TRAQbin

Integrated Waste Management System

PROUD TECHNOLOGIES

FLEXIBLE,RELIABLE,EFFICIENT

About Proud Technologies

- Founded in the year 2009, Proud Technologies has established itself as a name that is now synonymous with being the ultimate end-to-end IT solution provider. We have efficaciously strengthened our roots across Africa with our ever-evolving applications, digital imaging and communication through a combination of technical know-how, domain and process expertise.
- The urban development idea of a 'Smart City' integrates Information and Communications Technology to manage the assets and functioning of a city in a low-cost, efficient and secure manner. From Smart Schools to Smart Transportation, from Revenue Collection to Integrated Waste Management - Proud Technologies provides the digital architecture for every step of creating a smart world.

- Over the past decade, with a list of eminent and impressive clienteles and a widespread global presence, we have literally left our 'digital footprints' in the IT sector. We have been assessed at leading global quality benchmarks and standards including ISO 9001:2015.

TRAQBIN OULINES

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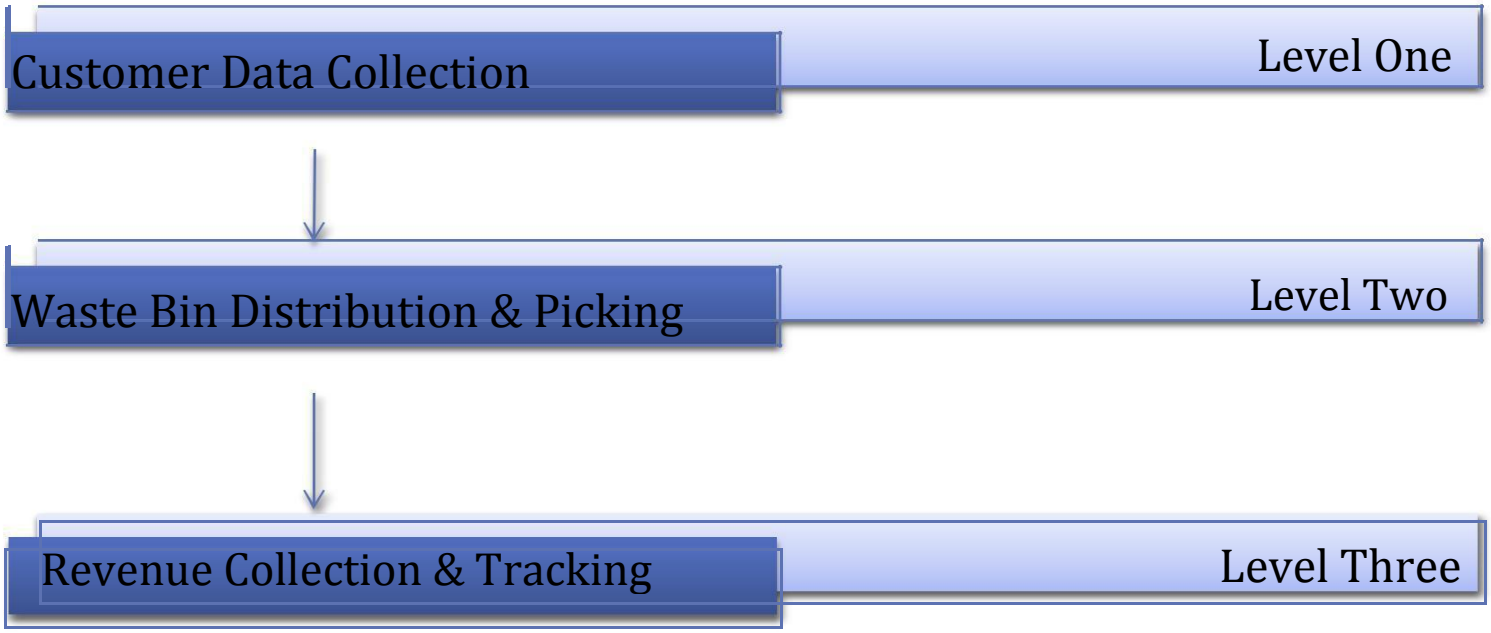
Integrated Waste Management Solution

Traqbin is our state of art solution for effective waste management which includes both collection as well as scientifically managed disposal which is successfully under implementation in Ghana ,Africa. We provide comprehensive technology solutions and application with hardware and other IT requirements to facilitate.

- **Mapping of streets, verifying of customers and households.**
- **Distribution of Bins to households & locality.**
- **Assigning of areas and agents.**
- **Providing training to local staff and agents.**
- **Maintenance of bins and revenue by RFID chip installed in the Waste bins.**
- **GPS Enabled trucks the movement and location.**

TRAQBIN IMPLIMENTATION:

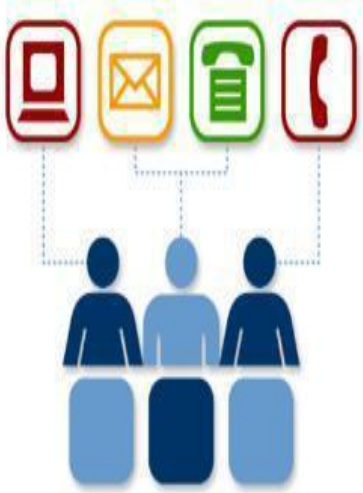


The platform that brings the whole Traqbin Live is the secure web portal Enabling optimal management of your up to 50% savings in collection costs.

Traqbin solution together, that the sensor reports to. container assets & bringing

Just some of the Traqbin Live features:

- **Grievances Management for customer**
- **Easy monitoring of service delivery by RFID Reader Installed in the trucks.**
- **Optimized Collection Routes**
- **Performance Analysis**
- **Operations Overview**
- **Traqbin Mobile**



Control Room for SWM

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Waste Bin collection application installed on the front panel inside the truck, the driver knows exactly which Bin to pick

- **Reducing miles driven and vehicle maintenance costs**
- **Minimizing dependency on dispatch and scheduling**
-
- **Improving customer satisfaction with faster response**
- **Drivers keeping eyes on the road for safer vehicle operation**
- **Managing compliance - commercial vehicle restrictions routing**

- **RFID based attendance system for the Janitors compactors(Trucks).**

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Monitoring of your containers with Traqbin means

- Routes are serviced only when needed
- Overspills, overfills and emergencies are eliminated
- Fuel cost drop significantly
- Volume per mile driven increases
- Trucks wear and emissions are minimized
- Provide a world class service
- Reduce your company's carbon footprint
- Send routes directly to drivers
- Track drivers as they service their smart routes
- Analyze and benchmark the performance of your operation
- Know the volume and value of routes before you go
- Inform your strategy with detailed KPI reports
- Customer and communities are happier

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It Is A Total Solutions For All Manner Of The Waste & Recycling.

General waste

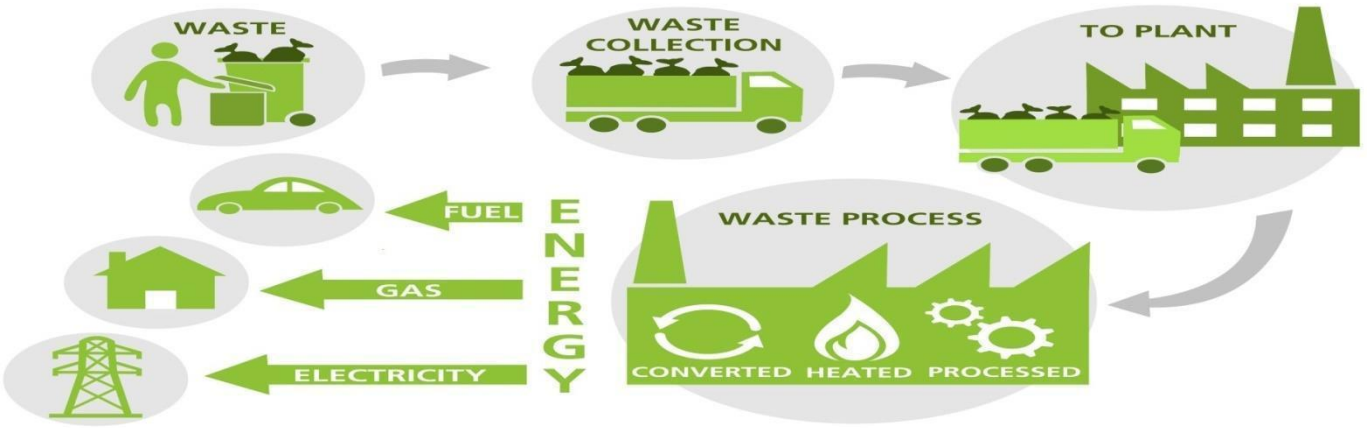
Used/waste Oil

Clothing/Textiles

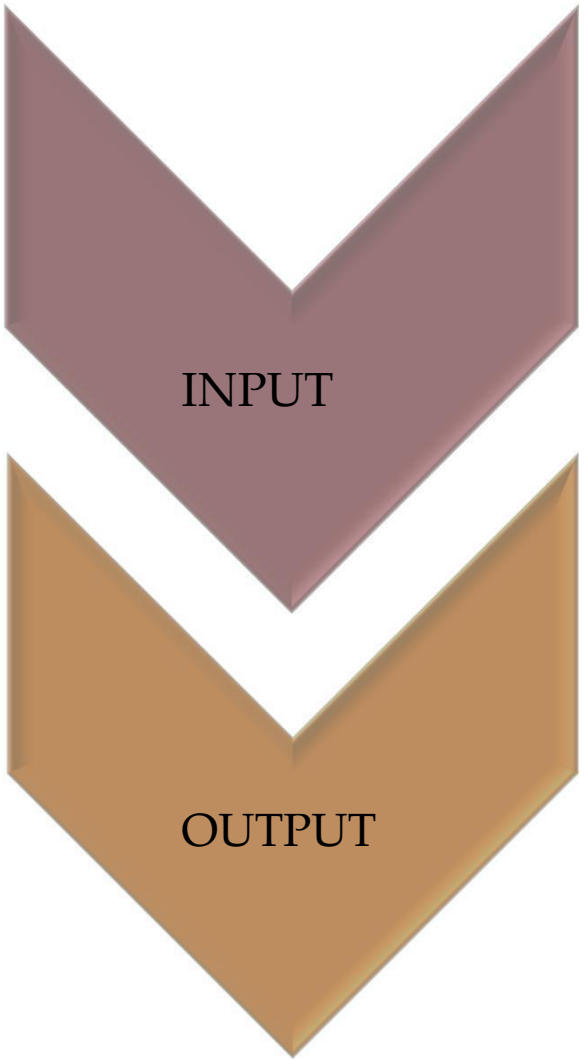
Glass/Recyclables

E-Waste

Clinical Waste



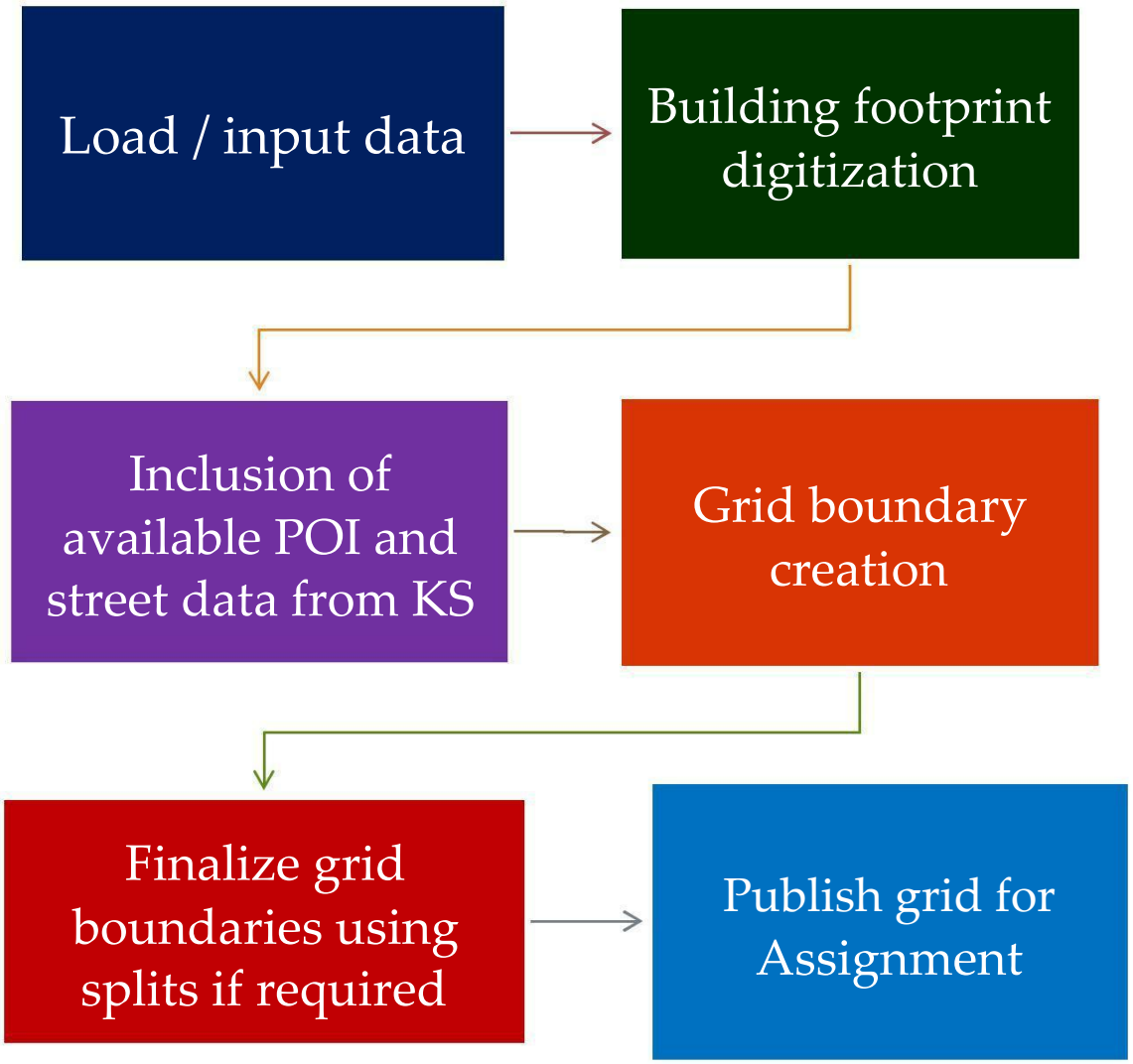
GIS Process :



- Process of digitization & grid creation based on OrthoMaps
- Grid assignment
- Tab based survey
- Data validation (call centre)
- Map update

- Building footprint along with panorama
- Building data with household details
- Points of interest, street names
- Lead generation for bin distribution0

GIS Based Assign The Grid To Surveyor



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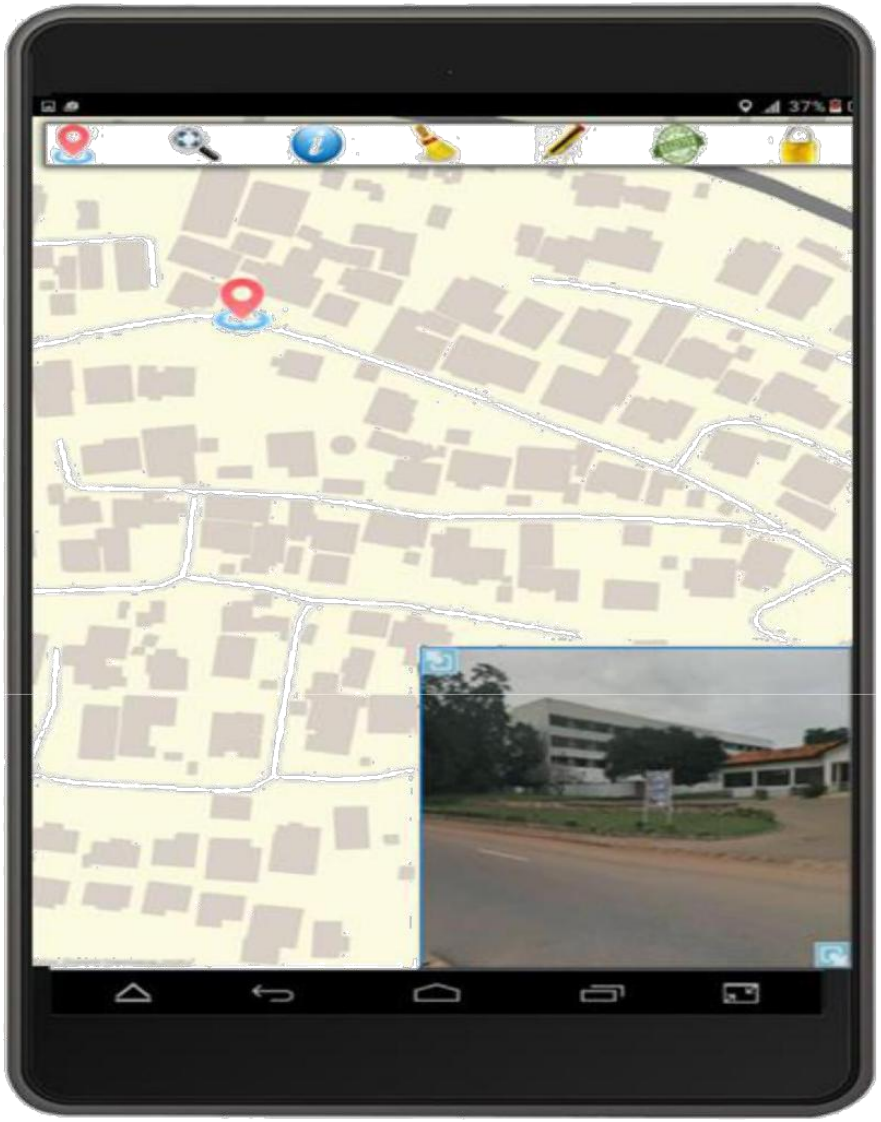
GIS Landbase Map Creation

Ortho images from drones are processed and then digitized using GIS application (like ArcMap).

All the structures are captured and encoded with GPS coordinates and spatial information.

Different map layers are developed and implemented into one integrated application for field resources and clients.



Registration of Customers

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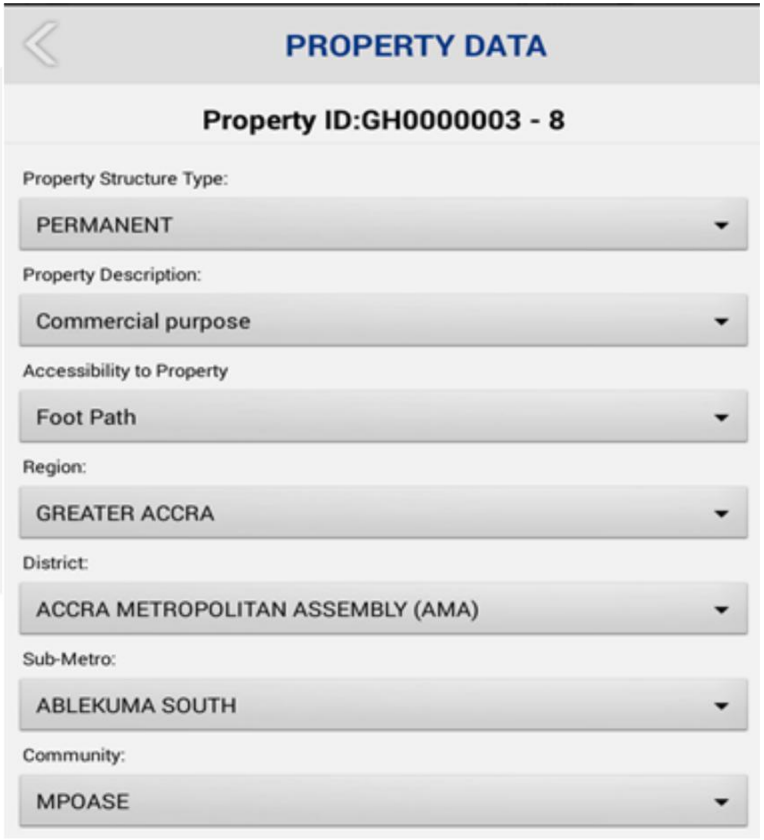

Interested customers are registered using the customized application on tablets or smartphones.

Complete information of the property including the approach (community, area and street) are captured for further processing. Waste Bins and invoice related information is tagged with this customer information for unique identification.

Registration of Customers: HH

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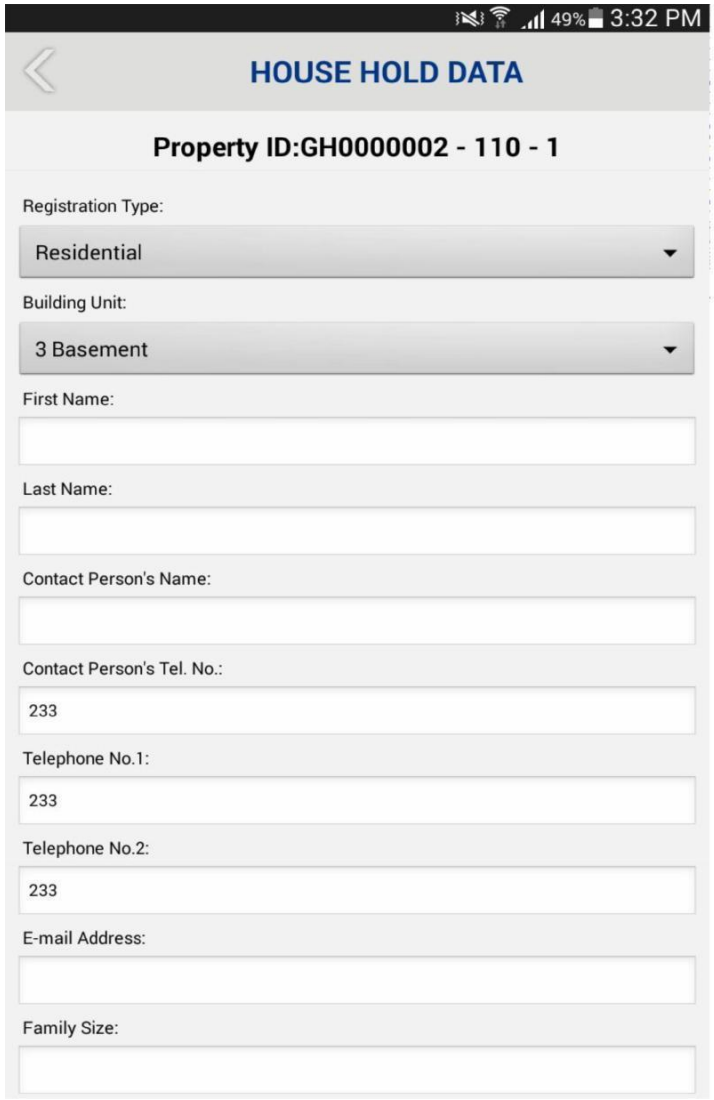
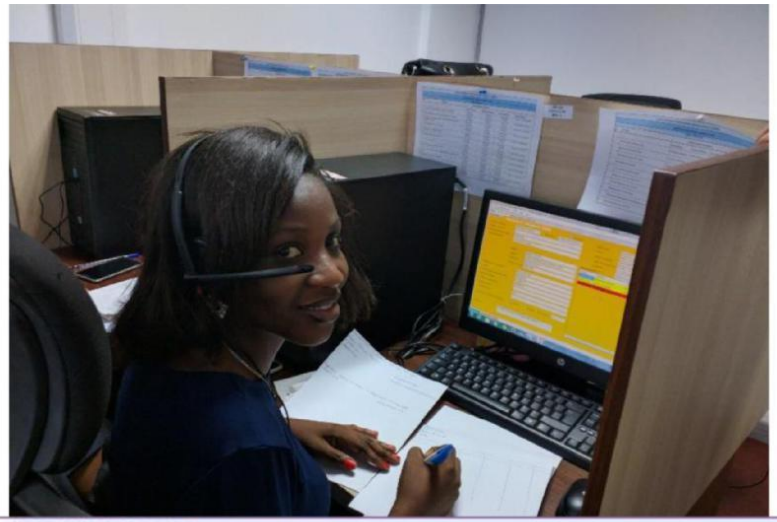


Customer personal details are collected for further communication from Call Centre and Client Command Centre.

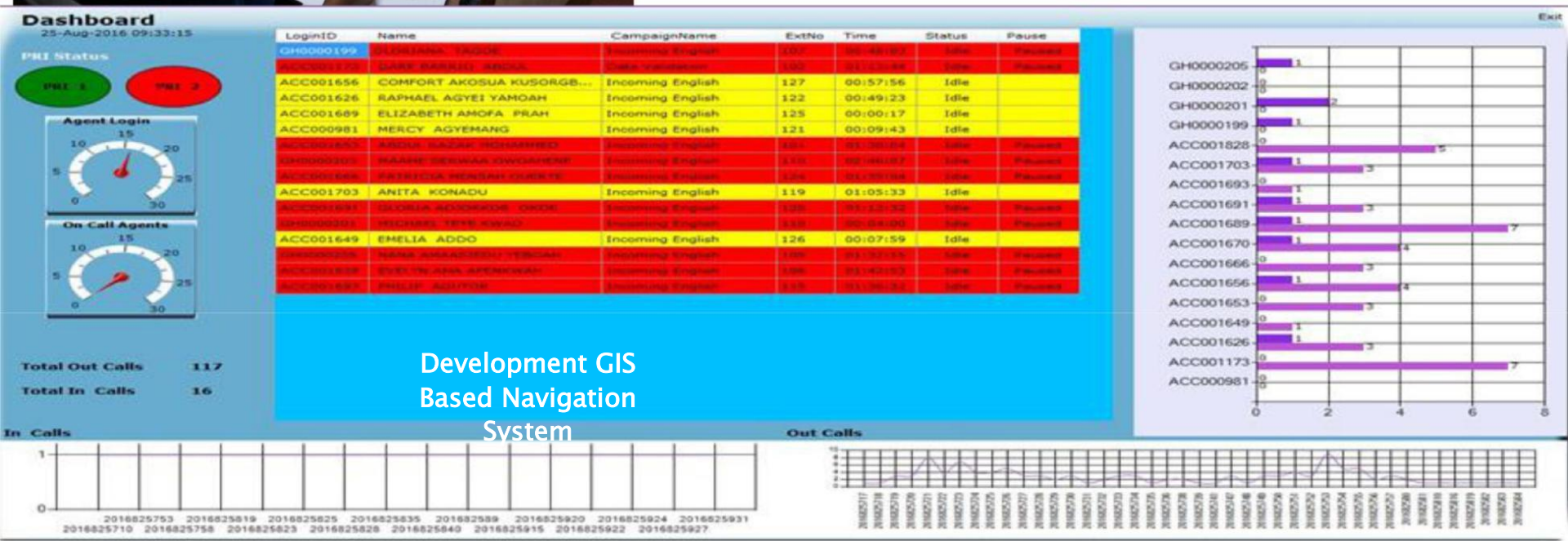
Data Quality checks are also performed basis the validated customer personal information.

CRM – Data Validation



Customer information collected using the Application on tablets, is then verified from the Call Centre to ensure accurate information is processed for Waste Bin Distribution & collection.

The Call centre operates with client approved SLA and campaigns are designed as per business requirement of Customer grievance handling, information correction or verification..



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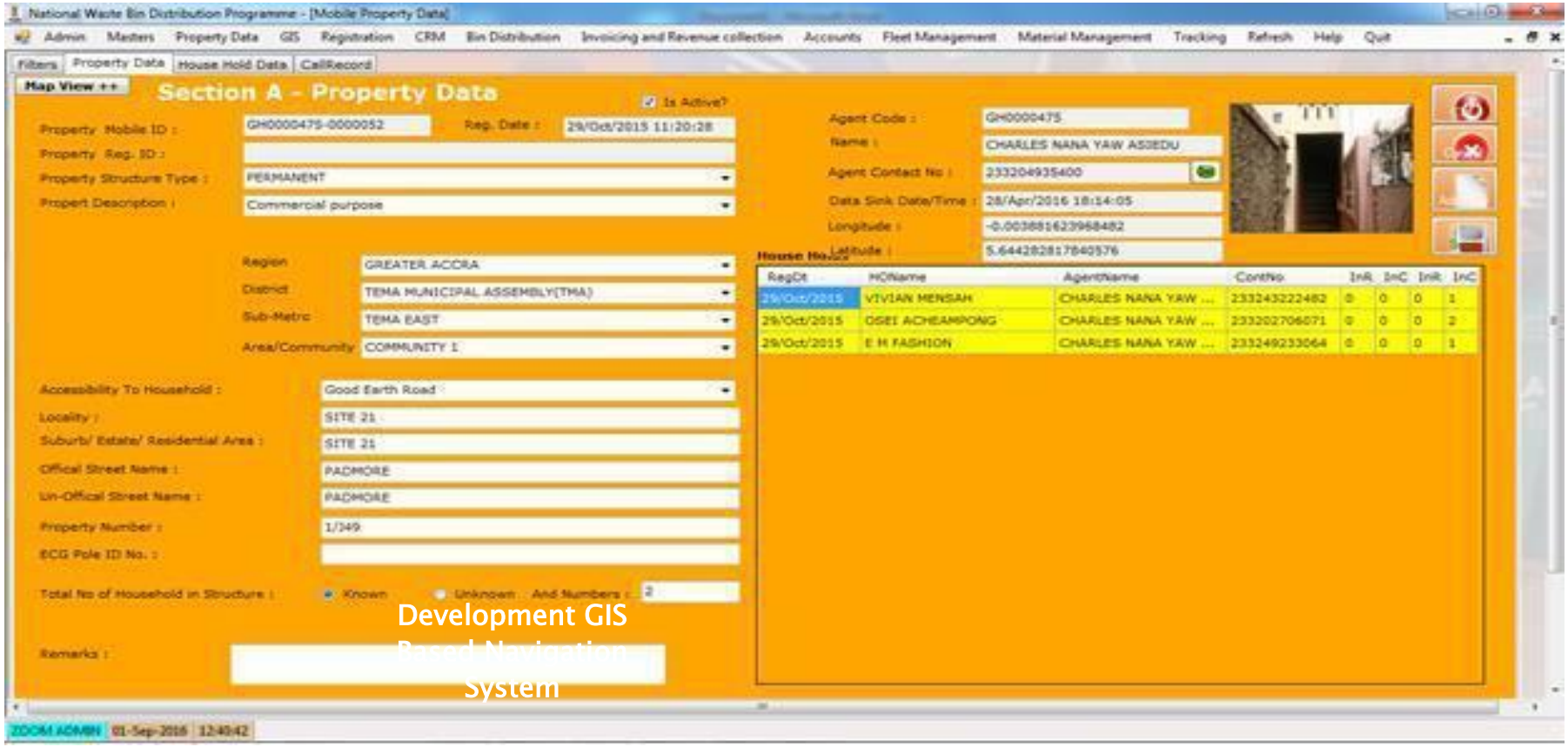
CRM – Data Update

Complete customer information is recorded from field and updated on the main servers. Call Centre validates 100% sample and updates any inaccuracies found in customer personal information, or interest in the product



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Waste Bin – Preparation

Waste Bins are first prepared for distributed. RFID tags are installed on the bins to identify each bin and monitor its usage from Command centre.

All the bins are updated in thecentral inventory database which is linked with the GIS Landbase Map server

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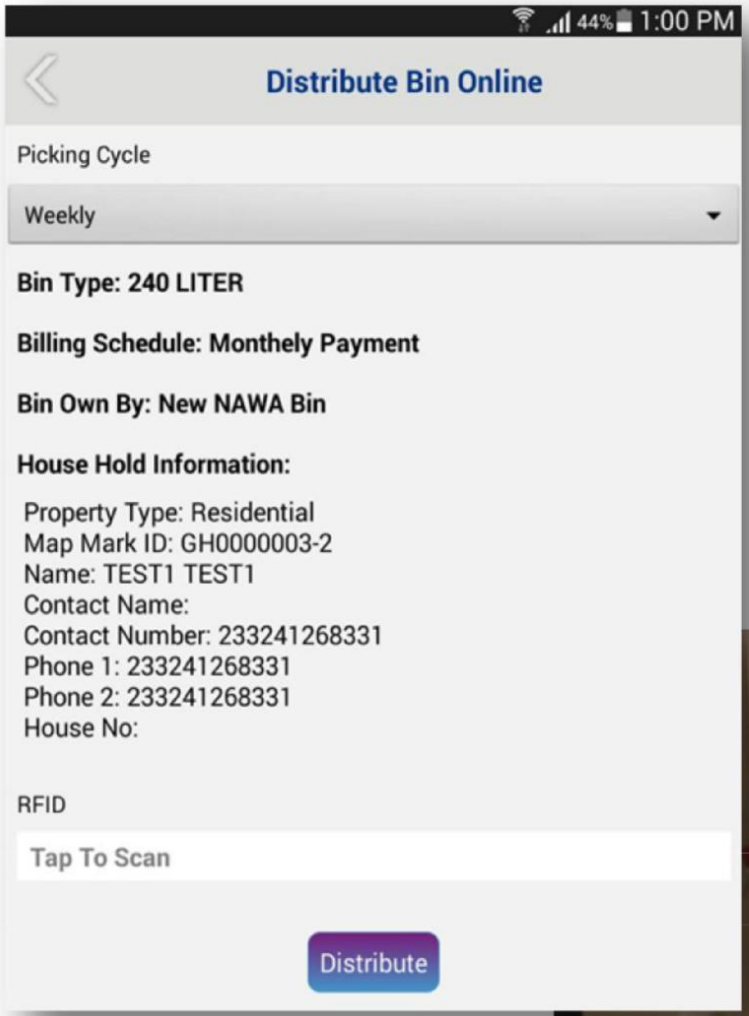
Waste Bin – Distribution



Data of “Interested Customers”, which has been validated by the Call Centre is uploaded to the Waste Bin Distribution server.

Bin distribution team then distributed the Waste bins using the GIS Landbase Map to find the location of the interested customer.

At the time of distribution, the Waste Bins are scanned and the RFID of that particular bin is then linked to the Customer whom it is being delivered.

This enables the client at the command centre to monitor each and every Waste bin and its related customer information

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Waste Collection

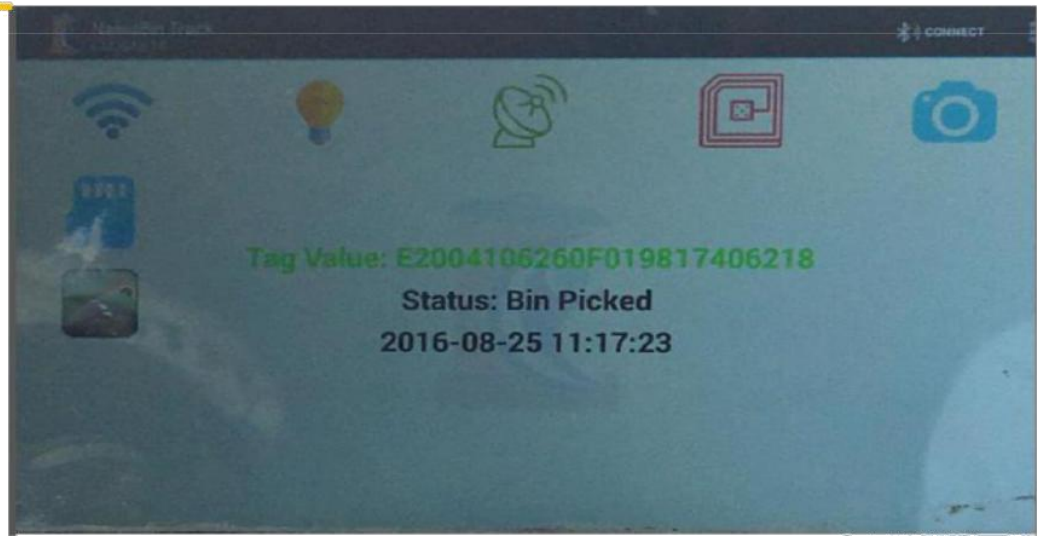
Guided by the Waste Bin collection application installed on the front panel inside the truck, the driver knows exactly which Bin to pick.

Live Waste Bin Picking:

Green: When the light bling's green it means that you have to pic the bin.

Red: When the light bling's RED it means that you don't have to pic the bin because this customer is a defaulter.

Blue: Blue light means the data of this bin is not in the system so don't pic the bin.



Waste Collection Truck Vehicle Tracking System (VTS)

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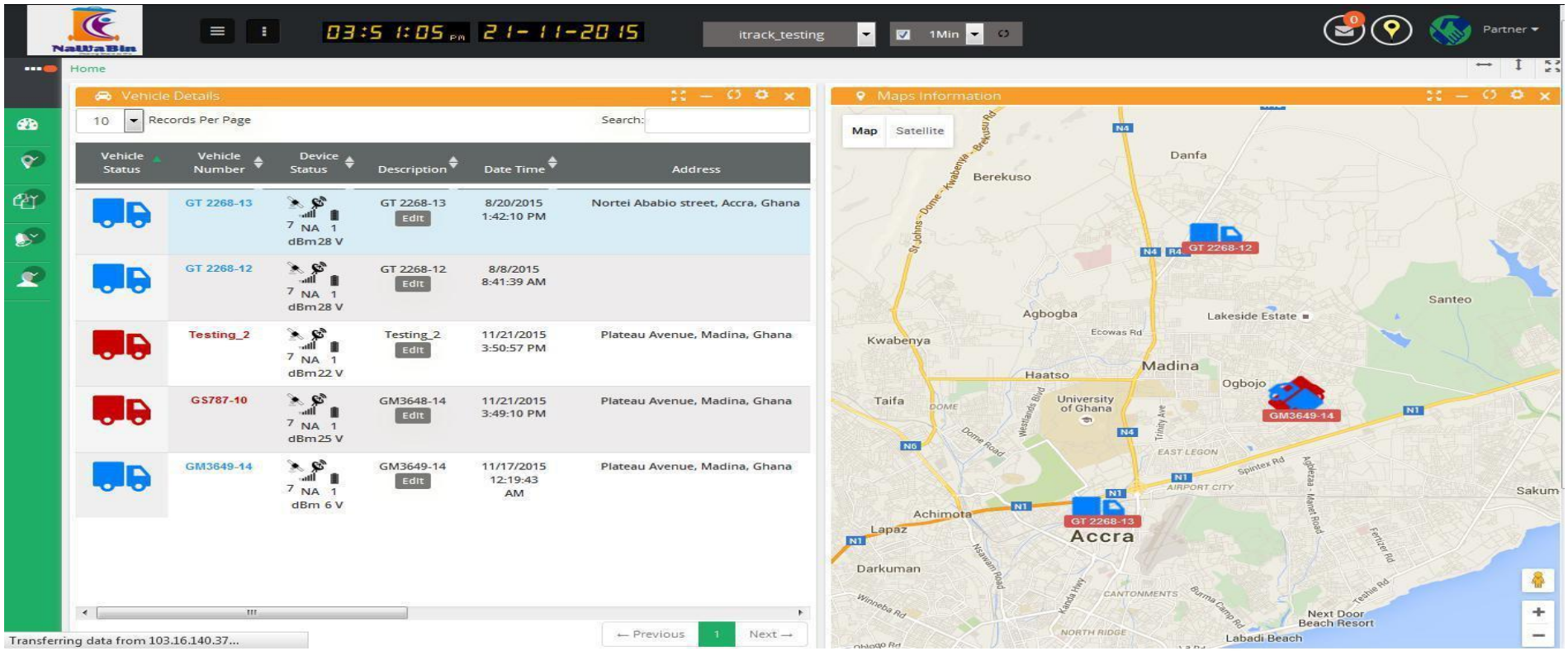

All the Waste Bin Picking vehicles are tracked from Client Command Centre real-time and VTS team assigns the routes and is able to make changes by sending new route plan to individual trucks from VTS. Complete history and pending collections of each truck can also be monitored.

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Client Dashboard – Bin Tracking

We have developed customized dashboard for the client, which is controlled from the Client Command centre. Real-time information about Interested Customers, Bins distributed, Waste Bins collected per schedule and even the Revenue collected can all be monitored from one Dashboard.

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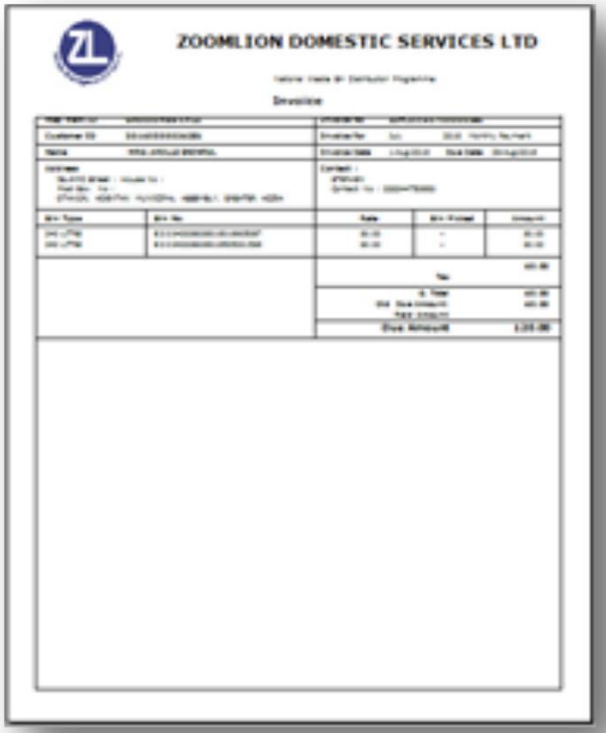
Invoice generation

Invoices are generated basis the waste bins collected per the plan opted and services rendered to the customer.



Invoices are auto generated and delivered via SMS and EMAIL to the registered mobile & email by the Revenue Management System (RMS).

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Revenue Collection

Revenue collection team is driven and governed by RMS and tracking of every pence is real-time.

All revenue collectors are equipped with POS devices, which are tagged and GPS enabled, and capable of collecting revenue from various platforms.

1. Cash
2. Mobile money
3. Credit card
4. Debit card
5. USSD
6. Cheque

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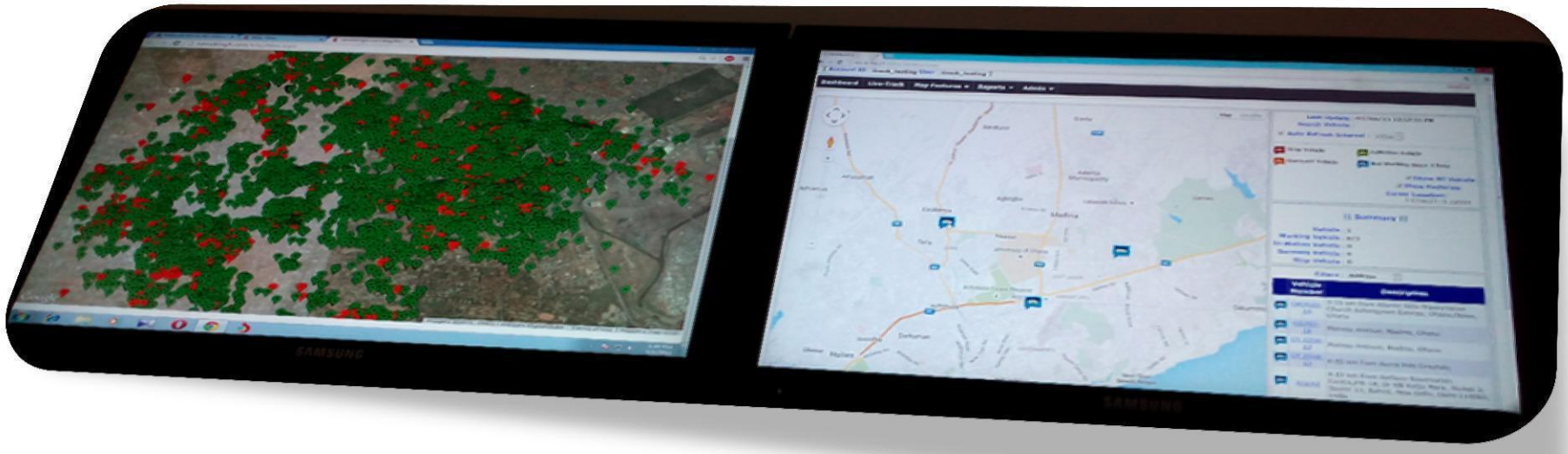
Client Command Centre

Governance and ROI tracking is the objective of the Client Command Centre, which has been developed for the Waste Management Program.

- Target segment of customers covered and not covered is available
- Inventory and Distributed Bin status is available
- Waste collection, with schedule and frequency, is available for each route
- All vehicles (vendor and in-house) are tracked for operation and efficiency
- Revenue collection on hourly basis and invoice defaults are updated real-time



Thank you

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