and timeliness for employees and managers.



Performance Reviews

Paper performance appraisals can be a hassle and are somewhat limited in scope and effectiveness. When performance management is done using an HR system, information regarding performance is collected on a continual basis. Managers can then tap into information directly from the system without having to dig through paperwork, and even fill out appraisal forms directly in the system.



Benefits Administration

Benefits open enrollment times can be confusing and hectic, but both the confusion and time spent on the process can be cut down by investing in an HR system that offers benefits administration. Systems that include this feature walk employee through enrollment, simplifying steps and explaining aspects of policies that may be unclear. Benefits administration features often make it very simple for employees to make changes to benefits when life changes occur, as well.



Recruiting and Onboarding Options

Recruiting and onboarding are integral parts of human resources management, but can be time consuming. HR systems can make it easy to place job postings on social media and company websites, simplify the application process, filter applicants by qualifications, and even transfer information into employee files when hiring decisions have been made. Employee Management System



Cascade Smart Metering

saving water

Cascade is an innovative software platform that helps you saving water.

Measure - Monitor - Monetize

Cascade software allows users to measure quantitative and qualitative aspects of water and enables an integrated water resource management service.

By continuously measuring relevant parameters of water you can monitor and optimize processes, policy and usage of it.

It also enables the calculate and transform the parameters in economic terms. Thus facilitating a a true value calculation and monitor of your savings.

Services:

- Bulk water abstraction billing
- · Environmental Reporting
- Water optimization in landscaping, agriculture, oil & gas and mining
- Groundwater monitoring



Earth Observation

New technologies enable a yearly, monthly, weekly or daily update of the area of operation by use of satellite imagery. With imaging and radar data one can measure change of ground structures, water levels, soil moisture, temperature and chemical elements.

Correlating water IoT data with Earth observation is one of the unique services within Cascade.

Partnerships and white label

Cascade is a new product and works with key partners within the water industry like hydro-engineering bureaus, sensor manufacturers and research institutes.

Together we create the solutions to save water.

Cascade software is delivered as a cloud based secure service and is customised for partners in a white label model.

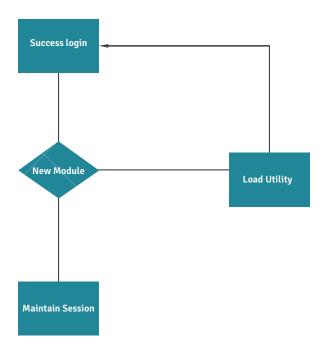


IoT

The software captures quantitative sensor data like level and flow as well as qualitative sensor data like temperature, turbidity, conductivity and other chemical elements in water. The system allows one to control the flow of data and includes essential information on the status of the the IoT connection like battery status and signal strength.



System Specifications And Modules



1.DATA COLLECTION

This shall be done directly from the hardware and hence an SDK shall be required from all manufacturers of the metering systems or data collection system that Earthview engages with.

Once this is received RDD will set up the correct parameters for all hardwares and develop a self reporting watchdog for all data collection hardware.

ROLES:

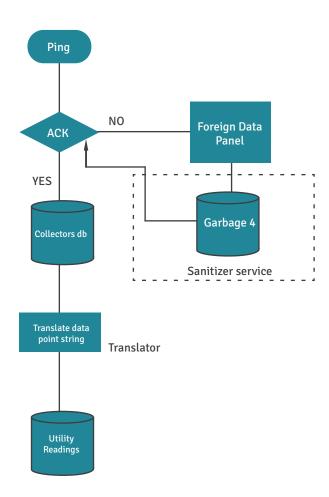
- Collect data from source
- Keep a log of meter status and parameters

2. TRAFFIC MANAGER

While some of the hardware may come configurable with a timeout and set times for data connection and sending, RDD will develop a standard and multi-hardware traffic manager shall shall queue up and send data.

ROLES:

- Set up a polling mechanism that is resource friendly
- Connect via API to the wireless communicators/ data collection points
- Authenticate source of data before sending through to main server





3. AUTO-SCALER

A software to keep tabs on performance of the traffic manager and report or cause action to maintain the performance and optimum

ROLES:

- Keep traffic manager alive
- Monitor performance of the traffic manager
- Report excessive use of resources on traffic Manager
- Auto-clone a traffic manager to ease traffic in primary

4. SQL DATABASE

This shall be the primary holder of the data sent from site and shall be stored as SQl to be imported into any database that runs on SQL.

ROLES:

- Keep an optimized and fully indexed structure of collected data, users, logs, alteration history, licences, client (hardware/software), foreign exchange
- Restrict access to data by maintaining minimized credentials per user
- Maintain and server access log
- Maintain Procedures and Functions as may be required by the web/java jobs below
- Create triggers and traps for forced access and data alterations
- Create and maintain shadow/parallel structure and data for high risk info
- Maintain binlogs oparable by Hadoop for big data
- Maintain a category of clients
- Maintain water life cycle database
- Maintain a procedure to calculate bills based on staggered billing modules with exceptions and expectation on funds, rates, categories and volumes
- Maintain a parent child relationship for all metering data collection stations
- Categorise collection points as water, sewer, trash, gas, electricity with a plan to expand

5. BIG DATA

For big data information we shall adopt and maintain already approved big data file distribution and management system called Hadoop which spreads data among many servers for ease of access and analysis.

http://hadoop.apache.org/

ROLES:

- Allow distributed processing of large sets of data
- Increase scalability and Reliability
- Detect and handle failures at application

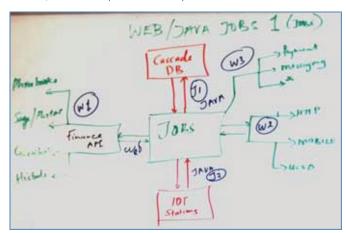
6. REDUDANT CLOUD

Specifically for security we will have a redundant cloud where all data is replicated. This hsall be an adoption of the existing data replicator with 2.0 where replication is easened by protocols rather than the full data.

ROLES:

- Maintain a backup of both protocols and data
- Allow reverse creation of data
- Connect to Simulators for demos

7. WEB/JAVA JOBS (MIDDLEWARE)



This is the core of the machine to machine communication system, after all data has been collected and stored, the JAVA and WEB jobs will receive requests from user, direct traffic to the correct processing points and finally return a message to the requesting user/client.

The jobs shall receive and respond to requests using JSON ROLES:

- Maintain end points to any cascade request or other third party access
- Maintain end points to gateways (payment, communication, etc)
- Receive and Direct as appropriate

Registration of Users

•Categorization of user by water life cycle interest

Approval Workflow

- User registration
- Permit registration
- Permit changes

Data display requests Bill queries

- Statements
- Periodic reports
- Graphical analysis
- •On spot bill request

Payment initialization

- Pay against a bill
- Pre-payment
- Maintain Float balances
- •Request payment parameters (phone, cc numbers etc)

Report Injections (on demand reports)

Change of language request

Foreign Exchange requests

STS requests

Licence management

Disbursemnt and settlement requests

- Maintain and manage traffic from clients using IP and Mac-address
- Maintain a white list and black list of clients
- Keep Alive
- Maintain threads connecting to the main database
- Maintain non-lifetime connection session between



8. BILLING AND PAYMENT GATEWAYS

The system shall work with the available billing and payment gateways that have made it possible to transaction within the east Africa region;

Billing gateways:

Adopt the database and work flow from http://munibilling.com Payment systems will allow debiting of client accounts and credit of cascade accounts.

- KAPS iVeri (http://kapstickets.com/)
- KAPS Mpesa Gateway
- Orange / Eazzy Pay gateway
- Airtel Money
- Skrill (https://skrill.com)

9. MULTI-PLATFORM USERS

Users of the system will have the privilege to access the system from desktop Application, Phone application or from an online portal as they may wish.

The key to user friendliness we shall adopt the following templates:



DESKTOP / WEBVIEW / ONLINE PORTAL

 $\label{lem:http://themeforestdemo.com/templates/themeforest/html/codex/v1.1/inverse/index.html ROLES:$

General Portal

Capture user details for registration

- Individual
- Corporate

Capture user category into the following use cases:

- Abstraction Regulator
- •Service Provision Association
- •Service Provider
- Property Manager
- Community association
- •Service Consumer
- Vendor
- Supermarket

Associate registered user with either of the following utility accounts(UA)

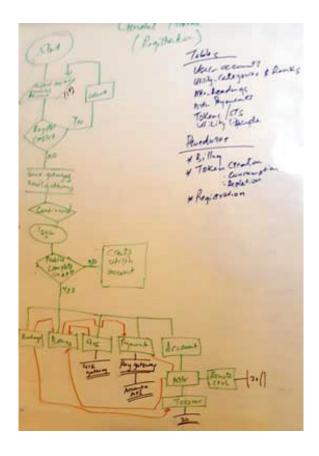
- •an already issued permit from the regulator OR
- a meter under a permit issued by the regulator using a parent-child categorization

Confirm registration details of the user by either:

- •2 step authentication by phone OR
- Email account verification

Capture user details at every login attempt (fail or success)

- •IP
- Date & time
- •OS



Display on a dashboard:

Utility data collected and presented in a summary form for associated $\ensuremath{\mathsf{UA}}$

- •Today yesterday -this week -last month -any period
- Trend of data received via line graph
- •Status of associated data collection points via GIS
- •Status of associated collection point via a pie graph
- ·Billing summary of all billed, paid, un paid
- •Commissions earned or fund deposited by the associated the UA accounts as the tariff may dictate. For instance where the UA has an associate child UA, the user shall view all cumulated commissions and fund deposits associated with their child meters

Drill down option for all above reports to all the way to raw transaction information

Allow reporting of data for the associated UA

Consumption, Payment and billing reports for all payments made to or made from the UA and an option to include or exclude the child UA in the report. This report shall be periodic and can be queried using

Date

- Data collection
- Data posting
- Payment
- Billing

UA

- Meter number
- Permit number
- Phone number
- •CIU number



Status

- Paid
- Read
- •Unread
- Un-delivered

Allow profile management

- •Email
- Phone
- •GIS information

Allow export of information

Allow comparison data for consumption, billing, payments between two periods

Allow API hook up to third party system for all data and data functionalities

Allow one time credit card and mobile pin registrations over secure algorithmns

Allow cyclic billing and automated payments as may be set by the owner of the UA this setting may cascade to the child meters as a default or as a permanent setting

Allow projections on the utility lifecycle based on the collected data

- Abstratction
- Treatment
- Distribution
- Consumption
- Billing
- Collection
- •Effluence

Maintain version

Allow for renewal of portal licensing

Allow credit analysis based on billing and payments patterns

Remote job tasking and ticketing

STS generation

ADMIN PORTAL

Workflow management

- Assigning of permits and meters and relating from parent to child
- Subcontracting approval workflow
- Registration of distribution channels and meters, monitoring of distribution
- •Reconciliation and settlement of funds and commis sions
- Support ticket management
- Purchasing
- •Testing of purchased equipment

Meter management

- Hardware Inventory
- Airtime management
- Meter setup approval process
- •Remote Meter management (incl auto disconnection)
- Troubleshooting

Utility Lifecycle management

•Step to from abstraction/manufacture to consumption

STS Management

- •Creation, distribution and status management of STS tokens
- Alerts

Tariff Management

- Volumetrics
- Fund Managements
- Tax management

Data collection Points Management

- ·Live view of all data points
- Authentication and Deactivation of collection point

Language Management

Currency and Foreign Exchange management

User management and categorizations

Support and CRM

- Connections
- Status report
- Location report
- Consumer profile
- •Termination, deposit refund, certificates
- Consumer aging report
- Technical tickets

Debt Management

- Summary
- •Zone based aging alnalysis
- Agreement statement

Non revenue utility management

Accounting Systems

- Phreebooks
- •Sage pastel
- Quickbooks

Analytics

- Reconciliaation of master and consumer reading
- Utility Distribution
- Traffic
- Leakage analytics



Why Earthview? Top 10 Reasons Why Water Service Providers (WSPs) the Choose Earthview ERP to help Transform their Business.

With Water Service Delivery being a devolved function and with Rapid Urbanization and Development happening across all counties in Kenya, the pressure to improve on hours of water supply per day, improved customer service must be balanced against managing operational and maintenance costs. For WSPs, this means facing water service demands on a daily basis with pressure from stakeholders at both internal and external levels. To win, WSPs need to rethink their business models and focus on how to grow revenue in an environment characterized by devolution.

Earthview's ERP goes beyond the limitations of traditional ERP. It is a modern day digital core integrating every aspect of the WSP while providing decision makers with never before insight through real-time analytics.

Here are 10 compelling reasons why utilities should embrace Earthview's ERP.

1. LEADERSHIP	We provide Expert Solutions for WSPS of All Sizes
2. INNOVATION	Continual Innovation Through Module Development Without Service Disruption
3. FOCUS	Benefit from Comprehensive Industry Expertise with 13 WSPs
4. ANALYTICS	Business Analytics and Reporting for Decision Making on Water Production, Distribution and Institutional Management
5. SMART METERING	IWMS connectivity to Smart Metering at Affordable Prices Per Unit
6. REALTIME	Real Time Water reduction and Distribution Information for Technical and Commercial Management
7. VALUE	Maximize Business Value By Acquiring the Earthview IWMS Module by Module
8. COST	Reduce NRW thorough accurate billing
9. SUPPOR T	Get Peace of Mind Utilizing Earthview's IWMS
10. DEPENDABILITY	24/365/7 Technical Support and Trouble Shooting

