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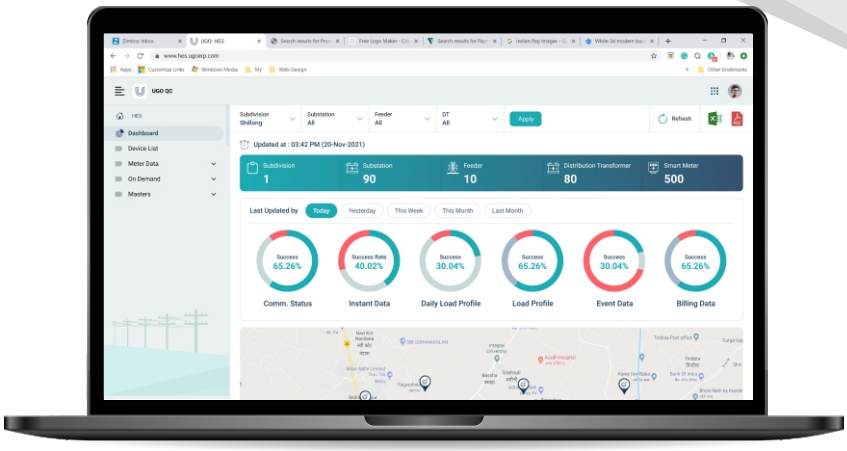
U-HES

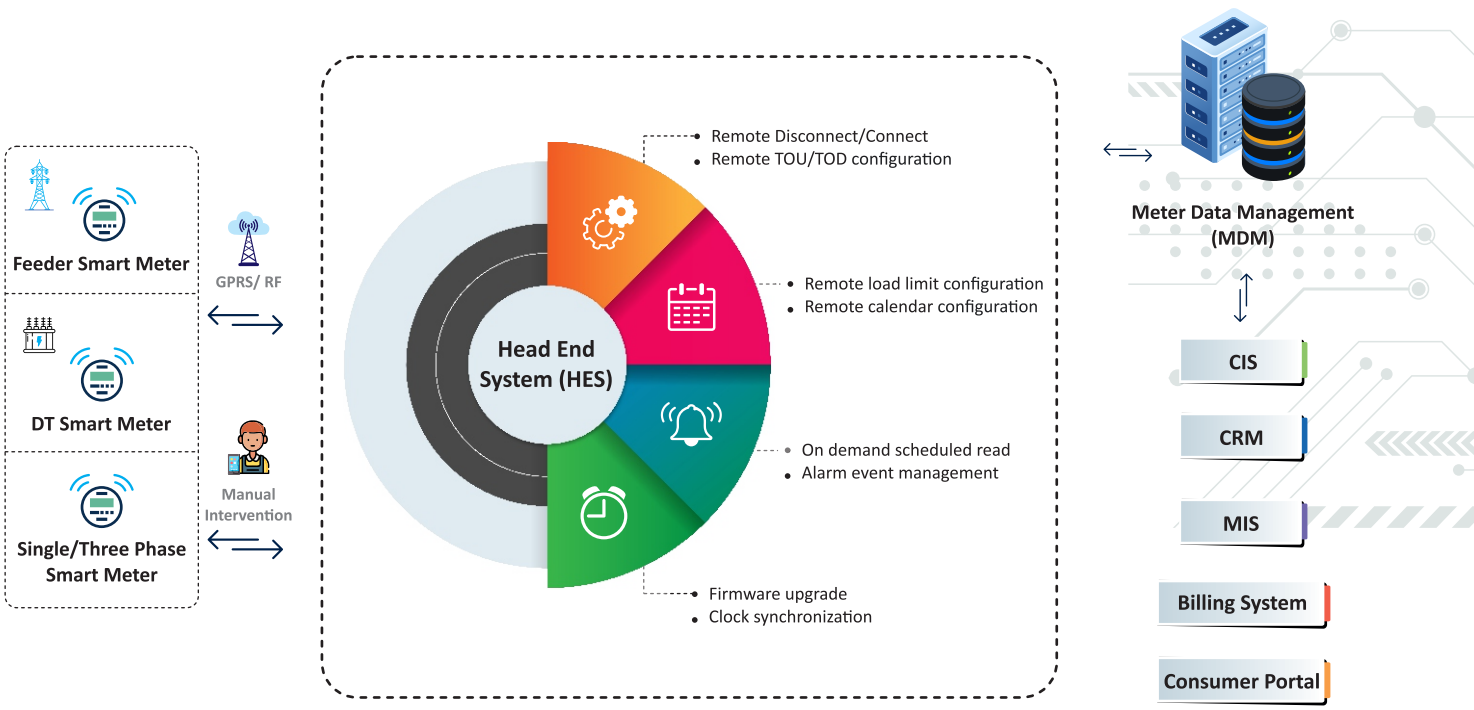
UGO UTILITY ON THE GO



Head End System

UGO Head End System (HES) operates on a secure cloud-based server. It is developed to offer secure and quality-based solution in a cost effective way.

We HES is capable to communicate via numerous channels such as 2G, 3G, 4G, NBIoT, RF, etc. It combines all the functionalities into a unified view for quick searching and data visualization as well as making informed decisions. UGO HES is completely configurable system, and it is also a forward-thinking solution built upon open standard and protocols with a scalable and flexible system.



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KEY BENEFITS

- Two-way communication capability.
- On demand and real time communication.
- All types of smart meters are supported.
- Multiple MDMs can be handled simultaneously by UGO HES.
- Scheduling of regular activities such as meter readings, disconnections, and firmware upgrades.
- Completely auditable systems.
- Consolidated view for data visualization.
- UGO HES is capable for handling multiple Channels.
- Supports open and secure, standard protocols and APIs for communication.
- Capability to store and transmit high volume of data with end to end encryption.

Key Features of HES System:-

Multiple Communication Channels

UGO HES supports multiple communication channels (RF, 2G, 3G, 4G, NBIoT etc.) and protocols. It provides ideal communication options for all customer segments and network areas.

Security

UGO HES ensures secure and reliable data flow at all system levels. Our HES has a user access management component that provides single sign-on for all system applications and centralized user access control.

Alarm Management

UGO HES can receive alarms sent by devices for various events. It communicates the alarms further to MDM, thus providing accurate information about the network status.

Monitoring and Reporting Capability

UGO HES have critical and non-critical reporting functionality. The critical & non-critical information generated from this reporting functionality shall be made available to MDM at user configurable periodicity.

HES Portable App

When any meter data cannot be acquired for whatever reason, in that case meter data are gathered from the meter using a registered and approved wireless device & mobile application.

Dashboards

It provides statistical and graphical monitoring of the meter data, meters communications, and failure networks. Power outages and meters on a heat map and all system components can also be viewed and trended graphically.

Scalability

UGO HES architecture enables decentralized system processes which are divided to meter communication, database and integration. The system performance can be scaled horizontally by adding servers to each of these layers.

Meter Job Configurations

This includes establishing the clock, billing cycle end, load profile, demand integration, net metering, firmware configuration, load limiting, current/voltage threshold, and many more meter setup tasks such as pinging the meter.

Integration

Provides easy integration for other systems to access and control smart metering devices as well as many features to help integrating third-party systems.

HES SLA

HES operations are carried out in accordance with a 99.9% SLA on a daily and monthly basis.

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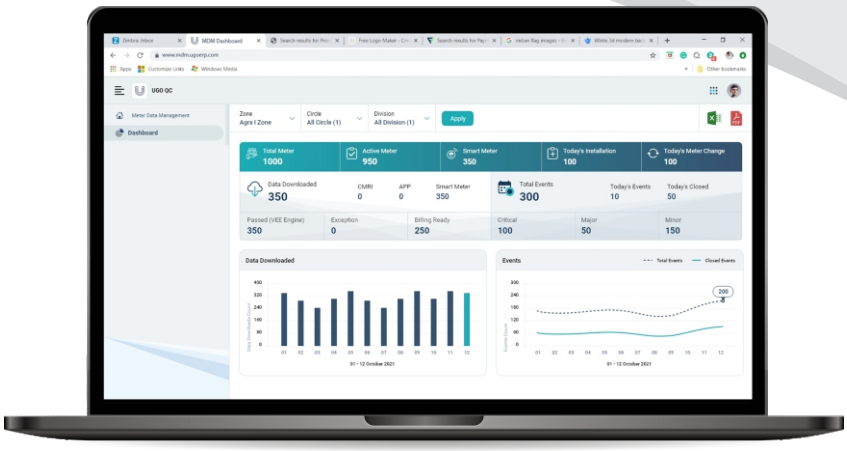
U-MDM

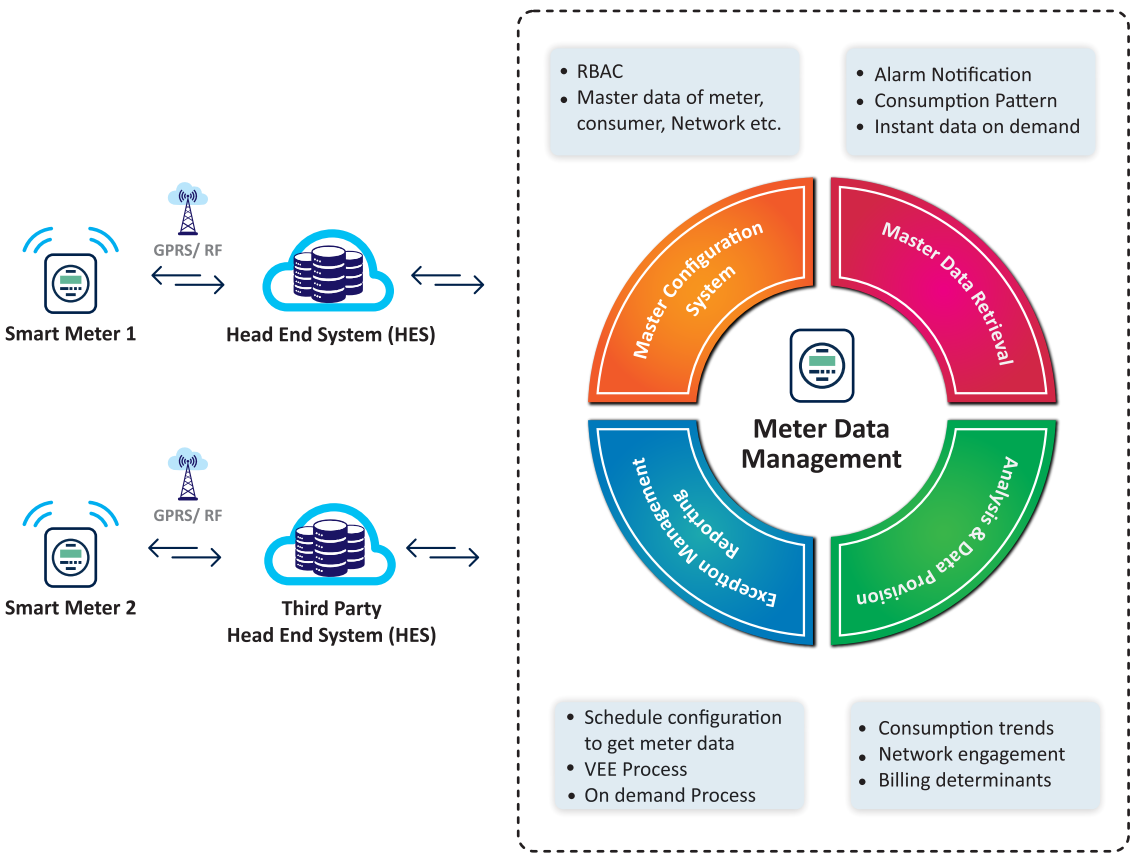
UGO UTILITY ON THE GO

Meter Data Management



UGO Meter Data Management (MDM) is a powerful platform built to leverage the full potential of modern meter data. UGO MDM's robust data management capabilities, utilities maximize the impact of their technology and infrastructure investments by effectively harnessing the power of data, to help utilities optimize and improve meters for cash flow, lower operating cost and faster recovery of implementation cost.

The UGO Meter Data Management System (MDM) validates, receives, and stores meter data such that it is conveniently available on internal and external downstream systems. It includes typical VEE capabilities (validation, estimate, and editing), which is to completely validate the supplied data and deliver the most adaptable data in accordance with utility needs. UGO MDM's primary characteristics are that it manages enormous volumes of meter data, that it can be rapidly configured to operate with a choice of leading meter HES and that it can acquire data manually through CMRI.



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KEY BENEFITS

- Event Analysis and Notifications.
- Reduces the necessity for manual data gathering and exchange.
- Implementation accelerators for electric, water, and gas utilities.
- Enhances the quality and consistency of data across systems.
- Analysis of consumer of different group and category & Theft and revenue loss identification.
- High data delivery capacity with a decentralized architecture.
- Embedded configurable business processes based on industry standard.
- It supports import the meter data by CMRI & AMR process.
- Data Capture from multiple meter types and formats.
- Streamlines data capture with Secure and reliable data transfer at all system levels.

Key Features of MDM System:-

Asset Management
Maintaining consumer and meter information such as consumer location, current installed meter position, customer information, feeder information, DT information, and so on.

Event/Alarm/ Notifications
Records alarms, events, tampering, and power outages generated by feeder, DT, and consumer meters. Provides the facility of notifications necessary to produce meter problems.

Multisystem Management
The system is capable of managing numerous channels and various billing systems simultaneously.

Automated Scheduling and Processing
The system automatically manages all scheduled and processing tasks with minimal operator intervention to support the enormous volume of daily data that needs to be collected.

Integration
Functionality of pre-built integration with multiple HES, billing system, CIS, consumer portal etc.

Automated VEE
Robust validation, estimation and editing (VEE) for interval and register data to meet data quality standards, supply billing determinants and support non-billing scenarios.

Scalable System
The system has the capacity to handle millions of meters with flawless flow integration and without any breakdown.

Interactive Graphs and Analytical Reports
MDMS performs numerous analyses on received meter data from HES and master data, taking into account various meter relationships with electrical hierarchy/ administrative hierarchy information & exception management reports.

Customer Service Support
MDMS has the provision to provide customers with access to current and historical consumption and interval data, outage flags, voltage and power quality indications in graphical and tabular form depending on user choice.

Exception Management
Workflows within the UGO MDMS focus on efficient exception management and the remediation of events related to the VEE process.

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U - SPS

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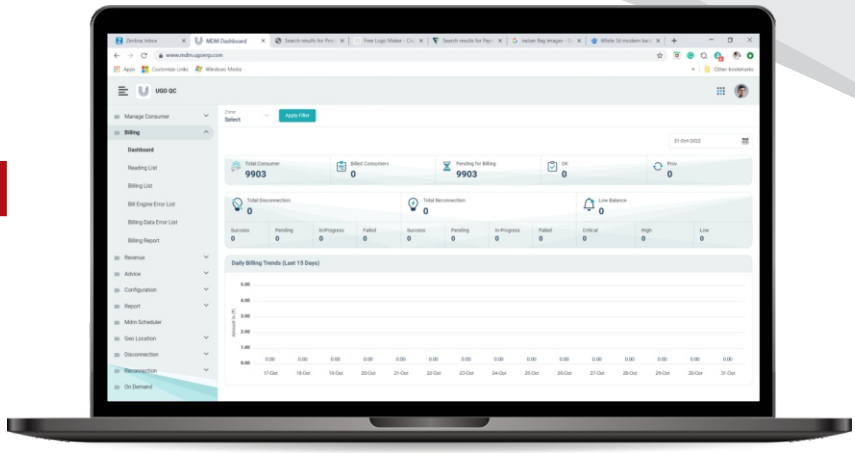
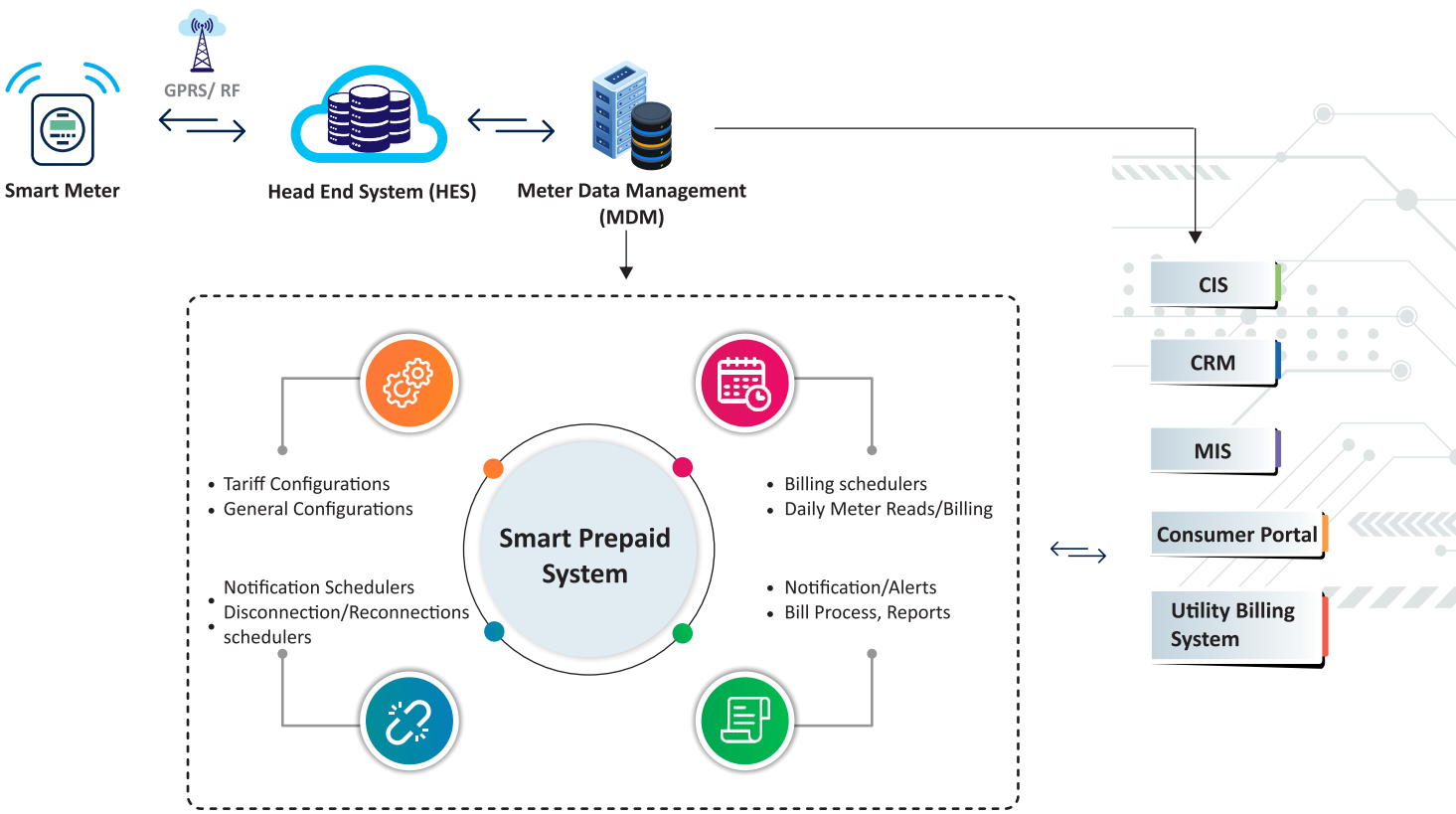
Smart Prepaid System



UGO Smart prepaid system (SPS) Real-Time, Online Utility billing software is an efficient smart-meter billing solution for service providers of water, electric, gas and multiservice utilities. It supports simple to very complex multiple utility tariff schemes along with a robust calculation engine, consumer invoicing and user tariff configuration.

UGO prepaid system delivers far greater speed, accuracy, consistency and efficiency in customer billing.UGO SPS calculates average consumption and sends alerts to consumers upon reaching a critical threshold. It enables user specific threshold configuration for critical alerts and remote disconnection.



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KEY BENEFITS

- Security Enables Module access.
- Customized tariff configurations.
- Easy Integration with all MDMs and Utilities.
- Its support multiple bill layout as per need.
- Consumer app supports, can view bills, history, recharges and more consumer related information.
- Regular billing with high accuracy.
- Automatic ability of reconnect and disconnect on real-time.
- Transparent view of consumption in near-real time to consumer.
- Lowers cost of operations significantly & all configurations are very flexible to modify and easy to use.
- UGO prepaid system having capability to reconcile the bills as per utility norms.

Key Features of Smart Prepaid System:-

Prepaid Consumer Information

Prepaid Consumer Information system contains details regarding Balance, Consumption, Daily charges , recharges & other activities (Like Emergency credit).

Meter Reading & Control

Meter Reading & Control is responsible for processing of meter read files and provisioning of meter control commands based on threshold events and account-related attributes.

Daily Reading & Bills

Billing will be done on daily basis and the calculations will be done based on configured tariff and amount will be deducted from the available balance.

Tariff Synchronization

Our Prepaid System is an efficient smart-meter prepaid solution for service providers of electric-utilities Compatible with all Types of tariffs, Net metering Billing, TOD/TOU Billing, Online Real-time reading as received from MDM.

Notifications

The below notifications will be send to the user- Low balance Notifications, Disconnection Notifications, Dismantling Notifications, Reconnection Notifications, Recharge Notifications.

Dashboard

Monitors by graphically and in trend views such as billing performance, revenue management, consumer information, reconnection, and disconnection.

Prepaid Meter Readings

Our system shall capture meter reads on daily basis from MDMS Application and Bills will be processed after getting meter reads successfully.

Rules Configuration

Configurable rules for bill calculation Reconnection & Disconnection, Emergency Credit, Happy Hours & Holidays SMS/ Notification Alert for Low balance at multiple Levels.

Recharges (Day to Day Balance Maintenance)

Recharge amount collected from the counters will be remitted instantly to SPS for further process. Application will send warning alerts to the consumers automatically when user having low balance.

Integrations

SPS Integrations with Different utilities systems like CIS, MDMS, WSS, and Consumer Portal etc.

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U-CSMI

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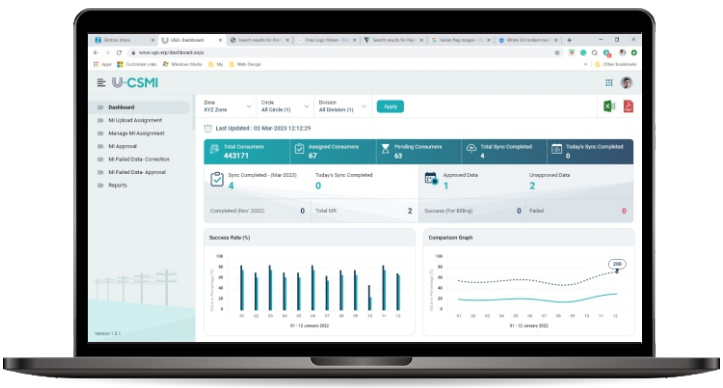
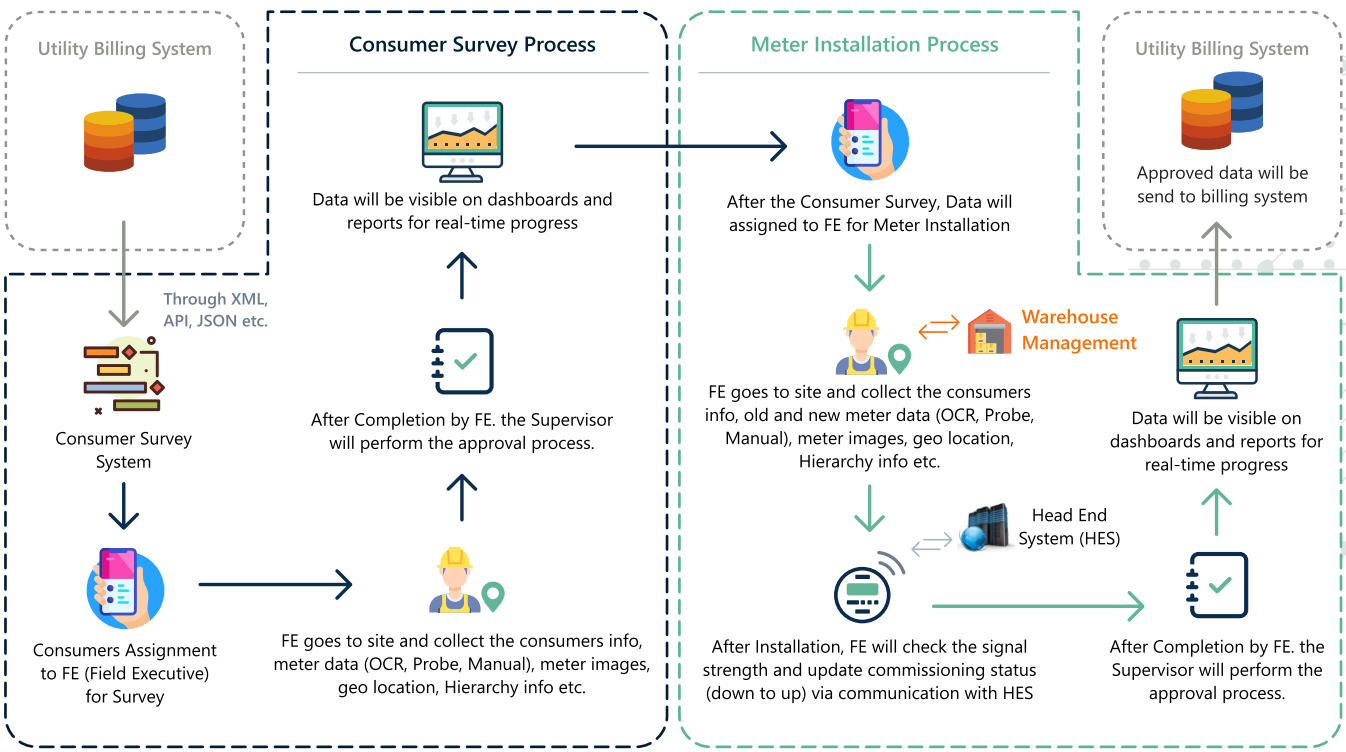
Consumer Survey & Meter Installation

UGO Consumer Survey is a cloud-based platform that allows users to upload customer data to a server, allocate it to field executives, who then conduct fieldwork and report their verified findings through survey app. It ensures correct consumer survey as it plays an important role in energy audit and billing of the consumers.

This information is directly to our servers and available for analysis and decisions. This allows for the collection of KYC information from the customer together with GPS coordinates at the time of the visit, as well as the monitoring of network performance and signal strength.





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KEY BENEFITS

- Cost savings because of increased efficiency & paperless process.
- Better and faster decision making & aids capital planning.
- Improved and accurate Energy Audit
- Improved customer satisfaction
- Integration with other system to ensure complete life cycle & business process monitoring.
- Improved confidence in all aspects of utility management
- Customization as per the clients requirement
- Better and permanent record keeping
- Instant feedback from the field for new connection
- Maintenance, quality control, plan ahead

Key Features of CSMI System :-

Cloud Based End-to-End Solution

Cloud-based end-to-end CI & MI solution for handling huge amount of data for Consumer Survey & Smart Meter Installation involving multiple vendors.

Integration with Billing System

Pre-integrated with major Billing Systems automating receiving of pre data of consumers for Smart Meter Installation and update data back after installation in seamless manner.

Interactive Mobile App

A powerful Mobile app for the field workforce to capture data both for Consumer Survey and Meter Installation including consumer hierarchy, network strength, old & new meter details, lat. Long. etc.

Ensure Signal Strength & Connectivity

Commissioning of newly installed Smart Meter with HES to ensure connectivity and on-boarding in HES in real time.

Archival

Archival of collected data during CI & MI process as evidence with facility to retrieve whenever required.

Warehouse Management

Integrated Warehouse management facility to manage assets, inventory and stock.

Web Based Application

Web based application to manage the consumer data and allocate to the field workforce of multiple vendors as per defined hierarchy.

OCR Functionality

Auto-Downloading/ OCR of old meter and new meter complete data along with multiple photos and geo coordinates.

Approval Process for Supervisor

Facility to verify the data captured during CI & MI completion work by Discom officer and after approval only updated consumer data will be pushed back to Billing System.

Reports

Real time Dashboard and MIS for various stakeholders providing status of consumer survey, meter installation work progress along with related assets and stock availability.

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ENERGY AUDIT

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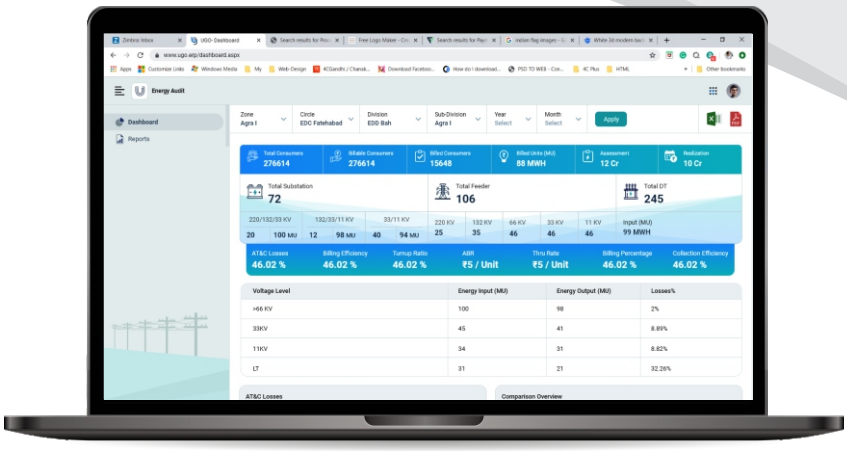
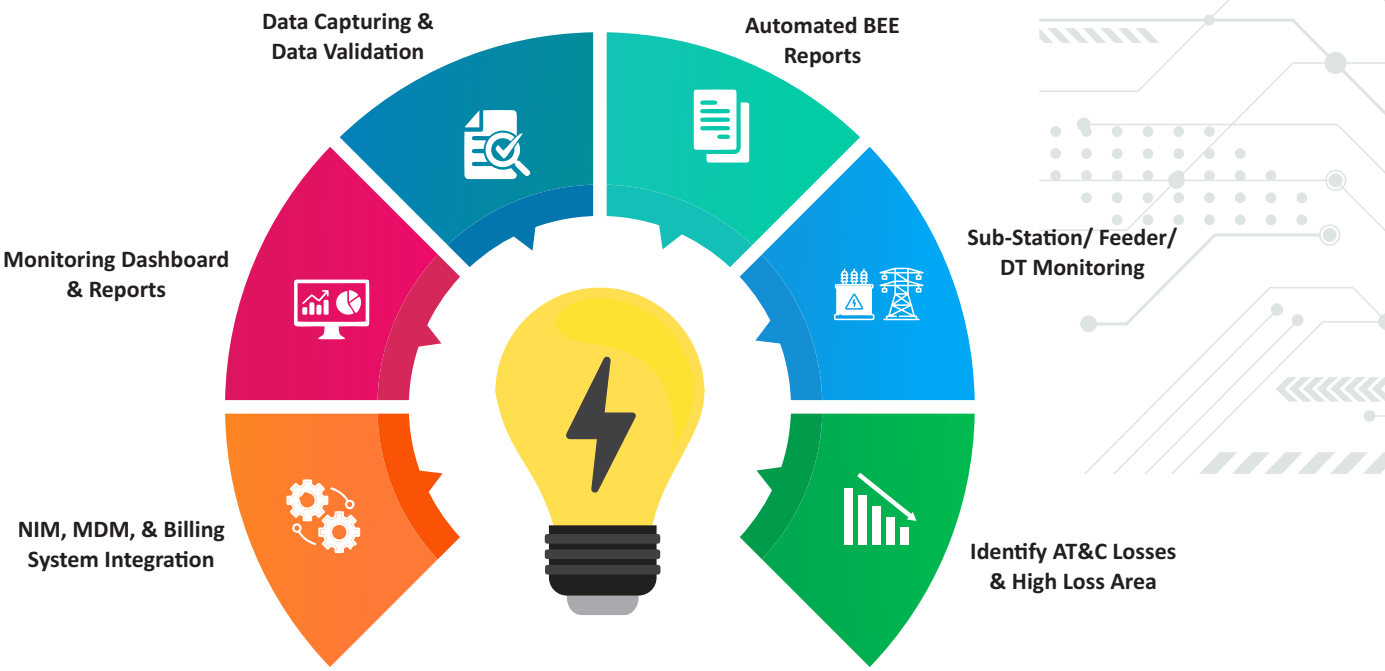


Energy Audit

Energy Audit is the key to a systematic approach for decision-making in the area of energy management. It attempts to balance the total energy inputs with its use, and serves to identify all the energy streams in a facility. It quantifies energy usage according to its discrete functions. Energy audit is an effective tool in defining and pursuing comprehensive energy management programme.

Energy Audit is defined as "the verification, monitoring and analysis of use of energy including submission of technical reports containing recommendations for improving energy efficiency with cost benefit analysis and an action plan to reduce losses. Energy audit is used to identify the AT&C loss by measuring energy input and energy output in the distribution network. It helps to highlight the areas where losses are occurring, and thus, helps to introduce suitable checks and balances to curb those losses.



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KEY BENEFITS

- Energy audits identify inefficiencies, improves the network health
- Audits extend equipment life-span, reducing replacement costs
- Empower informed decision- making for long- term energy planning.
- Reduce revenue leakages & energy consumption losses
- Identify & improve key commercial parameters (AT&C, billing efficiency, collection efficiency, thru rate etc.)
- Enhanced energy performance boosts overall operational efficiency
- Reduced energy consumption helps meet environmental regulations
- Improved energy efficiency enhances grid stability and reliability
- Energy audits help prioritize energy-saving initiatives, maximizing impact.
- An energy audit will identify energy-saving opportunities.

Key Features of Energy Audit System :-

Identify AT&C Losses and High Loss Area

Identifies AT&C (Aggregate Technical and Commercial) losses and high loss indicate inefficiencies in power utility resulting from technical and non-technical factors, leading to wastage and revenue loss for utilities.

Gaps Identification

Relating energy inputs and production output at company level, cluster level & individual substation, feeder and DT level.

Dashboard & Reports for Monitoring

Complete summarized information at single place and provides detailed analysis reports, gap reports, system reliability index dynamic listing of top/bottom.

Data Validation

Data authentication through regular check & validation and identifies the incorrect/ correct tagging of meters on feeder and DT.

Monitoring System

Activity based monitoring system such as Sub-Station Monitoring System, Industrial Feeder Monitoring, Revenue Tracking system, DT Monitoring System, Exception & ATR Analysis, Voltage level losses calculation etc.

Health Monitoring

Feeder DT health monitoring by dashboard reports with trend analysis such as overload loading, overload voltage, voltage deviation, power factor deviation monitoring, outage, etc.

Worst & Top Feeder

Monitoring the worst & best feeder in area-wise through the trend graph as per AT&C losses, SAIFI SAIDI etc.

Graphical Representation

Graphical depiction of criteria such as billing efficiency, turn-up ratio, collection efficiency, billing efficiency on circle, division, sub-division level as well as sub-station, feeder, DT level.

Integration

Seamless & Efficient Integration with Utility's legacy system during transition period & NIM (Network indexing management) system.

Key Commercial Analysis

Monitoring of key commercial parameters such as AT&C losses, Collection efficiency, turn-up ratio, billing efficiency, thru rate.

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U - NIM

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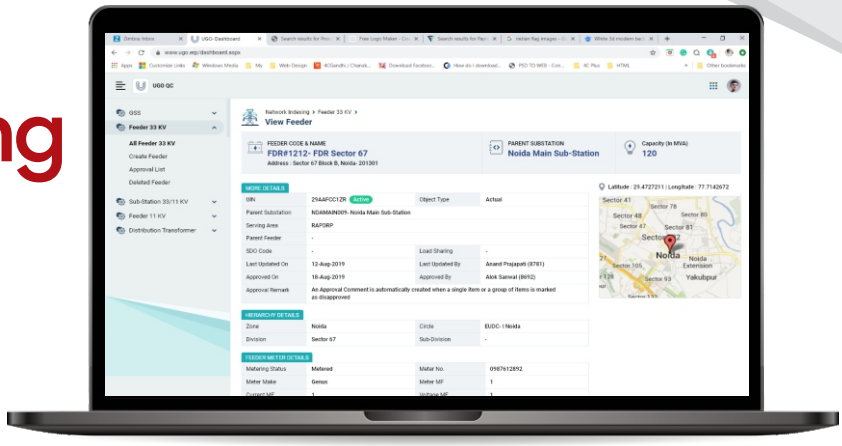
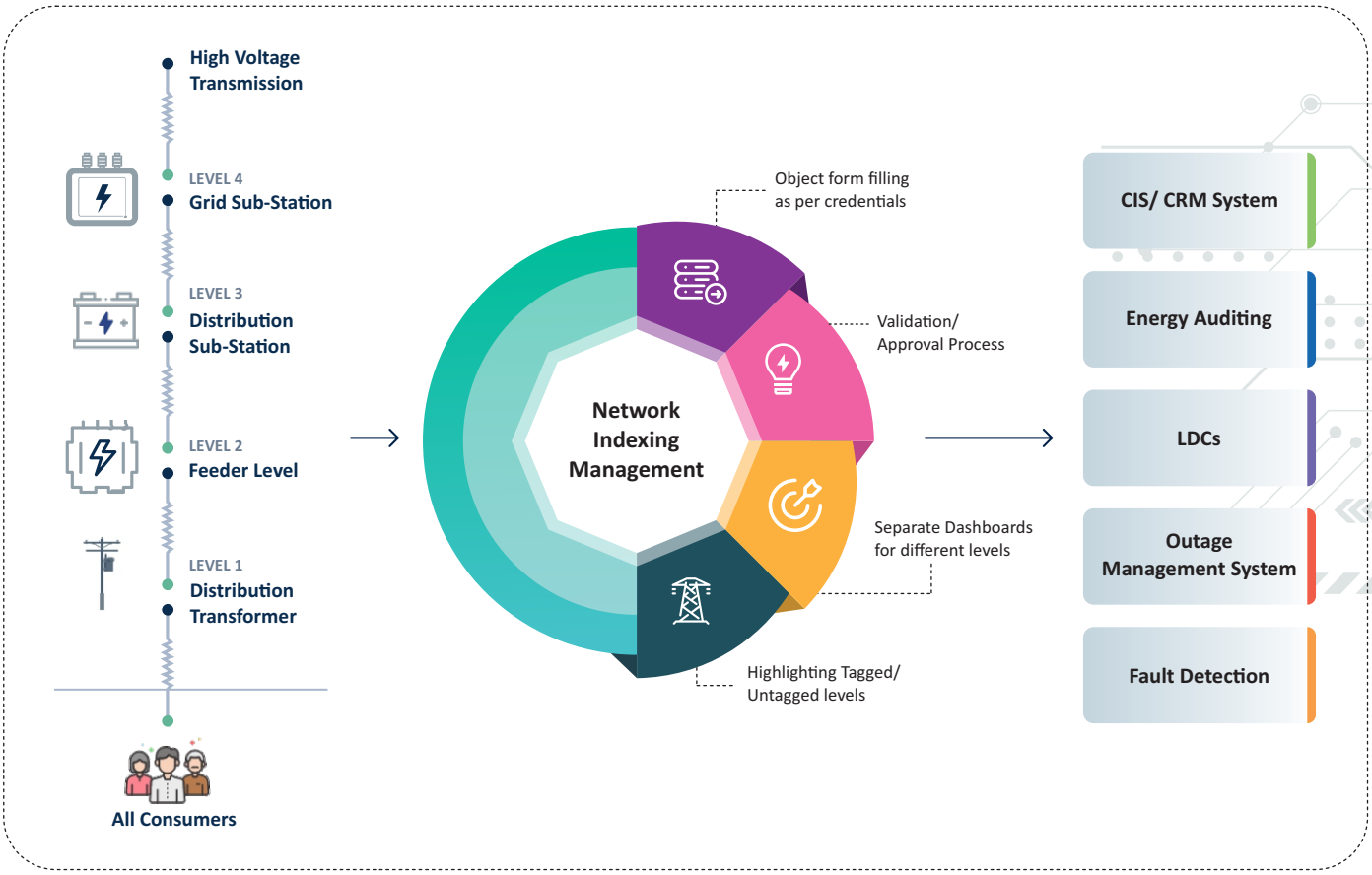
Network Indexing Management



The UGO Network Indexing Module is a flexible, scalable, and dynamic solution that will maintain the network hierarchy for power distribution. NIM can be utilized for services such as revenue tracking and energy auditing.

UGO NIM is made with an intuitive user interface that is intended to gather all data from the power distribution system and summarize the hierarchy by adding up all the data that is received from the lowest level (the consumer) to the highest level (GSS).



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KEY BENEFITS

- Manages the network hierarchy from GSS to consumer level for energy auditing, indexing, etc.
- Requires less manpower as physical survey is limited.
- An innovative, adaptable, & scalable product is the UGO NIM system.
- NIM provides voltage levels & capacity of various components, which are helpful for demand control & system maintenance.
- UGO NIM is an ongoing process which can match up with the frequent changes being done at physical distribution levels.
- Able to Acquire Information from existing GIS systems.
- Ability to send Hierarchy information through File System
- NIM allows you to edit/ change/ modify/ delete the network topology, so it can keep up with physical level changes.
- Individual dashboards and forms for all components on the NIM module make oversight simple.
- Various Components of Network system are separately managed with the help of Data abstraction, Encapsulation.

Key Features of Network Indexing Management :-

Network Indexing

Manage network hierarchy from GSS to consumer level for various applications, such as energy audit, revenue tracking, fault detection, and OMS, etc.

Data Validation

Most important aspect of NIM is the Data that is being filled, This feature helps to avoid any unrequired changes in the system and makes system more efficient.

Accommodate Metering Details

Apart Form Hierarchical in formation, there is provision to accommodate Metering Details of all Components of NIM.

Integration

Easy integration with other utility system such as Energy audit module, Billing system, MDM etc.

Modify the Network Structure

NIM has Provisions to edit/change/modify and even delete the Network structure hence it can match up with physical changes done at various levels of Electricity Distribution

Notification & Alarm

Notification & Alarm systems will be put in place for any Data edition or deletion.

Highlighting of Untagged Components

Highlighting of Untagged/ Unmarked Components of Distribution System. (GSS, SS, Feeders , DT's)

Log Entry

All log entries are recorded, such as edits, deletions and changes, and all changes are made after authenticate approval.

Single/ Bulk Information

Ability to add single or bulk information of hierarchy management that to managed/ edited/ changed makes a easy to use.

Maintain Network Hierarchy

Accumulate all data from subdivision level to zone level and sums up the hierarchy by summing up of all information received through base level (that is DT) to highest level (GSS).