

Agribusiness Field Automation Solution

CONCEPT



Automating the Field Operations of Food Processors

Who we are



We are an end to end Supply Chain solutions provider based in Nairobi Kenya with over 20 years of supply chain automation experience in several African markets

We use mobility tools with powerful insightful analytics tools to help drive efficiencies, mitigate losses and create linkages to markets while providing access to financial services

Virtual City - Value Chain Approach

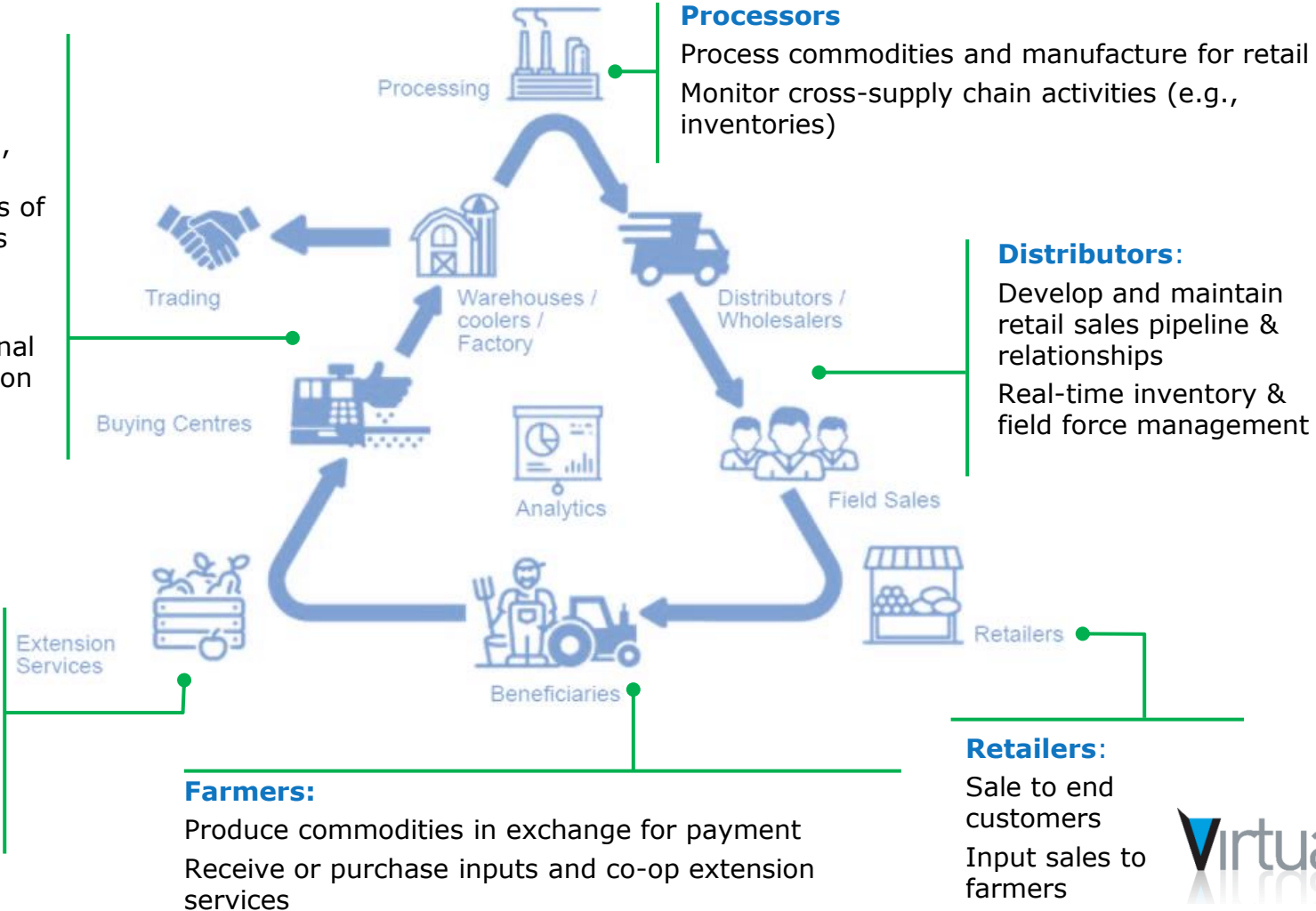
Warehouse Aggregation Points

Aggregate, weigh, quality check, and track supplies of farm commodities

Market farm commodities to global or regional buyers (depends on commodity)

Inputs & Service Providers:

Provide farmers with inputs and key services on behalf of farm cooperative



Virtual City – Who We Are



Unparalleled Expertise

- **Award-winning innovation** delivering enterprise mobility and multiple cloud platforms
- **20 years of experience** serving the East African market
- **Dedicated, experienced team** for business needs assessment, technical implementation, and ongoing support

Unwavering focus on client success

- **Results-oriented approach**, recognizing that every client is unique and has specific business needs and processes that must be factored into the solution
- **Focus from day one on ensuring organizational buy-in and full adoption** at our clients
- **Locally developed and supported IP** with intricate knowledge of Supply Chains

Long-term commitment + partnership

- **Commitment for the long term**, serving our clients as East Africa's leading solutions and innovations partner
- **Proven track record with successful client partnerships** across multiple industries and business needs

We are on the cloud!

- **Enabling scale** – we can walk to together into any market that your client may be operating from
- **Focus on your core business** – We have figured out all the tech stuff so that you don't have to
- **Reliability** – Guaranteed Uptime, Recovery, Load Management, Performance Management and Security

Project Description

Key Areas of Focus

- **Registration & Mapping** – Registration, Mapping and Geo-Tagging of Survey Respondents
- **Scout Agents** – Provide trained youth with Digital Mobile Survey Forms preconfigured to conduct the Field Surveys and Field Transactions for inputs distribution or produce purchase
- **Digital Applications** – Provide Digital Applications that can be downloaded onto Mobile Phones that map the farmers with back-end capability to rapidly deploy digital surveys with ease
- **Payments** – Provide Digital payment platform to enable disbursements of funds to farmers and agents

Key Activities

- Identify and GPS Map all the Trade Actors in the Value Chain
- Conduct Registration as per preset Checklist using mobile smartphones
- Provide appropriate Mobile or PC Application depending on User Type and Role
- Assign Tasks, routes and activities to Application Users remotely and centrally
- Map the Business Processes of each actor to the appropriate application
- Provide offline and online capability for capture of data collection and transactions in the field
- Develop Data Analytics Framework as per the provided KPIs

Project Deliverables

Digital Platform to Register, Map and Track Transactions utilizing Digital Tools to automate Field Activities and generate Data Analytics for decision making

What Digitization Would Enable



Challenges

- Lack of automated, centralized management of the linkages across supply chains
- Owners handle on all facets of the Packhouse business, especially with regard to Losses, Rejects and Waste
- Ability to track and understand Profitability at each stage in the business
- Manual record keeping in the produce collection process leads to challenges in accountability creating an opportunity for fraud and theft
- Long lead times in reconciliations and net payments due to farmers from their commodity deliveries leading them to sell cheaply at the Farm Gate to Brokers
- Reduction on dependence on Middlemen, Transporters and Local Market Stalls to allow scale of professional business

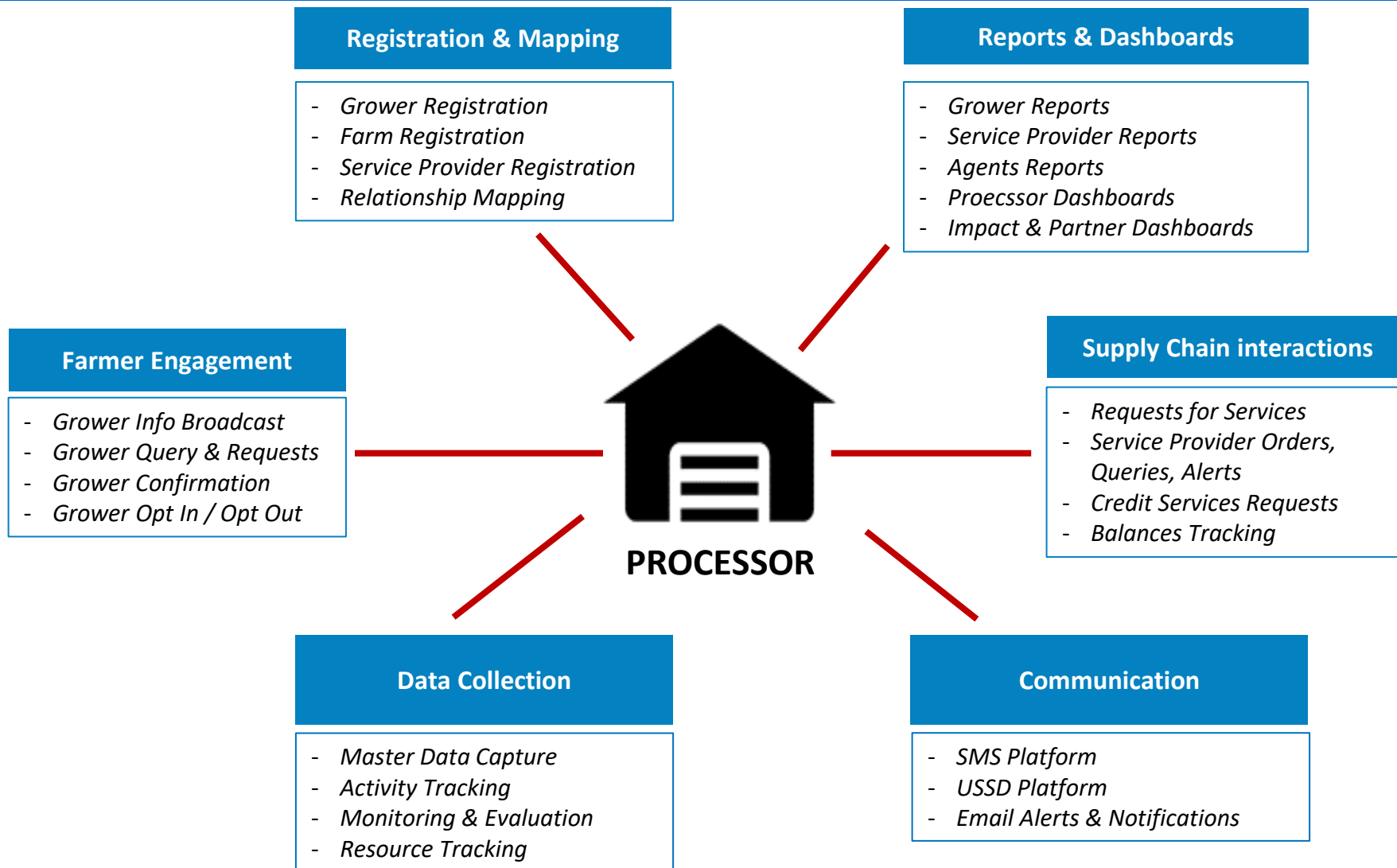
Value Addition Stakeholders

- Register select stakeholders and map their location and activities to the value chain
- Track and analyze all points of engagement with stakeholder such as farmers, traders, processors and retailers
- Track the commodities delivered to aggregation points together with specific quality parameter checks
- Monitoring and Evaluation Tools that enable verification and validation of value chain market players, premises, demographics and other relevant indicators
- Design market analytics dashboards and reports that add value to all decision makers against preset KPI Metrics
- Track proportion of the market price to the processor, aggregator and primary producer
- Mitigate Losses at each stage

Expected Outputs

- **Map the Ecosystem** - Identify each Entity in the Value Chain, including Farmers, Traders, Transporters, Processors, Distributors & Retailers
- **Ownership** – Track Ownership of Produce with primary producer until sale
- **Losses** – Establish process for Tracking Losses, Wastage and Rejects
- **Financial Services** – Automate Financial Services to farmers and retail buyers
- **Traceability**- Digitize process to Track, Validate and Reconcile farming, storage, movements and quality of commodities
- **Impact Tracking** – Use Digital Data Analytics to derive Impact Models
- **Credit** – Track exposure to credit and payments to players at each level
- **Toolkit** – Design Packhouse Process Toolkit that can enable scale


Project Result – Visibility across all Stages



Digital Activities to be Undertaken


Registration & Mapping

Register and Map all the Farmers, Farms and Farm Blocks. Capture baseline data on the farmers plus the crops, acreage, commodities, varieties and other critical information on which to build services.




Farm Activity

Capture Farm Activity Data from each farm. Utilise preconfigured datasets within preset parameters thereby ensuring the Agents collecting the data do so accurately without need for Agronomists.



Transaction Services

Identify and create new services that the Agents and Service Providers can deliver to the Growers such as inputs distribution, data collection, produce purchases, scouting, aggregation, transportation, crop monitoring, etc. through the use of technology.



Ecosystem View

Create a singular and verified view of all the farms, their profiles, activities, crops, harvests, projected incomes, etc. Create Analytics Platform from which decision making and projections can be made based on actual data.

Operating Standards

Generate a set standard for all youth teams operating in the agricultural communities. Monitor their workforce performance through tracking number of activities undertaken, quality of outputs, completed tasks, repeat jobs and other Performance KPIs.

Digital Payments

Enable Digital Payments for the Farmers, Service Providers and Buyers thus enabling digital payments to be made with ease. Identify the value components of each player in the value chain and enable disbursements directly to their Digital Wallets per transaction or periodically.

Ecosystem Components

Database Management

- Registration all Smallholder farmers and Cooperatives in ecosystem
- Cluster all smallholder farmers into groups, routes and centers
- Track quality and quantity of delivered commodity procured from smallholder farmers
- Track Registration Applications vs approved Growers
- Upload Farmer KYC Form from the Field, including all parameters and pictures
- Create Farm Activity parameters
- Create Crop Monitoring parameters
- Create Monitoring, Inputs and Extension Services
- Create Commodities, Grades, Products, Product Packs and Pricing

Financial Services

- Reliable Transactional Data enabling advances & credit to
 - Farmers
 - Farmer Groups
 - Aggregators
 - Service Providers
 - Warehouses
 - Processors
- Capture Payments Due, Payments Made and Balances
- Digital Vouchers enabling Farmers to access Inputs
- Track Loan Amounts
- Track Extension services and inputs provided on credit
- Future integration to ERP Data upon Needs Assessment

Communication

- Bulk Notification Platform enabling Bulk SMS to be sent to Farmer Groups or individual Growers
- Alerts to be sent out individually or in Groups
- SMS Groups set by Region or Crop or other as required
- Market Information to be disseminated
- Easy to use applications – built to ensure limited training
- Farmer or farmer group leader capability to respond and make requests via SMS
- Auto reports on messages sent, received
- Grower can generate SMS to Warehouse

Impact

- Fraud mitigation by use of accurate digital devices and platform apps
- Commodity aggregation per farmer/ route / buying center on Contract
- Collateral Management per store / vehicle / warehouse
- Quality parameter checks
- Safe Inputs Distribution
- Map Market Orders to Production at Agro Parks
- Guaranteed Volumes to enable Processing Capacity
- Trust in Formal Agro Trade
- Access to Credit
- Consolidation of databases
- Integration to ERP

Solution Components



Secure Cloud Platform linked to Mobile Applications in closed loop



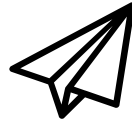
SMS Services for controlled broadcast to groups of ecosystem members and responses from Growers



Cloud Platform can be linked to Financial Wallets via API for payments disbursements



Specific and Targeted Survey Questions configured remotely on Mobile Devices



Reports generated can be exported onto Excel, CSV, etc. and distributed on email.



Conduct Market Research based on verifiable data platform and sources



Auto generated reports and analytical dashboards prebuilt onto Power BI Platform



Alerts and Notifications can be configured based on Performance Triggers



Mobile Syncs Survey Data from Cloud Platform and sends up survey results



Field Staff provided with secure Mobile App preloaded with surveys and route data



Every Survey conducted has GPS Coordinates and Timestamp



Improve Billing and Revenue Assurance Services through Digital Invoices and Payments

Process Mapping - Features & Functionality

Deploy Automation Platform at Farms, Collection Centres, Aggregators, Warehouses, Processors, and 3rd Party approved actors to attain full visibility and ease of Transactions

Grower Mapping

- Farmer, Cooperatives and Aggregation Centers Registration
- Aggregation Centre Purchases & Storage
- Warehouse Collateral Management
- Transport Facilitation and Tracking
- Value Assignment to Inventory
- Advances and Loans against inventory
- Inputs Facilitation against inventory
- Lots & Catalogue Tracking
- Farmer and Cooperative payments
- Crop Ownership vs. Liability Tracking

Crop Monitoring

- Crop / Block Count per Farm
- Farmer & Farm Baseline
- Farm Utilization & Crops
- Extension Service Provided
- Crop Bushes Count / Estimate
- Acreage under crop
- Training Survey
- Inputs Applied Survey
- GPS Coordinates Mapping
- Outgrower Survey
- Yield Tonnage Estimate
- Picture Validation per Survey
- Buyer Count & Classification

Inputs Distribution

- Product SKU Listing & Pricing (Seeds, Fertilizer, Chemicals)
- Route Planning
- Sales per unit (SKU)
- Sales monitoring per salesman
- Productivity tracking of all sales people
- Pre-sales orders tracking
- Sales against targets
- Creation of growers / outlets – expanding universe
- Universe of outlets tracking against targets
- Sales Tracking

Produce Purchase

- Grower Lists
- Raw Produce Purchase
- Weights per Grower
- Quality Assessment
- Input Distribution
- Bags / Crates
- Vehicles / Drivers
- Routes
- Loading Sheets / Inventory Manifest / Delivery Notes
- Receipt Print Outs
- Container RFID Tags
- Grower NFC Cards

Process Mapping - Features & Functionality

Deploy Automation Platform at Farms, Collection Centres, Aggregators, Warehouses, Processors, and 3rd Party approved actors to attain full visibility and ease of Transactions

Warehouse Storage

- Capture & Track Intake:
 - Supplier Name
 - Commodity
 - Grade
 - Gross Weight
 - Number of Crates
 - Date Received
 - Harvest Date
 - Reference No.
- Stock Movement
 - Tares & UoM
 - Stores
 - Stacks
 - Transfers
 - Product Components
 - Product Packs
 - Dispatches
 - Losses

Batch Management

- Digitization of all inventory
 - Farm Block Output
 - Outgrower Purchases
 - Farm Dispatch
 - Vehicle Manifest
 - Pack-House Intake
 - Stock Cards
 - Inter Store Transfers
 - Processing Tables
 - Returns
 - Rejects
 - Out of Life
 - Dispatch to Customer

Payments

- Value Mapping
 - Commodity Cost
 - Product Price
 - Inputs Prices
 - Services Pricing
- Payments allocation per Invoice
 - Grower Balances
 - Service Provider Fees
 - Grower Payments
- Reconciliations
 - Collections vs. Invoices
 - Payment vs. Invoice vs. stock

Reconciliation

- Summary of Progress
- Harvest Analysis
- Yield Analysis
- Losses Analysis
- Collection vs Deliveries
- Performance Analysis
 - % Yield (Intake Weight vs Packed Weight)
 - %Waste (Intake Weight vs Waste Weight)
 - % Rejects (Intake Weight vs Rejects Weight)
- Market Sales Analysis in MT
- Market Sales Analysis in Value

Technology Platforms Deployed

Enterprise Mobility Apps



- Android Mobility Applications for use by Field Teams including Growers, Agents & Extension Staff
- SMS and USSD capability for service queries, opt in, opt out, requests and broadcasts
- PC / Laptop Application versions for Warehouses, Distributors and such actors
- Cloud Web Portals for Processors and Partners

Azure Cloud



- Azure Cloud Platform for all backend processing, application hosting, storage, security, APIs, telemetry, websites and Power BI Dashboards
- Client Subscription on a Software as a Service Model and Resource Management
- Multi Application & Multi Tenant Cloud Architecture
- Azure Security and Telemetry Customization
- Azure Database and Storage Management

On Demand Analytics



- Analytics to drive decision making based on real time visibility.
- Data driven predictive analytics and demand planning for improved Impact Tracking
- Secure Role Based Access to specific reports, dashboards, alerts and notifications
- Pre-set auto generated Dashboards
- Power BI capability for client custom creation

Solution Design – Monitoring & Extension Services

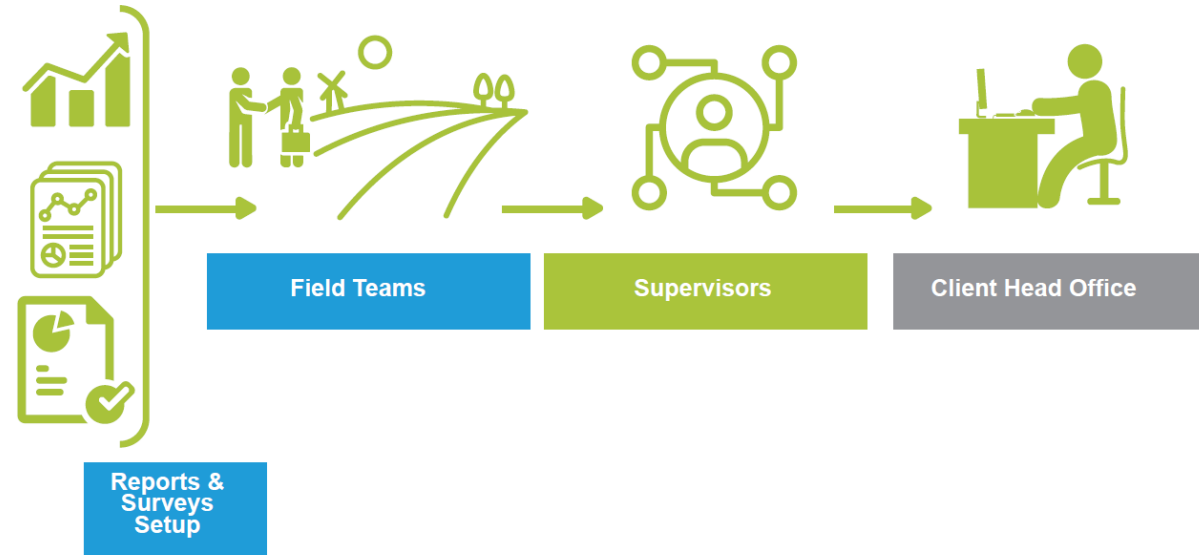
How it works:

Field agents use mobile application for data collection, mapping, and activity tracking

Data is transmitted electronically in real-time to supervisors and head office

Customized reports generated to provide actionable insights

All surveys preset centrally and then deployed to pre-assigned mobile app users



Outputs:

Productivity:

- Field staff location
- Route & activity management
- Work & transit time tracking
- Geo Tagging

Mobile Surveys

- Respondent Details
- Field Asset Tracking
- Demographics
- Geo-Mapping
- Competitor Tracking

Return on investment:

- Time spent in field vs orders placed
- Assets deployed vs revenue earned
- Centrally Managed and Controlled

Impact:

- ✓ Greater field staff productivity
- ✓ Improved accountability
- ✓ Meet KPIs

Solution Components – Inputs Distribution



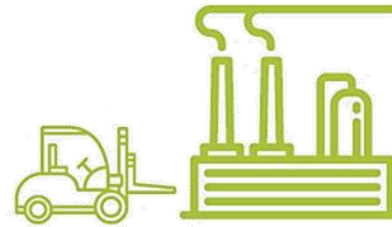
Salesman Module

Manages sales transactions and payments via M-PESA, collect orders from the outlet and send to the distributor; manage transport by planning and tracking van movements and generates customized reports for sales and payments



Distributor Module

Consolidates orders from the field agents and places orders with HQ; Sales transactions, track delivery agent, sales agents and outlets; Stock management, re-order levels, purchasing requirements to the HQ; Monitors distributor and sales agent performance against targets
Route planning and optimization.



Manufacturer Module

In the absence of a direct link to the manufacturer, this module is not deployed.
Involves the processing of orders made by salesmen, generates order no. and confirmation back to distributor. Manage transport by planning and tracking van movements

How it works:

Impact:

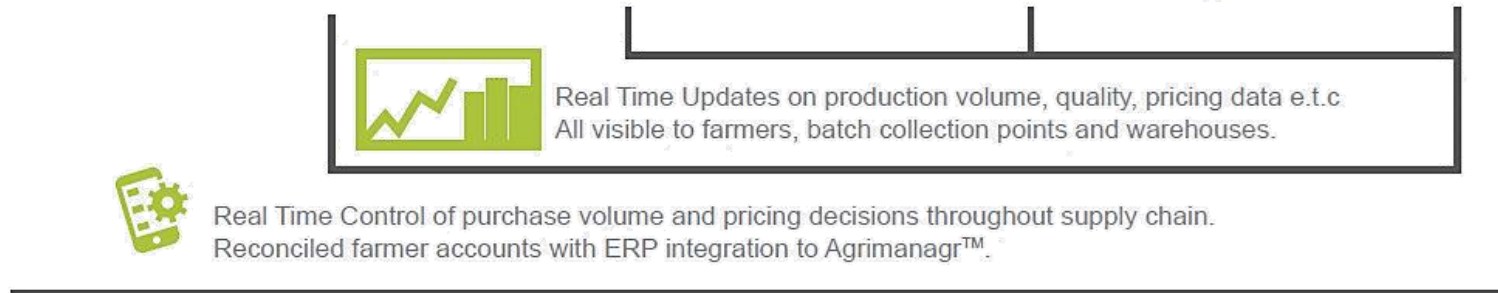
- ✓ Faster ordering process & tracking
- ✓ Improved team productivity
- ✓ Fewer lost sales from stock-outs or missing orders
- ✓ Lower inventory costs
- ✓ Greater customer loyalty (better fulfillment)
- ✓ Greater accountability (e.g., theft)
- ✓ Better collections / lower bad debt

Solution Components – Agents Produce Purchasing

How it works:



Outputs:



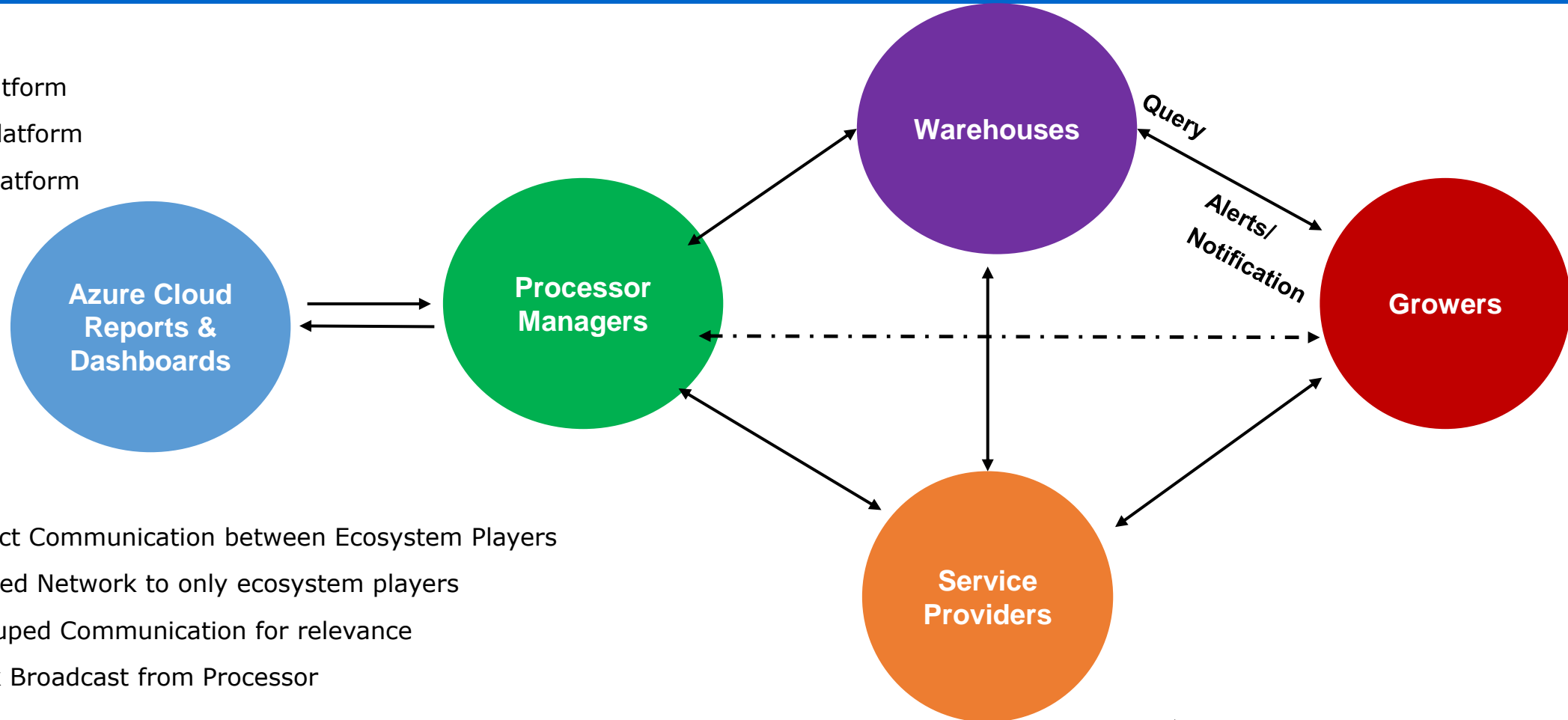
Impact:

- ✓ Faster collections & payments to farmers
- ✓ Greater stakeholder productivity (e.g., farmers, buyers)
- ✓ Improved accountability (e.g., quality, fraud)
- ✓ Consistency (e.g., offline access)
- ✓ Access to financing

Solution Components – Communication & Messaging

How it works:

SMS Platform
USSD Platform
Email Platform



Outputs:

Direct Communication between Ecosystem Players
Closed Network to only ecosystem players
Grouped Communication for relevance
Bulk Broadcast from Processor

Impact:

- ✓ Interaction between ecosystem players
- ✓ Alerts, Notifications after every transaction

Solution Components – Dashboards & Reports

How it works:

Information gathered from actors across Slaughterhouse and Butchery Supply Chain by using of automation solutions

End-to-end data leveraged to create dashboards, snapshots, and high-value analyses

Impact:

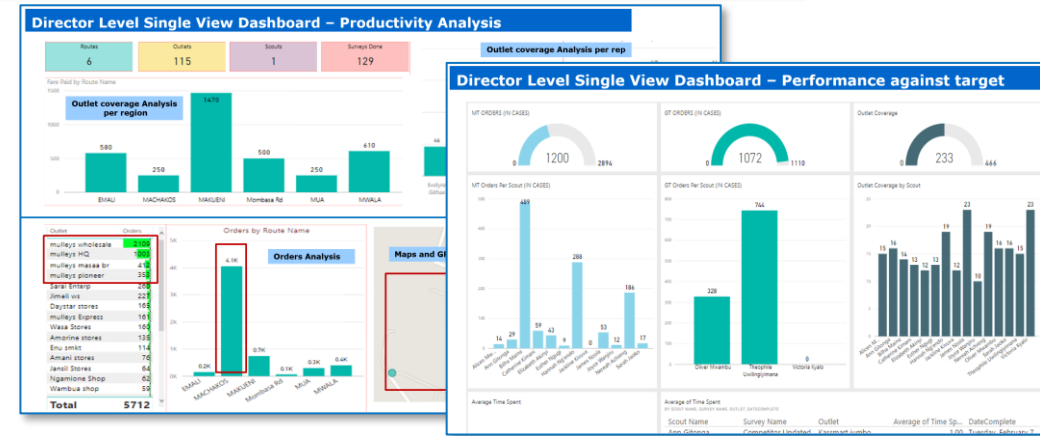
- ✓ Real-time insights geared to commercial needs
- ✓ Unique End-to-End view of supply chain inventory and actors
- ✓ Opportunity for extension to high-value predictive analysis

Outputs:

Director-level view: *summarized insights for quick decision-making*

Sample analyses:

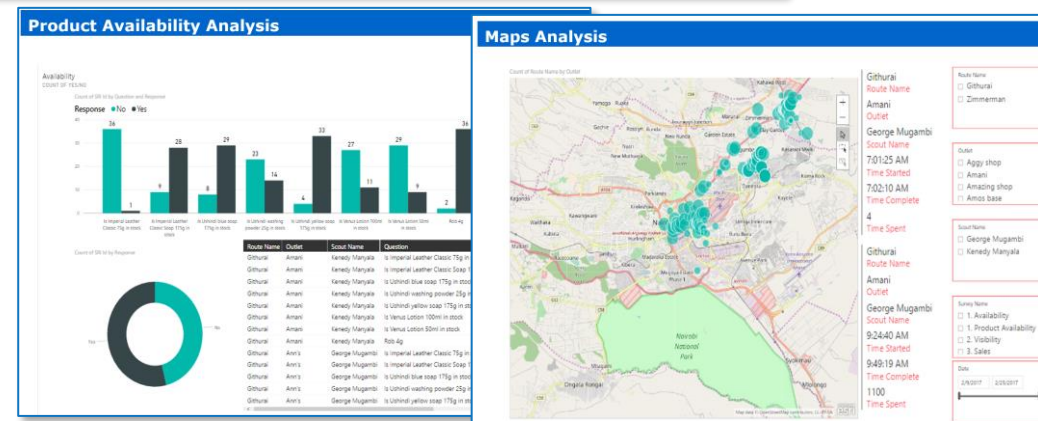
- Productivity analysis
- Performance vs targets
- ROI (Batch Profitability)
- Cost Analysis



Management-level view: *detailed analyses for day-to-day operations*

Sample analyses:

- Product Analysis
- Product Availability
- Stock Movement
- Batch Traceability
- Inventory Reconciliation
- Batch Productivity



Tools Available per User Type (Field Activities)

Growers



Growers would have access to an USSD and Android Mobile App that would enable:

- Register for Digital Services
 - Opt In / Opt Out
- Volume Query
 - Month Weight Delivered
 - YTD Weight Delivered
- Value Query
 - Amount Due
 - Amount Paid
- Grower Account Details
 - Grower ID
 - Demographic Details
 - Mobile Phone Number
- Loans
 - Loan Request
 - Payment History

Service Providers



Service Providers are registered and their specific services and are prices tracked with App:

- Ploughing
- Fertilizer & Herbicides
- Planting
- Weeding
- Irrigation
- Mapping

Extension Services also tracked:

- Germination
- Tillering
- Boat Stage
- Heading
- Grain Filling stage
- Changes of color
- Maturity/Drying Stage
- Harvest

Inputs Providers



Inputs provided to farmers and can be tracked from registered Merchants for Product, Quantity and Price. Provided with Web Portal or App that enables:

- Track inputs per Grower
 - Track Credit sales to Growers
 - Auto Deduction from Grower Produce Deliveries
 - Credit Purchases from Suppliers
 - Traceability of Chemicals applied
- Input Providers in turn gain value from the Digitization through better:
- Supply Chain Financing products from Suppliers, MFIs and Banks
 - Credit Facilities Tracking
 - Guaranteed Grower customer base
 - Increased Sales
 - Grower Account Reconciliation

Aggregators & Buying Agents



Buying Clerks weigh and track quality parameters at Farm Gate or Remote Buying Centers using Mobile App to:

- Assignment of Volume & Quality Grade to Farmer
- Digital weigh scales ensure accurate measures to 100g
- Initiate add new Grower to Platform
- SMS confirmation to Grower
- Consolidate produce from multiple Growers or Cooperatives
- Track Loading, Manifest and Delivery of produce in vehicle
- Deliver Inputs to Growers
- Acquire & Register new Growers in Catchment Area
- Generate & Print Digital GRNs, Delivery Notes, Invoices & Receipts

Tools Available per User Type (Office Activities)

Warehouses



Warehouses, whether owned or 3rd party, are provided with PC based App that manages the entire stock movement of produce:

- PC Platform used to manage:
 - Intake
 - Inspection
 - Grades
 - Stores
 - Transfers
 - Releases
 - Losses
 - Conversion to Product Packs
 - Aggregator Management
 - Commodity Tracking
 - Produce Ownership

Processors



Processors maintain control over the entire cloud platform :

- Adding Entities & Users
- Adding Commodities, Products, Warehouses, Stores, prices, etc.
- Setting the rules of how the various applications are run

Most importantly maintain a Bird's eye view of all the transactions that occur on the Supply Chain through Analytic Dashboards with realtime analysis on:

- Stock Movement & Storage
- Purchases, Sales & Payments
- Resource Allocation & Performance
- Gains & Losses
- Transaction Reconciliations
- Traceability

Financial Institutions



Through Tripartite Agreements, select Financial Institutions can be provided access to the Data Analytics across all actors, collateral and value in the Supply Chain from which to base credit and risk decisions.

- The Cloud Based Data Platform provides real time analysis on:
 - Entities
 - Farm Produce Volumes
 - Quality
 - Value
 - Batches
 - Stock Movement
 - Payments
 - Losses & Variances
 - Loan Requests

Institutions



The Cloud Based Data Analytics that is the core output from all the digital applications managed by the various actors in the Supply Chain. These outputs can be packaged in the form of automated reports, dashboards, alerts, notifications, etc. to track:

- Scale
- Impact
- Cost of Food
- Food Security
- Grower Incomes
- Quality
- Supply Chain Traceability
- Market Gaps
- Policy Recommendations

Hardware Devices



Rugged Mobile
Device with NFC
Reader



Windows
Tablet or PC
Hub Device



Bulk RFID
Reader

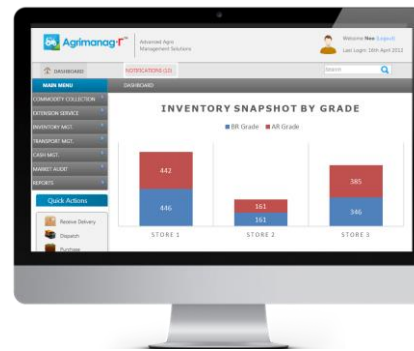


Cuts / Packaged Meats
Crates RFID Tags

Data Analytics – Ecosystem Visibility



Inventory Tracking



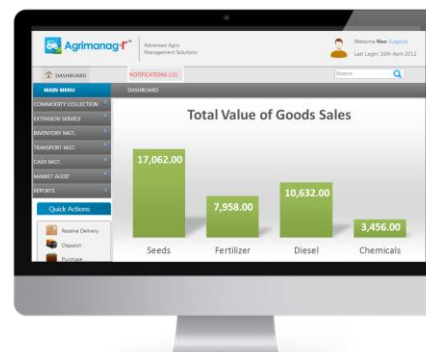
Quality Tracking



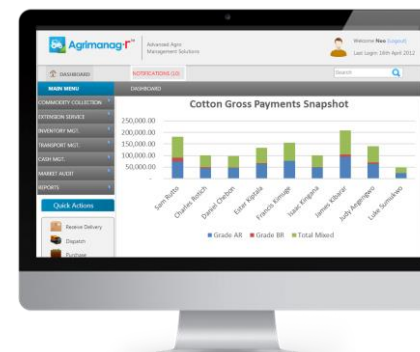
Services Tracking



Volume Tracking



Productivity Tracking

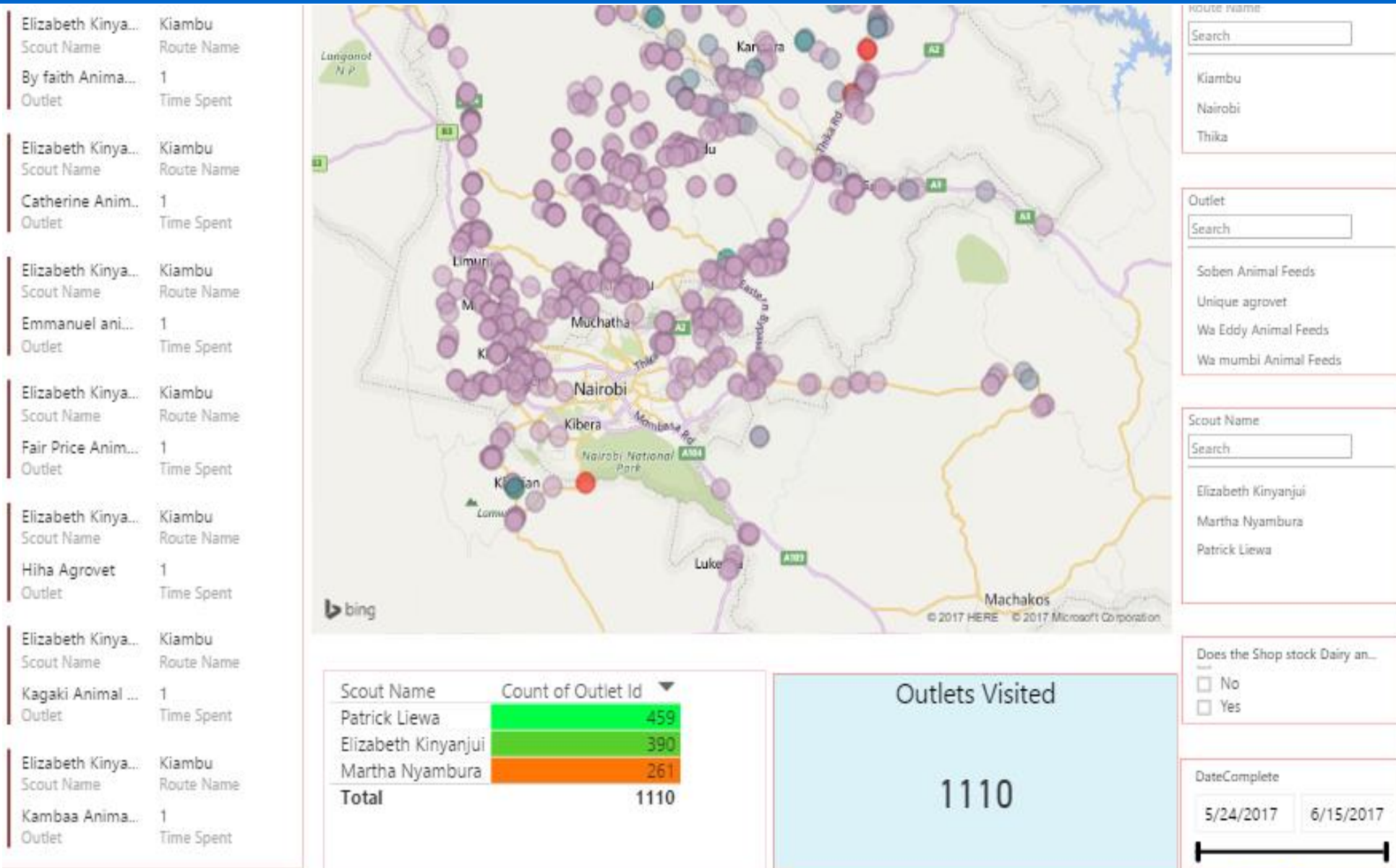


Dispatch Tracking

Visibility is key around the ecosystem with players keen to understand in real time:

- Collections
- Where is the inventory?
- Who has the inventory?
- Quality of the produce?
- Quantity at any given time?
- Produce sales at the point of sale?
- Service Providers and their active invoices?
- What payments are due?

Farms & Outgrower Mapping

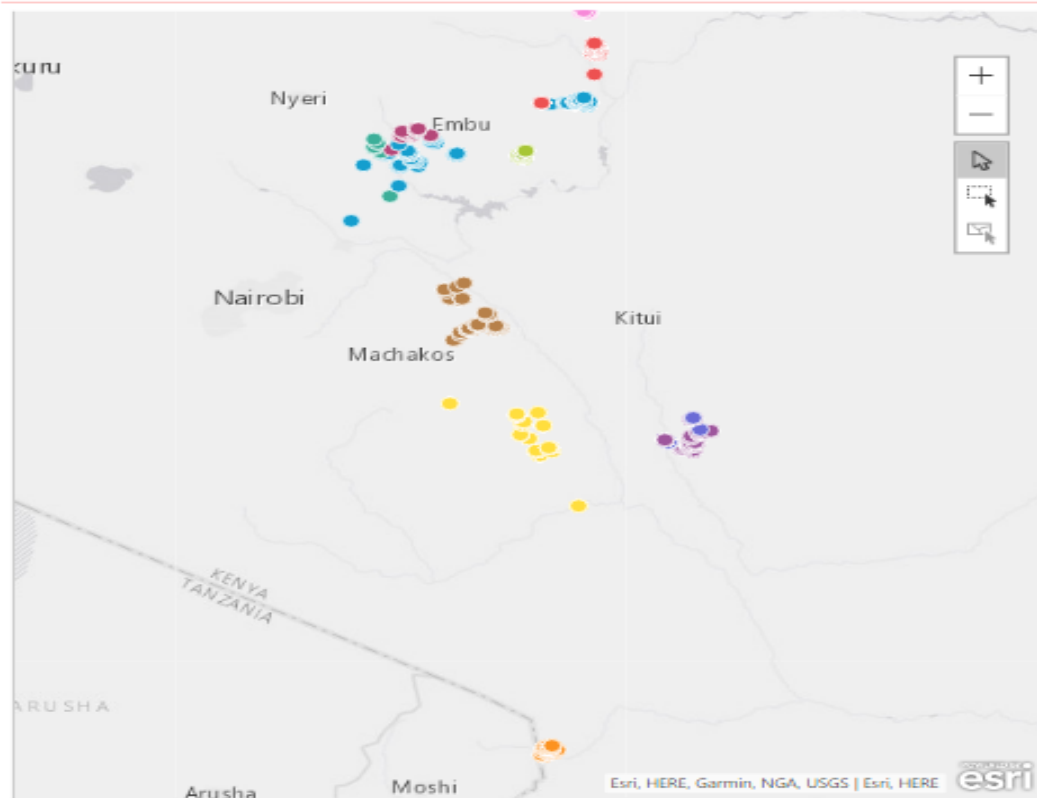


ANALYTICS PLATFORM

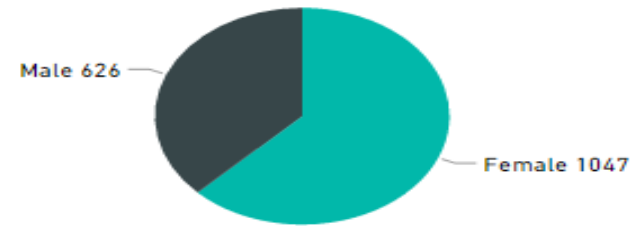
- The Analytics Platform consolidates all data
- All mobile transactions capture GPS and timestamp data automatically.
- Maps provide guides on where each survey was conducted
- Bubbles can be colour coded to define the type of survey conducted, or the scout name

Grower Demographics

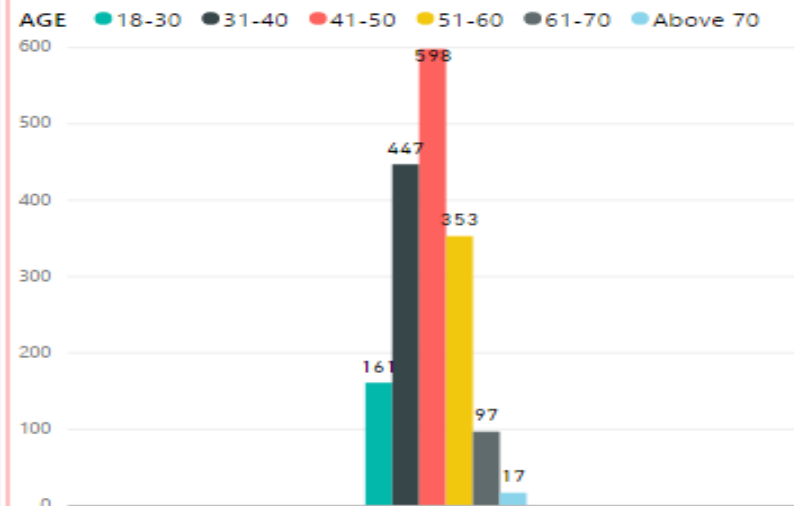
Divisions	Buying Centres	Enumerators	Average Quantity (kg)	Growers
2	3	1	16.92K	4
Number of Farmers	Average Sorghum Acreage	Average Green Grams Acreage		
1673	1.52	1.55		



Count of Farmers by Gender



Count of Survey Result Id by AGE



- Track Number of:
 - Youth
 - Farmers
 - Aggregation Centers
 - Farmer Groups
 - Cooperatives
 - Warehouses
 - Transporters
 - Service Providers
 - Services
 - Processors
 - Distributors
 - Sales Reps
 - Retailers
- Tracks the Age of the Youth Entrepreneurs in the Platform
- Tracks the number of Facilities and Providers across different levels in Supply Chain
- Tracks the Percentage Gender Ratio at each level
- Displays various stakeholders on Map and tracks where they are active

Farm Employee Details

EMPLOYEE REGISTRATION

Type of employment

☐ Permanent

Date

1/1/2019

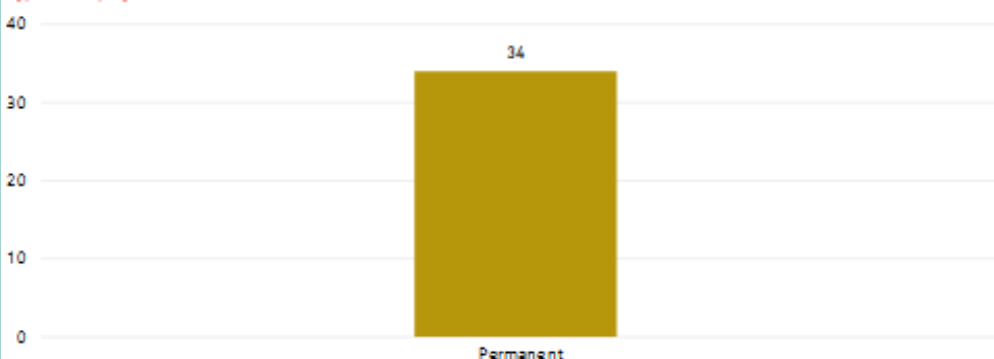
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ANALYTICS PLATFORM

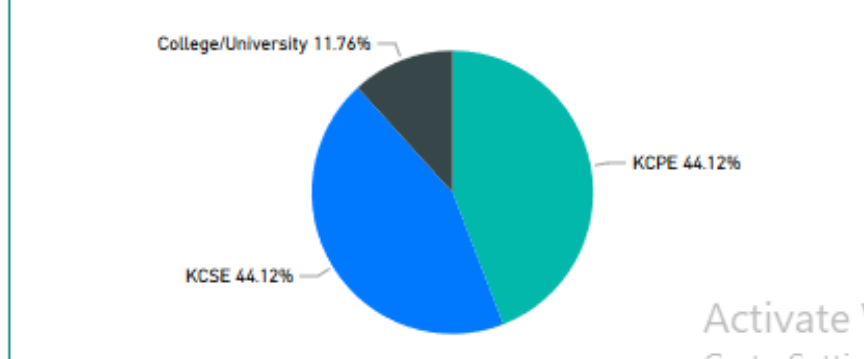
- The Biodata surveys can be configured to capture farmer, employee, sacco, input provider, etc. datasets
- The fields required are preset in the backend.
- The resulting data is categorized and displayed in tables, charts, graphs, etc.

Date	Name of the employee	Type of employment	Date of Birth	Date of employment	Level of education	Comment(s)
Sunday, June 30, 2019	Lawrence Macharia Njomo	Permanent	Friday, March 1, 1957	Saturday, September 27, 2003	College/University	Coffee manager
Sunday, June 30, 2019	James Kirika Mburu	Permanent	Sunday, January 1, 1950	Thursday, March 1, 2012	KCSE	Driver
Sunday, June 30, 2019	Peter Wanyiri Ndiritu	Permanent	Sunday, January 1, 1967	Saturday, June 1, 1996	College/University	Farm manager
Tuesday, June 25, 2019	John Kamonde Mahinge	Permanent	Tuesday, April 1, 1969	Tuesday, March 1, 1988	KCPE	Gardener
Tuesday, June 25, 2019	Alice Wairimu Gichuki	Permanent	Saturday, January 1, 1955	Tuesday, January 3, 2012	KCPE	General worker
Tuesday, June 25, 2019	Gladys Wanja Mugo	Permanent	Wednesday, January 1, 1964	Friday, October 1, 2010	KCPE	General worker
Tuesday, June 25, 2019	Grace Wairimu Maina	Permanent	Sunday, January 1, 1967	Monday, November 1, 2010	KCPE	General worker
Tuesday, June 25, 2019	Jennifer Ngonyo Mbote	Permanent	Tuesday, January 1, 1974	Sunday, January 1, 2012	KCSE	General worker
Tuesday, June 25, 2019	Lucy Wanjira Chege	Permanent	Sunday, January 25, 1970	Saturday, January 3, 2015	KCPE	General worker
Tuesday, June 25, 2019	Mary Muringi Mwangi	Permanent	Tuesday, January 1, 1957	Wednesday, January 1, 2014	KCPE	General worker
Tuesday, June 25, 2019	Mary Wangu Muriuki	Permanent	Tuesday, January 1, 1974	Wednesday, May 1, 2013	KCPE	General worker
Tuesday, June 25, 2019	Peter Wamucuni	Permanent	Friday, January 1, 1960	Friday, September 5, 2014	KCSE	General worker

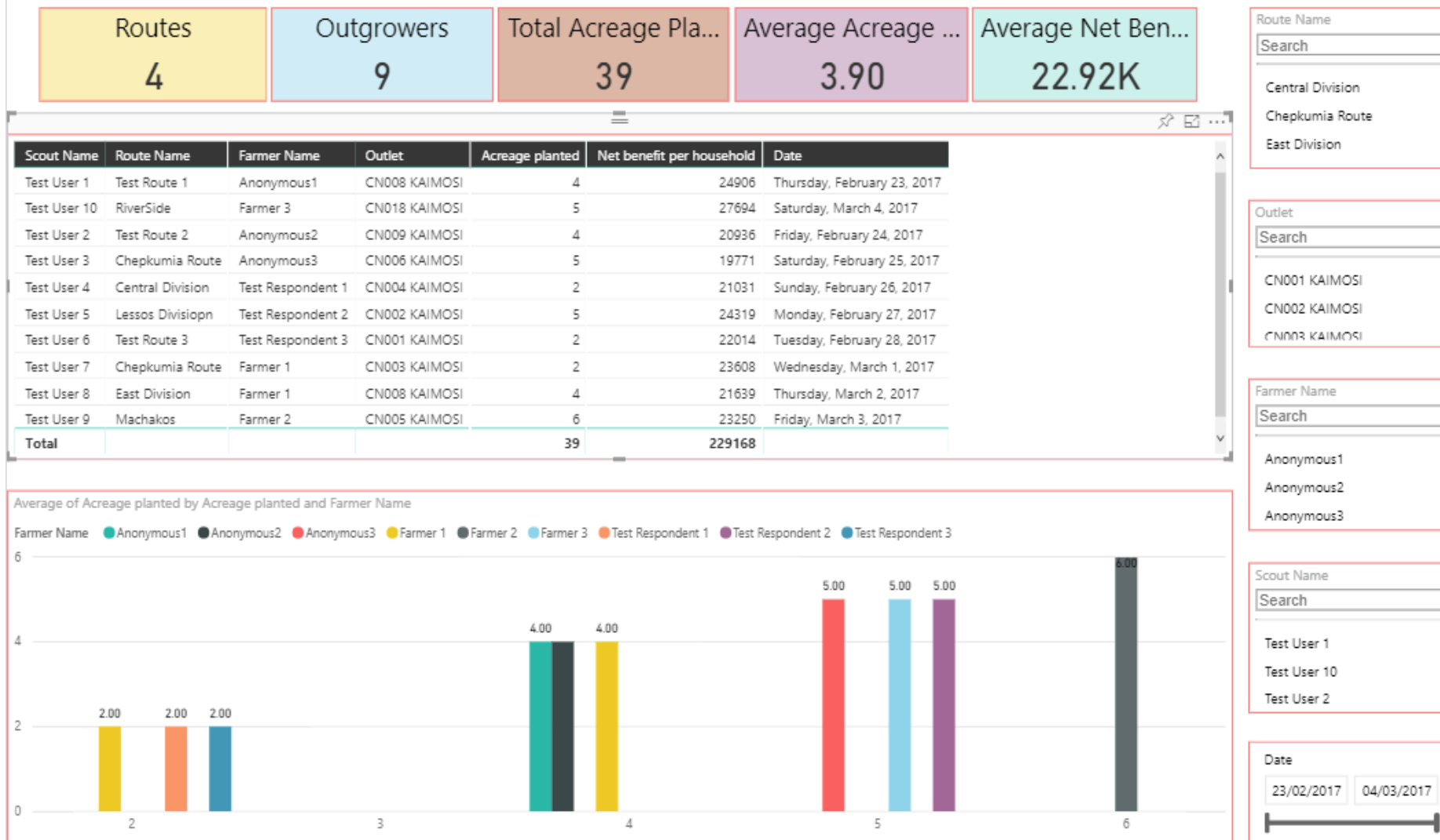
Type of employment



Level of education



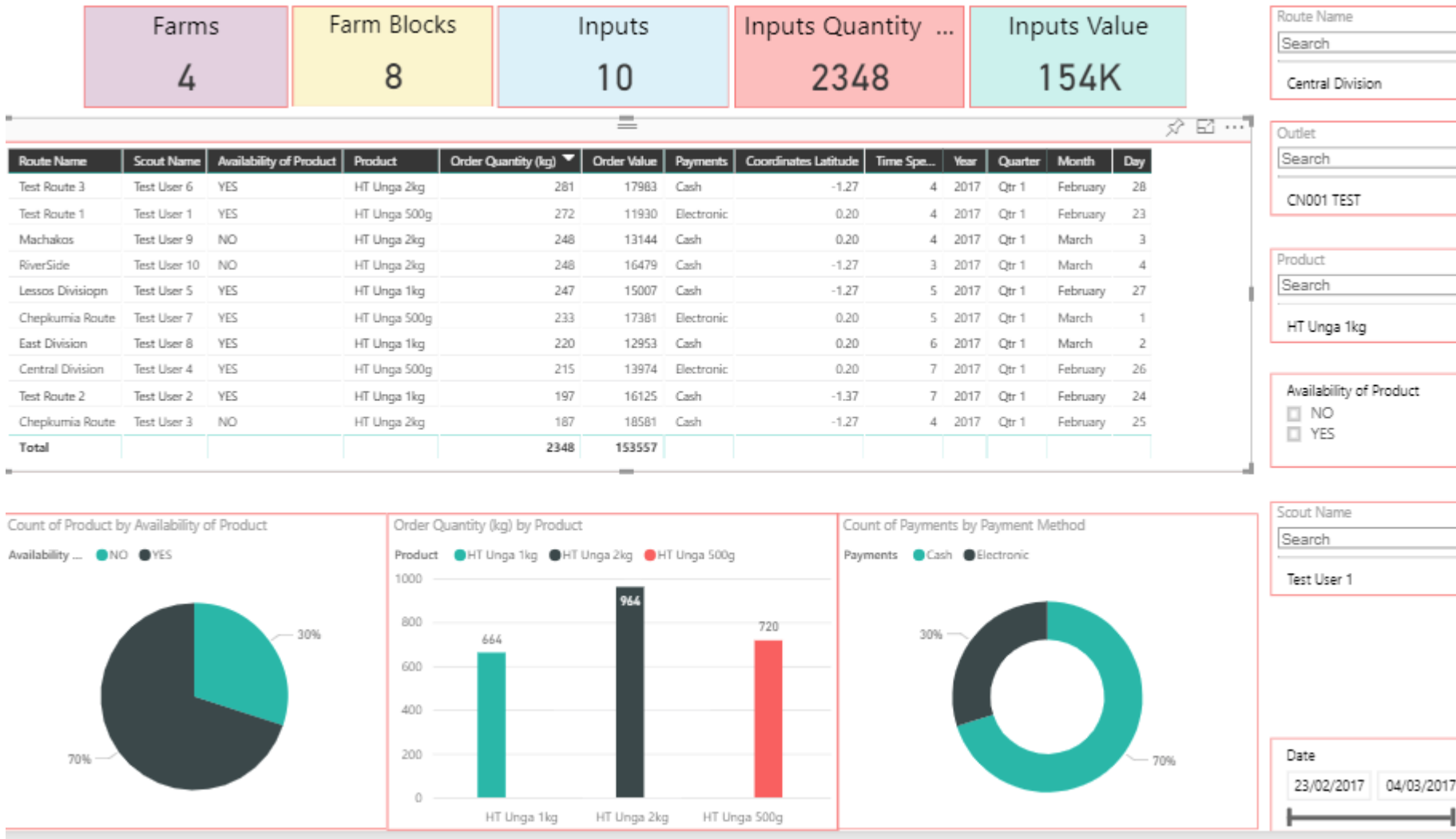
Farm & Outgrower Activities – Acreage Planted



- Dashboard can be generated to display the following details:

- Received Date/Time
- Farm Name
- Farm Block
- Delivery Note No.
- Vehicle Reg
- Harvest Date
- Commodity
- No. of Crates
- Received Weight
- Issue to Packhouse
- Returns
- Current Balance

Farm & Outgrower Activities – Farm Inputs



- Dashboard can be generated to display the following details:

- Farm Name
- Farm Block
- Inputs Applied - Quantity
- Inputs Applied - Value
- Commodity
- Time Applied

Harvest Schedule

HARVEST LOG

Average Block of Land

2.00

Average Number of Workers

2.86

Regions

1

Outlets

1

Scouts

1

Outlet	Block Of Land	Number Of Workers Involved	Expected Harvest Kgs	Date Of Harvesting	Comments
Meru default Outlets	3	0	No Response	8/16/2018	No Response
Meru default Outlets	0	0	No Response	8/18/2018	No Response
Meru default Outlets	2	5	700	8/21/2018	Harvested 744kgs
Meru default Outlets	4	3	3500	8/24/2018	Harvested 1523kgs
Meru default Outlets	2	5	2000	8/22/2018	Harvested 2001kgs
Meru default Outlets	3	6	2000	8/23/2018	Harvested 2039 kgs
Meru default Outlets	0	1	200	8/22/2018	Total KGS 151
Total	14	20			

Region and Outlet

Search

Meru Test

ScoutName

Search

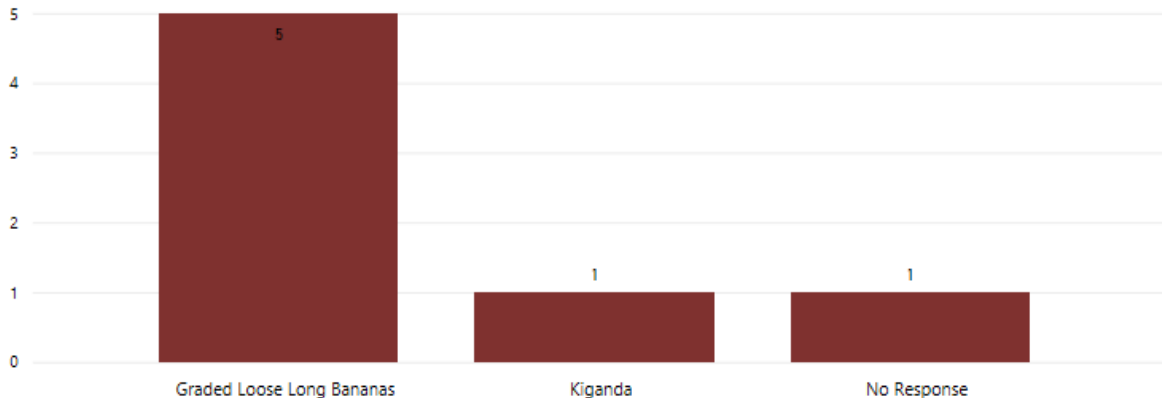
Test User

Date

6/1/2018

9/19/2018

Products Harvested



Date Of Harvesting

8/16/2018

8/18/2018

8/21/2018

8/22/2018

8/23/2018

8/24/2018

The report shows summary of the harvest schedule made from the month of June, 2018.

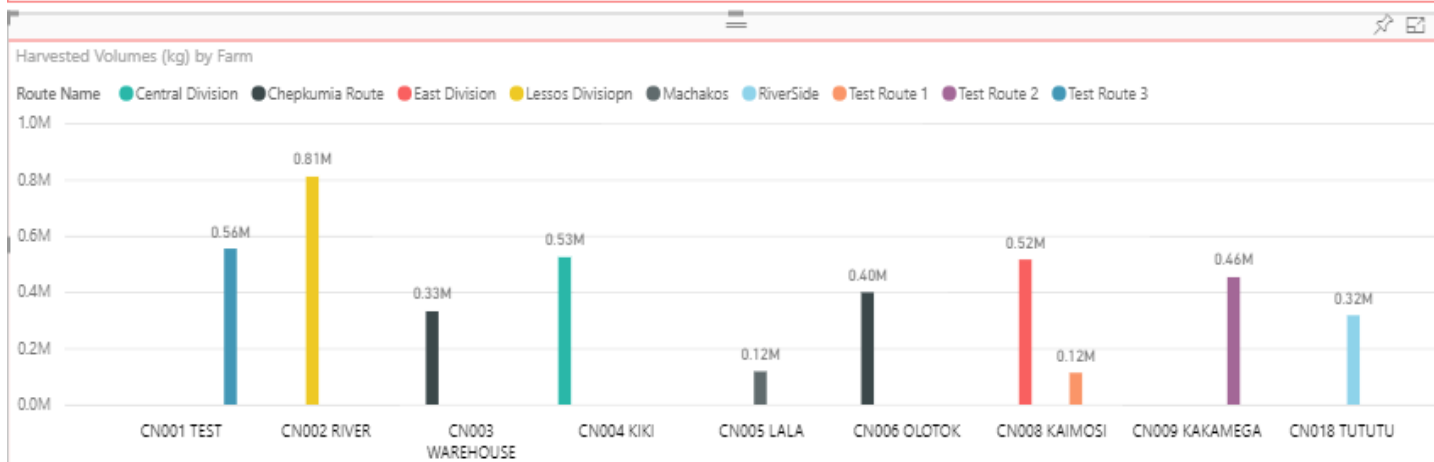
From the visualizations, we can deduce the following:

- Average blocks of land to be harvested.
- Average number of workers.
- Expected harvest of products in KGs
- Products harvested where graded loose long bananas was the highest harvested product.

Farm & Outgrower Activities – Harvest

Farms	Farm Blocks	Harvested Weight (KGs)	Average Harvest per ...
4	8	4M	415.79K

Route Name	Scout Name	Warehouse	Respondent Name	Warehouse Inventory Volumes (kg)	Date	Time Spent
Central Division	Test User 4	CN004 KIKI	Test Respondent 1	526240	Sunday, February 26, 2017	1
Chepkumia Route	Test User 3	CN006 OLOTOK	Anonymous3	401127	Saturday, February 25, 2017	7
Chepkumia Route	Test User 7	CN003 WAREHOUSE	Farmer 1	333746	Wednesday, March 1, 2017	1
East Division	Test User 8	CN008 KAIMOSI	Farmer 1	517981	Thursday, March 2, 2017	6
Lessos Divisiopn	Test User 5	CN002 RIVER	Test Respondent 2	812683	Monday, February 27, 2017	7
Machakos	Test User 9	CN005 LALA	Farmer 2	119792	Friday, March 3, 2017	4
RiverSide	Test User 10	CN018 TUTUTU	Farmer 3	319347	Saturday, March 4, 2017	3
Test Route 1	Test User 1	CN008 KAIMOSI	Anonymous1	115118	Thursday, February 23, 2017	1
Test Route 2	Test User 2	CN009 KAKAMEGA	Anonymous2	455130	Friday, February 24, 2017	3
Test Route 3	Test User 6	CN001 TEST	Test Respondent 3	556704	Tuesday, February 28, 2017	7
Total						40



Route Name

Central Division

Chepkumia Route

East Division

Warehouse

CN001 TEST

CN002 RIVER

CN003 WAREHOUSE

Scout Name

Test User 1

Test User 10

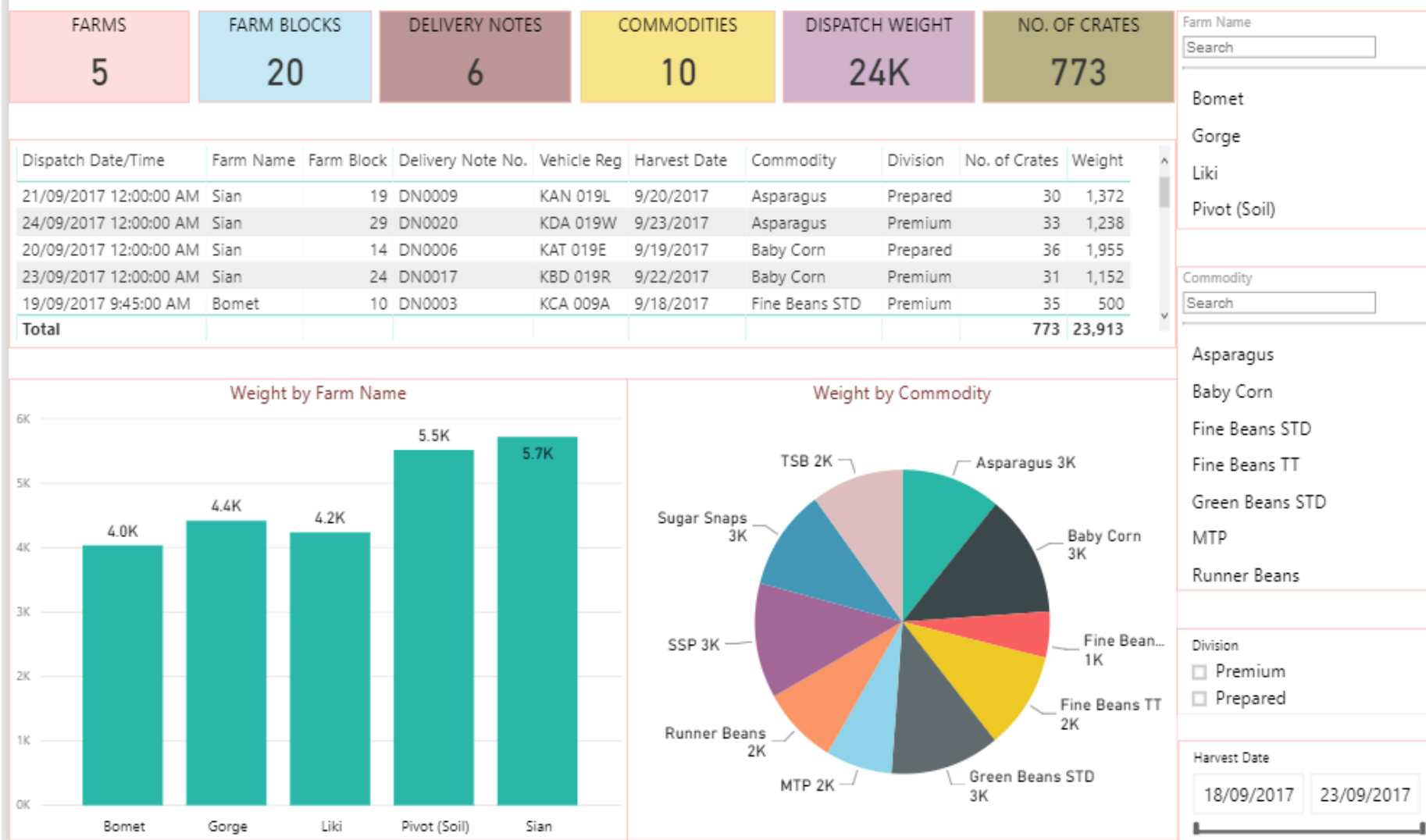
Test User 2

Date

- Dashboard can be generated to display the following details:

- Farm Name
- Farm Block
- Harvest Date
- Commodity
- No. of Crates
- Harvested Weight
- Time Harvested

Farm Dispatch



- Dashboard can be generated to display the following details:

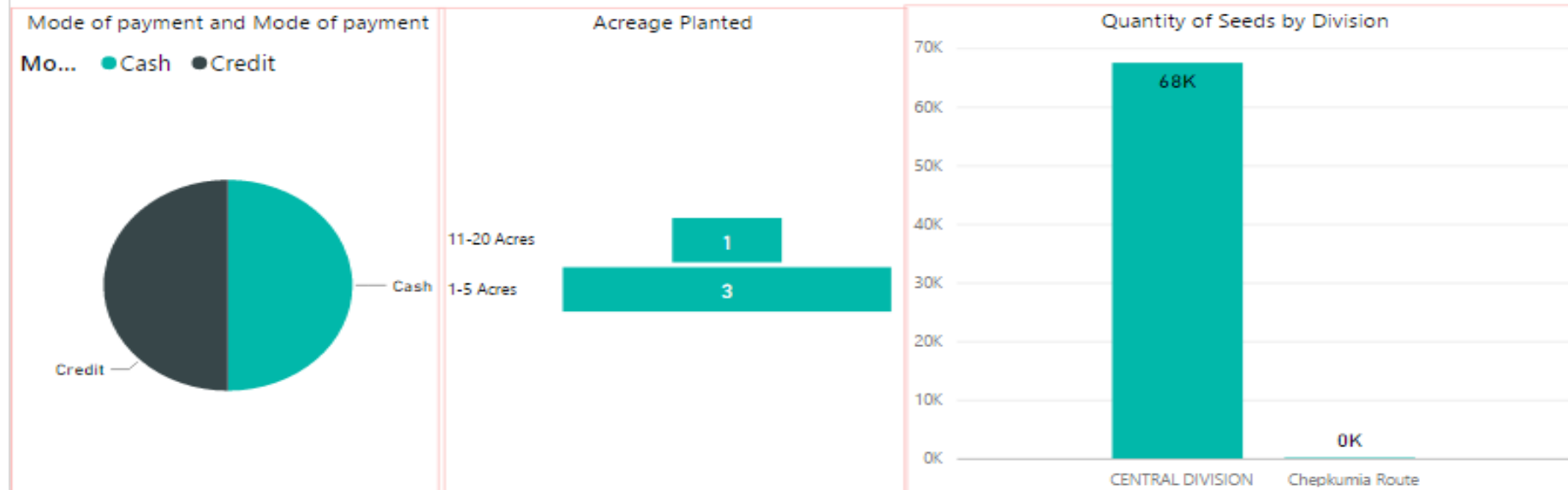
- Dispatch Date/Time
- Farm Name
- Farm Block
- Delivery Note No.
- Vehicle Reg
- Harvest Date
- Commodity
- No. of Crates
- Dispatched Weight

Service Provider Tracking

Divisions	Buying Centres	Enumerators	Average Quantity (kg)	Growers
2	3	1	16.92K	4

Division	Buying Centre	Enumerator	Quantity of Seeds	Mode of payment	Acreage planted for	Date
CENTRAL DIVISION	CN004 CHEM...	KTDA Test User	57000	Cash	1-5 Acres	Friday, February 24, 2017
CENTRAL DIVISION	CN004 CHEM...	KTDA Test User	600	Credit	1-5 Acres	Wednesday, March 1, 20
CENTRAL DIVISION	CN007 TINDIN...	KTDA Test User	10000	Cash	1-5 Acres	Friday, February 24, 2017
Chepkumia Route	Tindinyo Buyi...	KTDA Test User	90	Credit	11-20 Acres	Friday, February 24, 2017
Total			67690			

- Number of VACs/FBOs/Transporters/Service Providers
- Tracks the number of VACs across different divisions
- Shows the quantity of seeds delivered to VAC by each grower and mode of payment for each delivery made



FARM ACTIVITY



1/1/2019 12/31/2019

ANALYTICS PLATFORM

Date	Activity Name e.g. Planting	Date of Activity	Number of Workers Involved	Total Cost of Activity (Ksh)
Tuesday, December 3, 2019	Planting sweetpotato vines in Block B near Dairy shed	Tuesday, December 3, 2019	6	N/A
Thursday, November 28, 2019	Sheep shearing	Thursday, November 28, 2019	2	N/A
Wednesday, November 13, 2019	Planting sweetpotato vines in block A planted soghurm	Wednesday, November 13, 2019	1	N/A
Friday, November 8, 2019	Tree planting at Farm Gate entry	Friday, November 8, 2019	4	N/A
Wednesday, November 6, 2019	Irrigation in block B planted soghurm	Wednesday, November 6, 2019	9	N/A
Tuesday, November 5, 2019	Irrigation to the soghurm planted block	Tuesday, November 5, 2019	8	N/A
Wednesday, October 30, 2019	Planting Soghurm in Block A & B	Wednesday, October 30, 2019	4	N/A
Tuesday, October 22, 2019	Manure Application to Avocado seedlings in Block A & B	Tuesday, October 22, 2019	4	N/A
Saturday, October 19, 2019	Replaced 134 Macadamia seedlings in Kabati Block	Saturday, October 19, 2019	6	N/A
Saturday, October 19, 2019	Replaced 137 Macadamia Seedlings in Itiri Block Muranga 20 Variety	Saturday, October 19, 2019	6	N/A
Saturday, October 19, 2019	Replaced 222 Macadamia Seedlings in Kubwa Block-Muranga 20 Variety	Saturday, October 19, 2019	10	N/A
Friday, October 18, 2019	Replaced 22 Avocado seedlings in Block A near Labour camp	Friday, October 18, 2019	5	N/A
Friday, October 18, 2019	Replaced 85 Avocado seedlings in Block B near Cow shed.	Friday, October 18, 2019	5	N/A
Saturday, October 19, 2019	Received 290 Macadamia Muranga 20 variety seedlings	Friday, October 18, 2019	4	N/A
Thursday, October 17, 2019	Received Hass Avocado seedlings for	Thursday, October 17, 2019	2	N/A
Total			173	

Photo of Activity being done



- Activity based surveys can also be configured on the mobile app
- Certain components can be forced into the survey such as picture taking
- The pictures are referenced digitally against the survey question

WEEDING

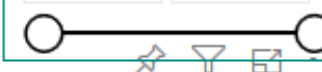
Block of land

- ☐ Itiri A
- ☐ Itiri B
- ☐ Kabati A
- ☐ Kaihu

Date

1/1/2019

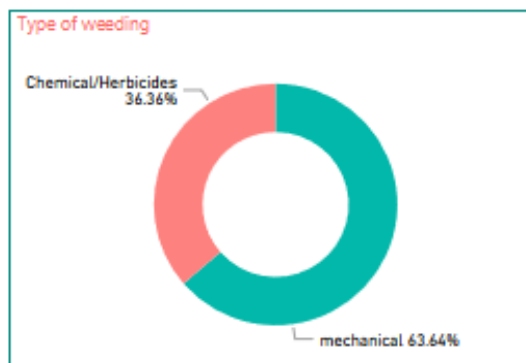
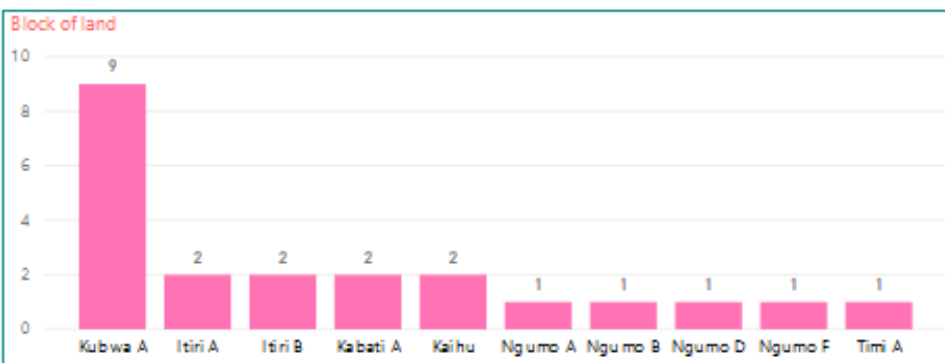
12/31/2019



ANALYTICS PLATFORM

- Key activities that are repetitive are structured such that minimal data needs to be keyed in by the scout.
- Once the route and farmer are picked on the App, the rest of the reference data to that location can be assigned in the database

Date	Block of land	Type of weeding	If chemical weeding specify chemical used	Number of workers involved	Date of weeding	Comments
Thursday, November 28, 2019	Kabati A	Chemical/Herbicides	Touchdown	3	Thursday, November 28, 2019	Herbicide application after slashing
Thursday, November 28, 2019	Kubwa A	Chemical/Herbicides	Touchdown	3	Wednesday, November 27, 2019	Herbicide application after slashing
Tuesday, November 26, 2019	Kubwa A	Chemical/Herbicides	Touchdown	3	Tuesday, November 26, 2019	Slashing and herbicide application.
Thursday, November 28, 2019	Kubwa A	Chemical/Herbicides	Touchdown	3	Monday, November 25, 2019	Herbicide application after slashing
Wednesday, November 13, 2019	Kubwa A	mechanical		1	Wednesday, November 13, 2019	Slashing of remain weeds after tractor slashing
Wednesday, November 13, 2019	Itiri A	mechanical		1	Wednesday, November 13, 2019	Slashing.
Tuesday, November 12, 2019	Kubwa A	mechanical		1	Tuesday, November 12, 2019	Slashing of remaining weeds after tractor slashing
Tuesday, November 12, 2019	Itiri B	mechanical	N/A	1	Tuesday, November 12, 2019	Slashing used.
Tuesday, November 12, 2019	Kubwa A	mechanical	N/A	2	Friday, November 8, 2019	Tractor slashing
Tuesday, November 12, 2019	Kubwa A	mechanical	N/A	2	Thursday, November 7, 2019	Tractor slashing
Monday, October 28, 2019	Ngumo F	mechanical		3	Friday, August 23, 2019	Slashing done
Total				63		



Block of land	If chemical weeding specify chemical used
Itiri B	Touchdown
Kabati A	Touchdown
Kaihu	Touchdown
Kubwa A	Touchdown
Timi A	Touchdown
Itiri B	N/A
Kubwa A	N/A
Itiri A	

PRUNING

Block of land

- ☐ Itiri A
- ☐ Itiri B
- ☐ Kabati A
- ☐ Kabati B

Date

1/1/2019 12/31/2019



ANALYTICS PLATFORM

Date	Block of land	Grafting Done	Number of workers involved	Date of pruning	Comments
Tuesday, April 2, 2019	Itiri A	No	16	Thursday, February 15, 2018	No Response
Tuesday, April 2, 2019	Itiri B	No	16	Thursday, February 15, 2018	No Response
Tuesday, April 2, 2019	Kabati A	No	16	Thursday, February 15, 2018	No Response
Tuesday, April 2, 2019	Ndimu A	No	16	Thursday, February 15, 2018	No Response
Tuesday, April 2, 2019	Ngumo A	No	16	Thursday, February 15, 2018	No Response
Tuesday, April 2, 2019	Ngumo F	No	16	Thursday, February 15, 2018	No Response
Tuesday, April 2, 2019	Timi B	No	16	Thursday, February 15, 2018	No Response
Tuesday, April 2, 2019	Timi A	No	15	Wednesday, February 21, 2018	No Response
Tuesday, April 2, 2019	Kaihu	No	16	Wednesday, February 28, 2018	No Response
Thursday, April 4, 2019	Kubwa A	No	10	Thursday, March 8, 2018	No Response
Tuesday, April 2, 2019	Kaihu	No	15	Wednesday, January 30, 2019	No Response
Tuesday, April 2, 2019	Ndimu A	No	15	Wednesday, January 30, 2019	No Response
Wednesday, April 3, 2019	Itiri A	No	5	Saturday, February 2, 2019	No Response
Wednesday, April 3, 2019	Timi A	No	5	Saturday, February 2, 2019	No Response
Tuesday, April 2, 2019	Itiri A	No	15	Thursday, February 21, 2019	No Response
Tuesday, April 2, 2019	Itiri B	No	15	Thursday, February 21, 2019	No Response
Tuesday, April 2, 2019	Kabati A	No	30	Thursday, February 21, 2019	No Response
Tuesday, April 2, 2019	Kabati B	No	15	Thursday, February 21, 2019	No Response
Tuesday, April 2, 2019	Kubwa A	No	15	Thursday, February 21, 2019	No Response
Tuesday, April 2, 2019	Ngumo A	No	15	Thursday, February 21, 2019	No Response
Tuesday, April 2, 2019	Kaihu	No	10	Thursday, March 21, 2019	No Response
Total			308		

Was Grafting Done



Block of land



- The range filters are available for all the reports and dashboards
- Analytics users can then determine the dates, farms, blocks, activities, scouts, etc. they wish to analyse
- The platform auto regenerates the dashboards and reports on chosen parameters

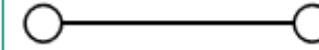
SPRAYING

Block of land

- ☐ Itiri A
- ☐ Kabati B
- ☐ Kubwa A
- ☐ Ndimu A

Date

1/1/2019 12/31/2019

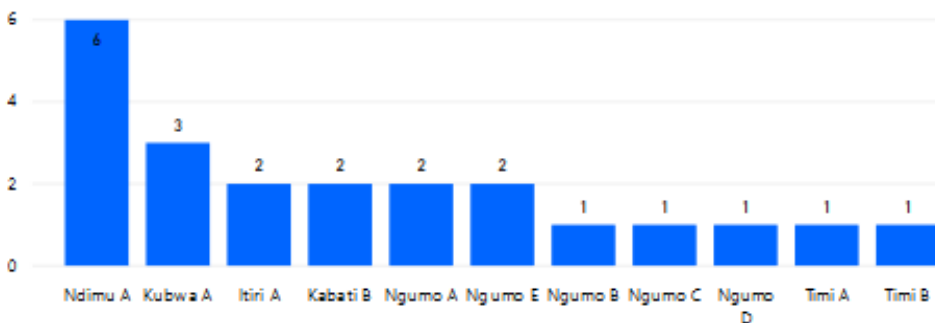


ANALYTICS PLATFORM

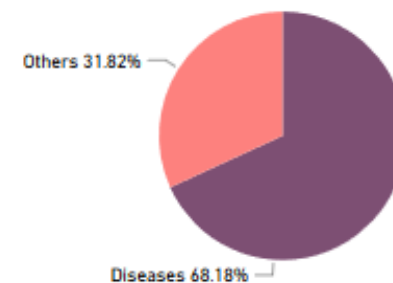
Date	Block of land	Chemical used	Number of workers involved	Date of spraying	Other reason for spraying	Comments
Tuesday, April 2, 2019	Ndimu A	AG COPPER	5	Friday, March 16, 2018		No Response
Tuesday, April 2, 2019	Kubwa A	COMBI FERT	1	Monday, September 17, 2018		No Response
Tuesday, April 2, 2019	Kubwa A	FOLIAR FEEDING	1	Sunday, October 28, 2018		No Response
Thursday, October 24, 2019	Timi B	Rova	2	Friday, June 21, 2019		No Response
Thursday, October 24, 2019	Ngumo A	Rova	2	Saturday, June 22, 2019		No Response
Thursday, October 24, 2019	Ngumo B	Rova	2	Monday, June 24, 2019		No Response
Thursday, October 24, 2019	Ngumo E	Rova	2	Monday, June 24, 2019		No Response
Thursday, October 24, 2019	Ngumo C	Rova	2	Tuesday, June 25, 2019		No Response
Thursday, October 24, 2019	Ngumo D	Rova	3	Tuesday, June 25, 2019		No Response
Thursday, October 24, 2019	Timi A	Rova	2	Wednesday, June 26, 2019		No Response
Thursday, October 24, 2019	Ndimu A	Rova	2	Thursday, June 27, 2019		Motorized spraying, tractor boom sprayer used
Total			49			

- The range filters are available for all the reports and dashboards
- Analytics users can then determine the dates, farms, blocks, activities, scouts, etc. they wish to analyze
- The platform auto regenerates the dashboards and reports on chosen parameters

Block of land



Reason for spraying



Other reasons for spraying

Activate V
Go to Setting

IRRIGATION

Block of land

- ☐ Itiri A
- ☐ Itiri B
- ☐ Kabati A
- ☐ Kabati B

Date

1/1/2019

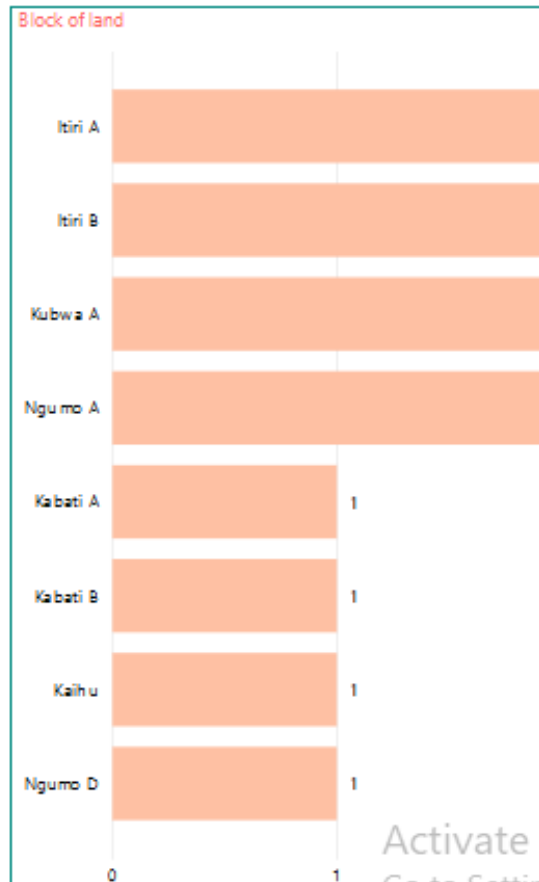
12/31/2019



ANALYTICS
PLATFORM

- All Dashboards and reports also have the survey data available on tables
- These tables can be expanded onto focus mode
- All tables can also be exported into Excel or CSV
- Within the dashboard the data fields can be sorted or spotlight put on specific elements

Date	Block of land	Number of workers involved	Amount of water used	Date of irrigation	Comments
Thursday, April 25, 2019	Itiri B	9.00	110.00	Wednesday, April 17, 2019	No Response
Thursday, April 25, 2019	Itiri A	9.00	185.00	Wednesday, April 24, 2019	No Response
Monday, October 28, 2019	Itiri B	8.00	156.00	Wednesday, August 14, 2019	Overhead irrigation used.
Monday, October 28, 2019	Itiri A	8.00	110.00	Wednesday, August 14, 2019	Overhead irrigation.
Monday, October 28, 2019	Ngu mo A	9.00	142.00	Thursday, August 15, 2019	Overhead irrigation
Monday, October 28, 2019	Ngu mo D	8.00	130.00	Saturday, August 17, 2019	Overhead Irri used.
Monday, October 28, 2019	Kaihu	9.00	114.00	Monday, August 19, 2019	No Response
Monday, October 28, 2019	Kubwa A	14.00	296.00	Tuesday, August 20, 2019	No Response
Monday, October 28, 2019	Kabati B	6.00	140.00	Thursday, August 22, 2019	Night hours irrigation done.
Monday, October 28, 2019	Kabati A	8.00	150.00	Thursday, August 22, 2019	No Response
Tuesday, November 5, 2019	Ngu mo A	8.00	140.00	Tuesday, November 5, 2019	Irrigation on Block A planted sog humr
Total		96.00	1,673.00		



Activate W
Go to Settings

Fertilizer Application

FERTILIZER APPLICATION

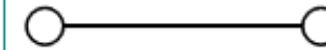
Block of land

- ☐ Itiri A
- ☐ Itiri B
- ☐ Kabati A
- ☐ Kaihu

Date

1/1/2019

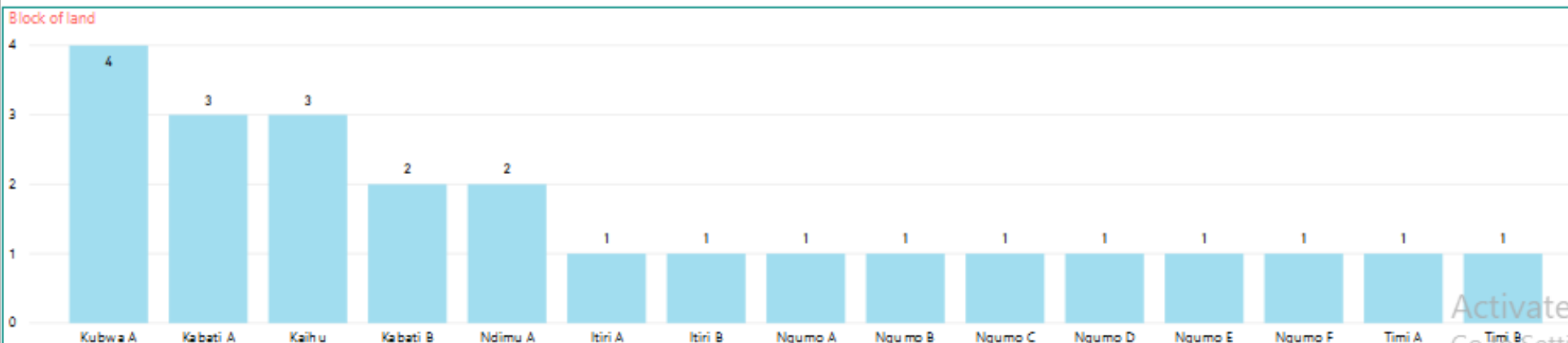
12/31/2019



ANALYTICS PLATFORM

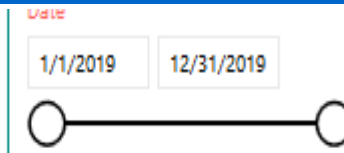
Date	Block of land	Type of Fertilizer used	Date of application	Number of workers involved	Amount of Fertilizer used	Comments
Tuesday, April 2, 2019	Kabati B	Urea	Thursday, October 4, 2018	16	6.00	No Response
Tuesday, April 2, 2019	Kabati A	Urea	Wednesday, January 3, 2018	14	10.00	No Response
Tuesday, April 2, 2019	Kaihu	Boom	Friday, January 5, 2018	12	25.00	No Response
Thursday, October 24, 2019	Ngumo F	NPK 22:6:12	Thursday, May 9, 2019	8	125.00	Method of application-Broadcasting
Tuesday, April 2, 2019	Kaihu	Boom	Thursday, January 4, 2018	6	6.00	No Response
Tuesday, April 2, 2019	Kubwa A	Urea	Tuesday, October 2, 2018	6	20.00	No Response
Tuesday, April 2, 2019	Kubwa A	Boom	Tuesday, October 2, 2018	5	20.00	No Response
Tuesday, April 2, 2019	Kubwa A	Urea	Wednesday, October 3, 2018	5	10.00	No Response
Thursday, October 24, 2019	Timi B	NPK 22:6:12	Wednesday, May 8, 2019	5	200.00	Broadcasting
Thursday, October 24, 2019	Itiri B	NPK 22:6:12	Wednesday, May 8, 2019	5	200.00	Broadcasting method.
Thursday, October 24, 2019	Itiri A	NPK 22:6:12	Wednesday, May 8, 2019	5	200.00	Broadcasting method.
Total				132	4,847.00	

- Comparative analysis are provided for most survey fields against farms, farm blocks, etc.
- Data fields that have numeric data have cumulative totals assigned.
- Date ranges of the date of survey and also the date of activity applied are both maintained in the database



CHEMICAL STORE

Date	Chemical Name	IN (KG)	OUT (KG)	Balance (KG)
Monday, September 2, 2019	ALTO 100	30,250	29,500	373,160
Tuesday, September 17, 2019	CABRIO	17,000	20,560	241,920
Thursday, May 23, 2019	ALTO 100 SL	12,810	20,110	65,710
Thursday, September 5, 2019	CABRIO	7,000	3,180	96,540
Saturday, June 29, 2019	Green Copper cobox	150	0	150
Sunday, June 30, 2019	Green Copper cobox	125	245	1,582
Tuesday, September 3, 2019	OMEX FOLIAR FEED	60	66	567
Tuesday, August 27, 2019	Zinc Sulphate (T-Zinc & Albreen Zincoplus)	40	55	334
Sunday, June 30, 2019	Green Cooper cobox	0	5	48
Wednesday, August 28, 2019	COMBI FERT 20:20:20	0	6	423
Thursday, August 29, 2019	Decis	0	2,000	1,000
Thursday, August 29, 2019	Marshall	0	9	21
Total		67,435	75,735	781,456



67K
IN (KG)

76K
OUT (KG)

781K
Balance (KG)

ANALYTICS PLATFORM

- Related Survey Questions can be compared and reconciled
- Through the unique IDs used for all entities and survey questions comparative calculations are applied

FERTILIZER STORE

Date	Name of Fertilizer	Enter Date of Fertilizer Input/Output in Store	IN (KG)	OUT (KG)	Balance (KG)
Wednesday, August 28, 2019	SOLUBOR	Friday, January 5, 2018	0.0	50.0	50.0
Wednesday, August 28, 2019	SOLUBOR	Monday, January 8, 2018	0.0	3.2	46.8
Wednesday, August 28, 2019	SOLUBOR	Tuesday, January 9, 2018	0.0	2.8	44.0
Wednesday, August 28, 2019	SOLUBOR	Wednesday, January 10, 2018	0.0	2.8	41.2
Wednesday, August 28, 2019	SOLUBOR	Thursday, January 11, 2018	0.0	3.2	38.0
Wednesday, August 28, 2019	SOLUBOR	Friday, January 12, 2018	0.0	2.8	35.2
Wednesday, August 28, 2019	SOLUBOR	Monday, January 15, 2018	0.0	3.2	32.0
Wednesday, August 28, 2019	SOLUBOR	Tuesday, January 16, 2018	0.0	0.8	31.2
Wednesday, August 28, 2019	SOLUBOR	Wednesday, January 17, 2018	0.0	1.2	30.0
Wednesday, August 28, 2019	SOLUBOR	Thursday, January 18, 2018	0.0	2.8	27.2
Wednesday, August 28, 2019	SOLUBOR	Friday, January 19, 2018	0.0	2.8	24.4
Wednesday, August 28, 2019	SOLUBOR	Saturday, January 20, 2018	0.0	1.6	22.8
Wednesday, August 28, 2019	SOLUBOR	Monday, January 22, 2018	0.0	0.8	22.0
Wednesday, August 28, 2019	CAN 26% N & 27%N	Tuesday, May 15, 2018	1,000.0	0.0	1,000.0
Wednesday, August 28, 2019	CAN 26% N & 27%N	Wednesday, May 16, 2018	0.0	1,000.0	0.0
Saturday, May 4, 2019	No Response	Monday, September 3, 2018	100.0	0.0	100.0
Thursday, May 23, 2019	COMBI FERTILIZER 20:20:20	Monday, September 3, 2018	100.0	0.0	100.0
Wednesday, August 28, 2019	COMBI FERT 20:20:20	Monday, September 3, 2018	100.0	0.0	100.0
Wednesday, August 28, 2019	Urea	Monday, September 3, 2018	100.0	0.0	109.0
Thursday, May 23, 2019	COMBI FERTILIZER 20:20:20	Monday, September 17, 2018	0.0	1.2	98.8
Wednesday, August 28, 2019	COMBI FERT 20:20:20	Monday, September 17, 2018	0.0	1.2	98.8
Thursday, May 23, 2019	COMBI FERTILIZER 20:20:20	Tuesday, September 18, 2018	0.0	1.2	97.6
Total			29,425.0	15,219.9	45,683.5

Date

1/1/2019 12/31/2019

○ — ○

ANALYTICS PLATFORM

29.4K
IN (KG)

15.2K
OUT (KG)

45.7K
Balance (KG)

- All Dashboards and reports also have the survey data available on tables
- These tables can be expanded onto focus mode
- All tables can also be exported into Excel or CSV
- Within the dashboard the data fields can be sorted or spotlight put on specific elements

Estimates & Recommendations

COFFEE EXTENSION SERVICES



ANALYTICS PLATFORM

- Both Qualitative and Quantitative Survey Questions can be assigned and analyzed
- Actual parameters collected can be compared with budget figures and reconciled
- Text responses can also be viewed within and across surveys

Crop Estimate

Date	Budget Estimate Early Tons	Budget Estimate Late Tons	Budget Estimate Total Tons	Budget Estimate Kg/Ha	June Estimate Early Tons	June Late Tons	June Total Tons	June Kg/Ha	Sept Estimate Early
7/12/2019	2	14	16	863	0	0	0	0	
11/14/2019	2	14	16	863	2	12	14	755	
Total	4	28	32	1726	2	12	14	755	

Pruning Comments

Coffee Block Pruning	Pruning Text Comments
Itiri A	No pruning operation was going on despite evidence of a need of desuckering.
No Response	With the heavy rain fall recorded in the month of October the coffee trees are expected to grow a lot of unwanted foliage which needs to be removed through desuckering to facilitate aeration and proper coffee ripening. Opening of the coffee trees through pruning is a cultural control method for both pests and diseases.

Weeding Comments

Coffee Block Weeding	Weeds Control Comments
Itiri A	October has recorded the highest rainfall in the last over ten years and this is good for the coffee trees development, but the weeds will also benefit from it and if not controlled, they will have a negative impact on the coffee as far as competition for water and nutrients is concerned. To keep the weeds under control, constant slashing need to be done to avoid the seeding of the weeds, before hand weeding during the dry weather. In block Ndimu where young suckers are coming up care need to be taken to avoid herbicide scorching of the young suckers.
Kabati A	Herbicide application needed. Its more economical than weeds slashing.

Soil Testing & Analysis

SOIL ANALYSIS

FIELD NAME

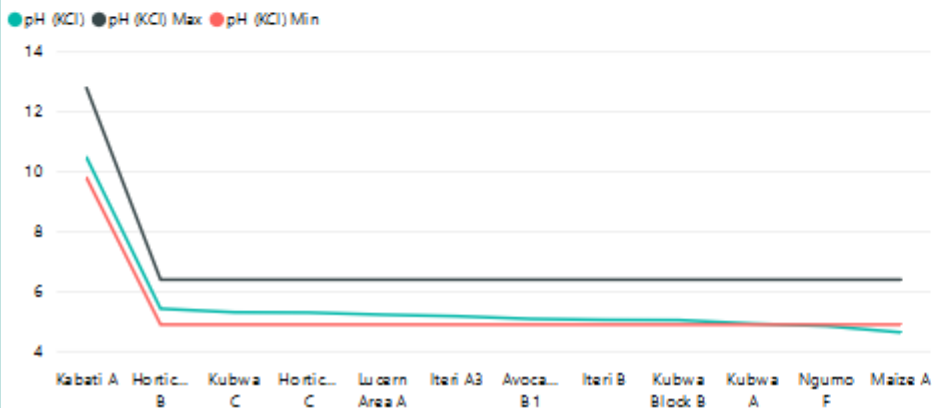
DATE

1/30/2020 1/31/2020

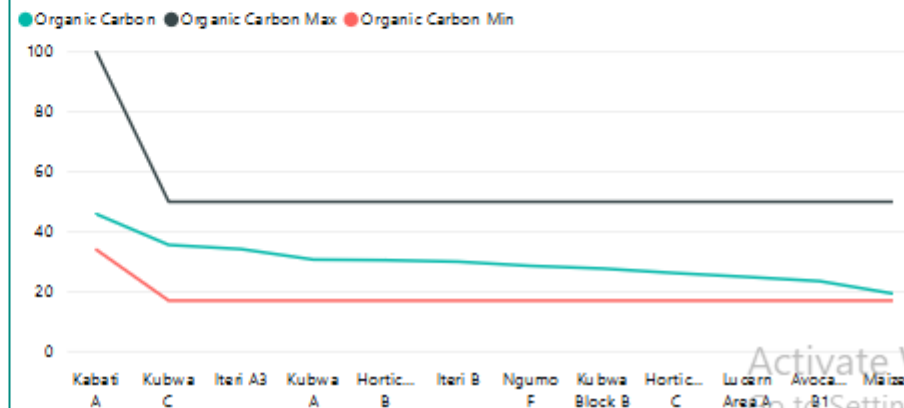
☐ Avocado B1
☐ Horticulture B

Date	Field Name	Field Size	Crop Name	Date of Soil Testing	Soil Texture	pH (KCl)	pH (KCl) Min	pH (KCl) Max	Organic Carbon	Organic Carbon Min	Organic Carbon Max	Total Nitrogen	Total Nitrogen Min	Total Nitrogen Max
1/31/2020	Kabati A	2.9 acre	Macadamia	Monday, December 23, 2019	Clay	5.17	4.90	6.40	20.00	17.00	30.00	1.60	1.00	1.50
1/31/2020	Avocado B1	2.5 acre	Avocado	Monday, December 23, 2019	Clay	5.09	4.90	6.40	23.50	17.00	50.00	1.90	1.00	1.50
1/30/2020	Lucern Area A	0.75 acre	Alfalfa Lucerne	Monday, December 23, 2019	Clay	5.23	4.90	6.40	24.90	17.00	50.00	2.50	1.00	1.50
1/31/2020	Kabati A	2.9 acre	Macadamia	Monday, December 23, 2019	Clay	5.31	4.90	6.40	25.90	17.00	50.00	2.10	1.00	1.50
1/30/2020	Horticulture C	2 acre	Garlic	Monday, December 30, 2019	Clay	5.30	4.90	6.40	26.20	17.00	50.00	2.00	1.00	1.50
1/31/2020	Kubwa Block B	2.5 acre	Coffee	Monday, December 23, 2019	Clay	5.05	4.90	6.40	27.70	17.00	50.00	2.20	1.00	1.50
1/30/2020	Ngumo F	1.1 acre	Coffee	Monday, December 23, 2019	Clay	4.85	4.90	6.40	28.60	17.00	50.00	2.40	1.00	1.50
1/30/2020	Iteri B	3 acre	Coffee	Monday, December 23, 2019	Clay	5.06	4.90	6.40	30.00	17.00	50.00	2.60	1.00	1.50
1/30/2020	Horticulture B	3 acre	Basil	Monday, December 30, 2019	Clay	5.43	4.90	6.40	30.50	17.00	50.00	2.60	1.00	1.50
1/30/2020	Kubwa A	2.5 acre	Coffee	Monday, December 23, 2019	Clay	4.93	4.90	6.40	30.70	17.00	50.00	2.60	1.00	1.50
1/30/2020	Iteri A3	3 acre	Coffee	Monday, December 23, 2019	Clay	5.18	4.90	6.40	34.20	17.00	50.00	3.00	1.00	1.50
1/31/2020	Kubwa C	2.6 acre	Macadamia	Monday, December 23, 2019	Clay	5.31	4.90	6.40	35.60	17.00	50.00	3.20	1.00	1.50

pH Profile



Organic Profile



ANALYTICS PLATFORM

- Farmer and Farm Biodata previously collected can be used as a reference in follow up surveys
- Parameters collected can be compared against ranges provided
- Data collected can be compared to other datasets from other sources
- Platform can import csv files

Soil Testing & Analysis

SOIL ANALYSIS

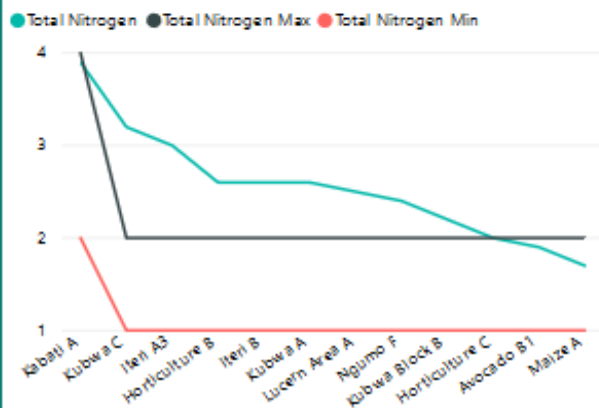
FIELD NAME

☐ Avocado B1
☐ Horticulture B

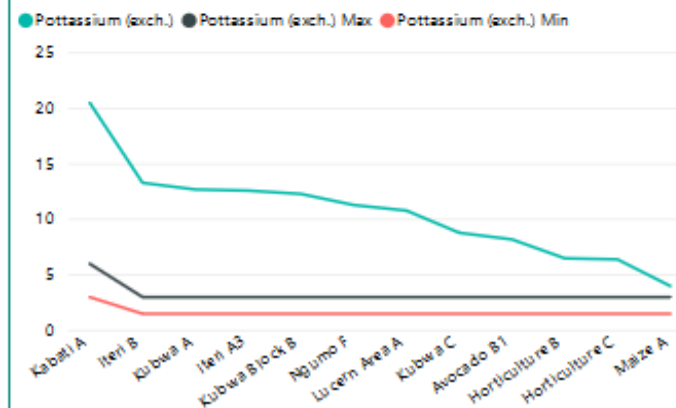
DATE

Date	Field Name	Field Size	Crop Name	Date of Soil Testing	Soil Texture	pH (KCl)	pH (KCl) Min	pH (KCl) Max	Organic Carbon	Organic Carbon Min	Organic Carbon Max	Total Nitrogen	Total Nitrogen Min	Total Nitrogen Max
1/30/2020	Horticulture C	2 acre	Garlic	Monday, December 30, 2019	Clay	5.30	4.90	6.40	26.20	17.00	50.00	2.00	1.00	3.00
1/30/2020	Kubwa A	2.5 acre	Coffee	Monday, December 23, 2019	Clay	4.93	4.90	6.40	30.70	17.00	50.00	2.60	1.00	3.00
1/30/2020	Ngumo F	1.1 acre	Coffee	Monday, December 23, 2019	Clay	4.85	4.90	6.40	28.60	17.00	50.00	2.40	1.00	3.00
1/30/2020	Maize A	2.5 acre	Maize (com)	Monday, December 23, 2019	Clay	4.64	4.90	6.40	19.40	17.00	50.00	1.70	1.00	3.00
1/30/2020	Iteri A3	3 acre	Coffee	Monday, December 23, 2019	Clay	5.18	4.90	6.40	34.20	17.00	50.00	3.00	1.00	3.00
1/30/2020	Horticulture B	3 acre	Basil	Monday, December 30, 2019	Clay	5.43	4.90	6.40	30.50	17.00	50.00	2.60	1.00	3.00
1/30/2020	Lucern Area A	0.75 acre	Alfalfa Lucerne	Monday, December 23, 2019	Clay	5.23	4.90	6.40	24.90	17.00	50.00	2.50	1.00	3.00
1/30/2020	Iteri B	3 acre	Coffee	Monday, December 23, 2019	Clay	5.06	4.90	6.40	30.00	17.00	50.00	2.60	1.00	3.00
1/31/2020	Kubwa Block B	2.5 acre	Coffee	Monday, December 23, 2019	Clay	5.05	4.90	6.40	27.70	17.00	50.00	2.20	1.00	3.00
1/31/2020	Kubwa C	2.6 acre	Macadamia	Monday, December 23, 2019	Clay	5.31	4.90	6.40	35.60	17.00	50.00	3.20	1.00	3.00
1/31/2020	Kabati A	2.9 acre	Macadamia	Monday, December 23, 2019	Clay	5.17	4.90	6.40	20.00	17.00	50.00	1.80	1.00	3.00
1/31/2020	Kabati A	2.9 acre	Macadamia	Monday, December 23, 2019	Clay	5.31	4.90	6.40	25.00	17.00	50.00	2.10	1.00	3.00

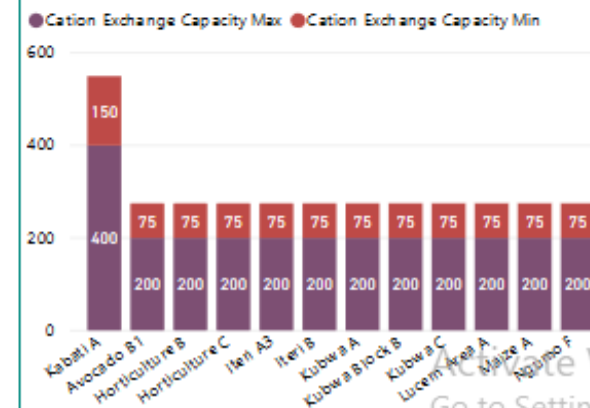
Nitrogen Profile



Potassium Profile



Cation Profile



ANALYTICS PLATFORM

- Backend APIs can be done at a Cloud Platform Level or at a SQL Database level
- APIs provided by other platforms are easily integrated via Azure Cloud's API Manager at minimal effort
- Transaction IDs are then easily matched to map onto the platform database

Farm & Outgrower Activities – Acreage Planted

Routes

4

Outgrowers

9

Total Acreage Pla...

39

Average Acreage ...

3.90

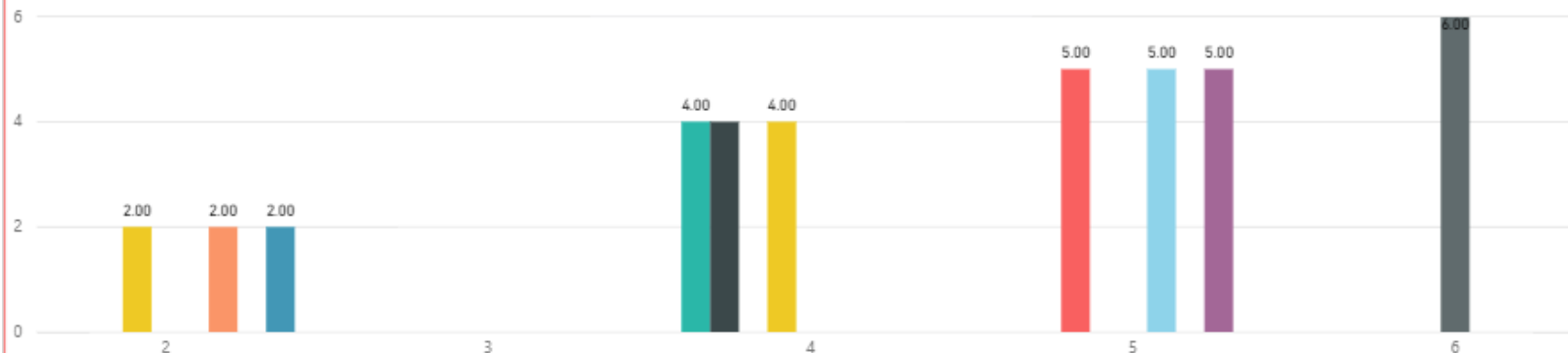
Average Net Ben...

22.92K

Scout Name	Route Name	Farmer Name	Outlet	Acreage planted	Net benefit per household	Date
Test User 1	Test Route 1	Anonymous1	CN008 KAIMOSI	4	24906	Thursday, February 23, 2017
Test User 10	RiverSide	Farmer 3	CN018 KAIMOSI	5	27694	Saturday, March 4, 2017
Test User 2	Test Route 2	Anonymous2	CN009 KAIMOSI	4	20936	Friday, February 24, 2017
Test User 3	Chepkumia Route	Anonymous3	CN006 KAIMOSI	5	19771	Saturday, February 25, 2017
Test User 4	Central Division	Test Respondent 1	CN004 KAIMOSI	2	21031	Sunday, February 26, 2017
Test User 5	Lessos Divisiopn	Test Respondent 2	CN002 KAIMOSI	5	24319	Monday, February 27, 2017
Test User 6	Test Route 3	Test Respondent 3	CN001 KAIMOSI	2	22014	Tuesday, February 28, 2017
Test User 7	Chepkumia Route	Farmer 1	CN003 KAIMOSI	2	23608	Wednesday, March 1, 2017
Test User 8	East Division	Farmer 1	CN008 KAIMOSI	4	21639	Thursday, March 2, 2017
Test User 9	Machakos	Farmer 2	CN005 KAIMOSI	6	23250	Friday, March 3, 2017
Total				39	229168	

Average of Acreage planted by Acreage planted and Farmer Name

Farmer Name Anonymous1 Anonymous2 Anonymous3 Farmer 1 Farmer 2 Farmer 3 Test Respondent 1 Test Respondent 2 Test Respondent 3



Route Name

Search

Central Division

Chepkumia Route

East Division

Outlet

Search

CN001 KAIMOSI

CN002 KAIMOSI

CN003 KAIMOSI

Farmer Name

Search

Anonymous1

Anonymous2

Anonymous3

Scout Name

Search

Test User 1

Test User 10

Test User 2

Date

23/02/2017 04/03/2017

ANALYTICS PLATFORM

- A count is maintained of all activities and surveys conducted
- Telemetry metrics are then generated
- Counts, averages and other KPIs can then be projected

Scout Agent Productivity & Performance

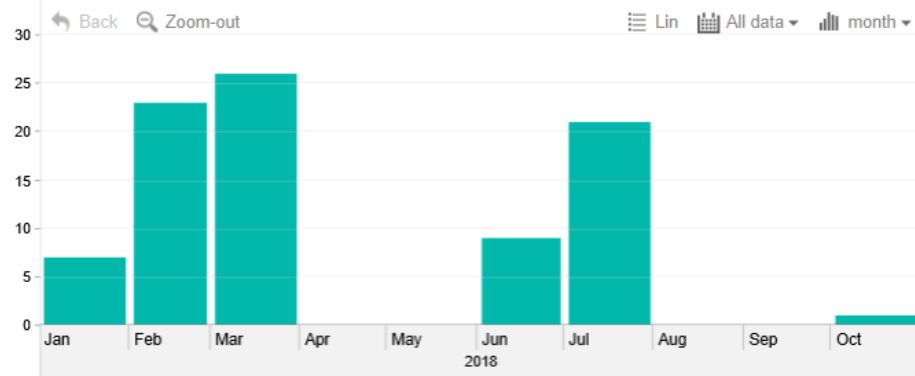
HISTORICAL COVERAGE & PRODUCTIVITY

Scout Name	Count of Outlets Visited
Platinum User	26
Test Scout2	9
Test ScoutA	9
Test Scout3	8
Test ScoutB	7
Total	40

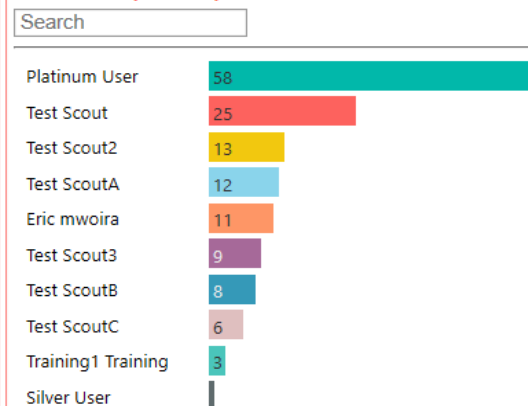
Scout Name	Average of Time Spent
Test ScoutB	1.21
Eric mwoira	1.26
Silver User	2.00
Test ScoutA	2.00
Test ScoutC	2.02
Platinum	3.55
Total	454.70

Scout Name	Earliest Time Started	Latest Time Complete
Test Scout	6:20:59 AM	11:27:44 AM
Eric mwoira	7:10:07 AM	1:30:15 PM
Test Scout2	9:31:49 AM	3:29:03 PM
Platinum User	9:46:26 AM	2:47:49 PM
Test Scout3	10:39:18 AM	3:15:19 PM
Test ScoutB	10:43:33 AM	5:15:32 PM
Test ScoutA	10:52:00 AM	11:54:21 AM

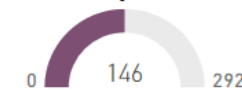
Outlet Coverage by Date



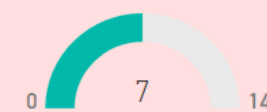
Count of Surveys Done by Scout Name



Surveys Done



Scouts



Avg. Time Taken

454.70

Outlets

Buffalo Mall
Busia default Outlet
Carrefour Junction
Eldoret default Outlet
Garden city
Hearts cafe
Kenya

Date



ANALYTICS PLATFORM

- Productivity Metrics are tracked against pre determined KPIs
- Colour coding is used to visualize the performance against the set KPIs
- Scouts surveys are tracked for quantity, completeness, time taken, survey type, etc.
- This is then used to determine performance

Harvest Schedule

HARVEST LOG

Average Block of Land

2.00

Average Number of Workers

2.86

Regions

1

Outlets

1

Scouts

1

Outlet	Block Of Land	Number Of Workers Involved	Expected Harvest Kgs	Date Of Harvesting	Comments
Meru default Outlets	3	0	No Response	8/16/2018	No Response
Meru default Outlets	0	0	No Response	8/18/2018	No Response
Meru default Outlets	2	5	700	8/21/2018	Harvested 744kgs
Meru default Outlets	4	3	3500	8/24/2018	Harvested 1523kgs
Meru default Outlets	2	5	2000	8/22/2018	Harvested 2001kgs
Meru default Outlets	3	6	2000	8/23/2018	Harvested 2039 kgs
Meru default Outlets	0	1	200	8/22/2018	Total KGS 151
Total	14	20			

Region and Outlet

Search

Meru Test

ScoutName

Search

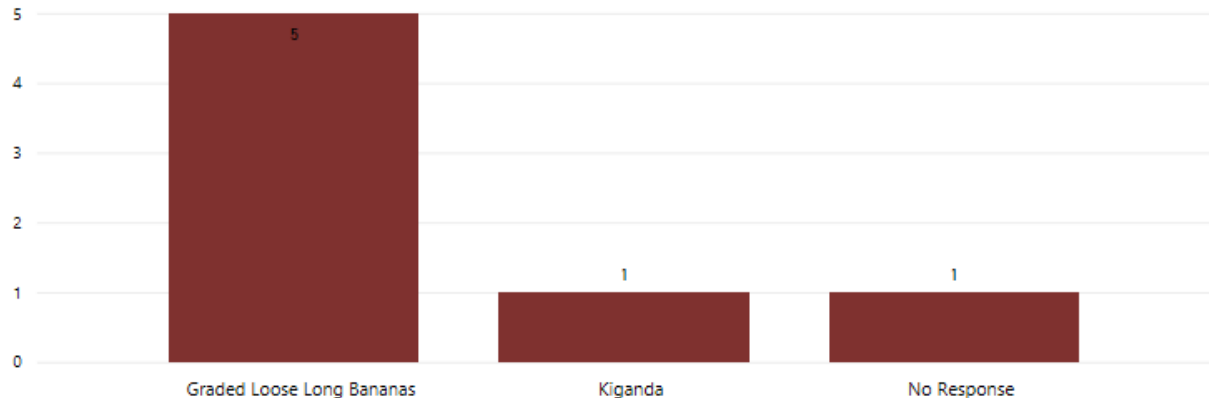
Test User

Date

6/1/2018

9/19/2018

Products Harvested



Date Of Harvesting

8/16/2018

8/18/2018

8/21/2018

8/22/2018

8/23/2018

8/24/2018

ANALYTICS PLATFORM

- Survey questions set with calendars on the mobile can be used to generate period based analysis
- These calendars are within question types and can therefore be related back to all the parameters and entities of the survey.

Farm & Outgrower Activities – Harvest

ANALYTICS PLATFORM

- The search capability is provided to enable finding of massive datasets
- The search can be set against any of the parameters that have unique IDs
- Single, multiple and all parameters can be highlighted and the corresponding graphs / charts generated

Farms	Farm Blocks	Harvested Weight (KGs)	Average Harvest per ...
4	8	4M	415.79K

Route Name	Scout Name	Warehouse	Respondent Name	Warehouse Inventory Volumes (kg)	Date	Time Spent
Central Division	Test User 4	CN004 KIKI	Test Respondent 1	526240	Sunday, February 26, 2017	1
Chepkumia Route	Test User 3	CN006 OLOTOK	Anonymous3	401127	Saturday, February 25, 2017	7
Chepkumia Route	Test User 7	CN003 WAREHOUSE	Farmer 1	333746	Wednesday, March 1, 2017	1
East Division	Test User 8	CN008 KAIMOSI	Farmer 1	517981	Thursday, March 2, 2017	6
Lessos Divisiopn	Test User 5	CN002 RIVER	Test Respondent 2	812683	Monday, February 27, 2017	7
Machakos	Test User 9	CN005 LALA	Farmer 2	119792	Friday, March 3, 2017	4
RiverSide	Test User 10	CN018 TUTUTU	Farmer 3	319347	Saturday, March 4, 2017	3
Test Route 1	Test User 1	CN008 KAIMOSI	Anonymous1	115118	Thursday, February 23, 2017	1
Test Route 2	Test User 2	CN009 KAKAMEGA	Anonymous2	455130	Friday, February 24, 2017	3
Test Route 3	Test User 6	CN001 TEST	Test Respondent 3	556704	Tuesday, February 28, 2017	7
Total						40

Route Name

Search

Central Division

Chepkumia Route

East Division

Warehouse

Search

CN001 TEST

CN002 RIVER

CN003 WAREHOUSE

Scout Name

Search

Test User 1

Test User 10

Test User 2



Date

23/02/2017 04/03/2017

Crop Delivery & Sales

COFFEE SALES DELIVERY RELEASE

26.32K

Total Value (USD)

Financial Year

☐ 2018/2019

Date

1/1/2019

12/31/2019

Date	Financial Year	Total green Coffee (KG)	Offered (Kgs)	Held (Kgs)	Sold (Kg)	Total Value (USD)
Tuesday, July 16, 2019	2018/2019	4,844.00	0.00	0.00	4,844.00	26,318.72
Total		4,844.00	0.00	0.00	4,844.00	26,318.72

COFFEE OUT-TURN SALES

SALE AMOUNT

161.00

Grade

All

Date

1/1/2019

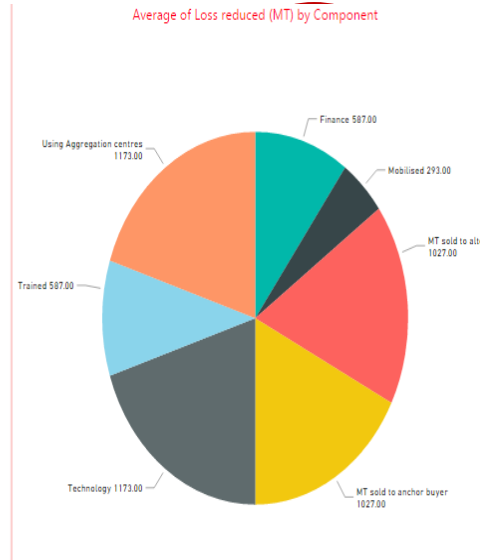
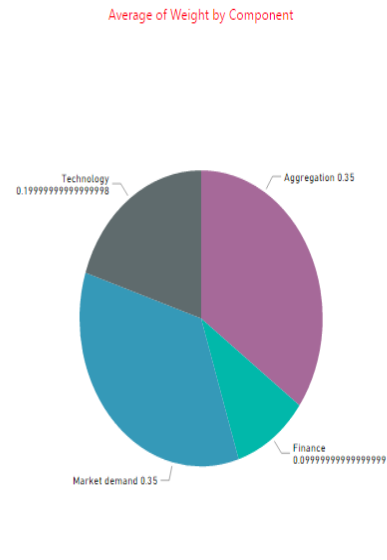
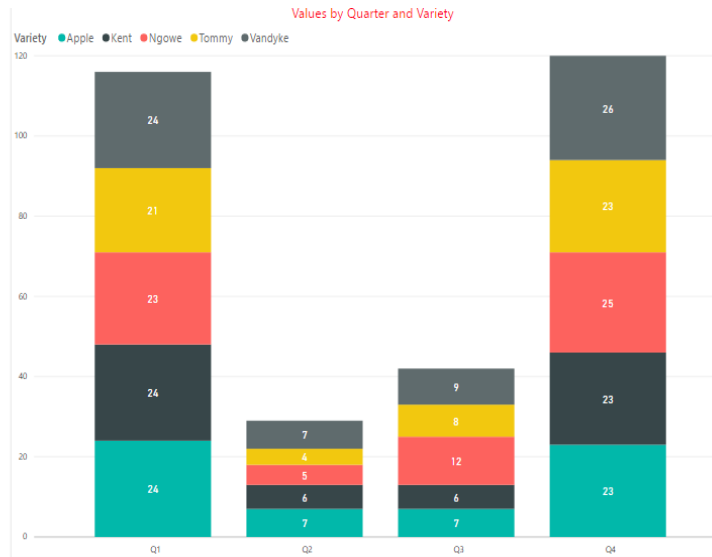
12/31/2019

Date	Lot	Buyer Name	Outturn	Class	Grade	Status	Quantity in (KG)	Sale	Average of Rate	Value
Thursday, August 1, 2019	1215	Ibero Kenya Ltd	15MT2007	4-	TT	Confirmed	91.00	22.00	96.00	174.72
Thursday, August 1, 2019	1202	Ibero Kenya Ltd	15MT2014	6+	T	Confirmed	81.00	22.00	100.00	162.00
Thursday, August 1, 2019	1337	Kimani Coffee	26MT2003	4/+	PB	Confirmed	184.00	31.00	136.00	500.48
Thursday, August 1, 2019	1388	Taylor Winch	15MT2002	6	HE	Confirmed	66.00	22.00	97.00	128.04
Thursday, August 1, 2019	1369	Rashid Moledina	15MT2009	4	HE	Confirmed	28.00	22.00	325.00	182.00
Thursday, August 1, 2019	1207	Ibero Kenya Ltd	12NG0047	4-	C	Confirmed	795.00	14.00	141.00	2,241.90
Thursday, August 1, 2019	1289	Kenyacof Ltd	12NG0047	4/+	AB	Confirmed	2,280.00	14.00	294.00	13,406.40
Thursday, August 1, 2019	1380	Taylor Winch	12NG0047	4/+	AA	Confirmed	1,319.00	14.00	361.00	9,523.18
Total							4,844.00	161.00	193.75	26,318.72

ANALYTICS PLATFORM

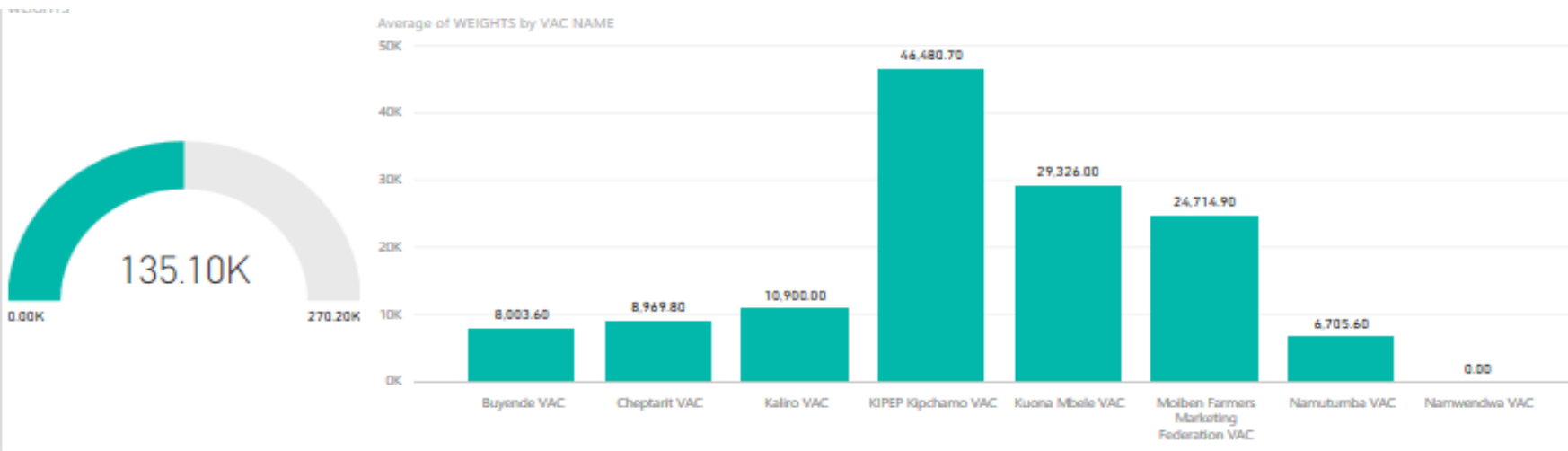
- 3rd party data from auctions, buyers, suppliers, financiers can be integrated into the analysis
- The key is to share the same unique identifiers

Key Performance Indicators Tracking

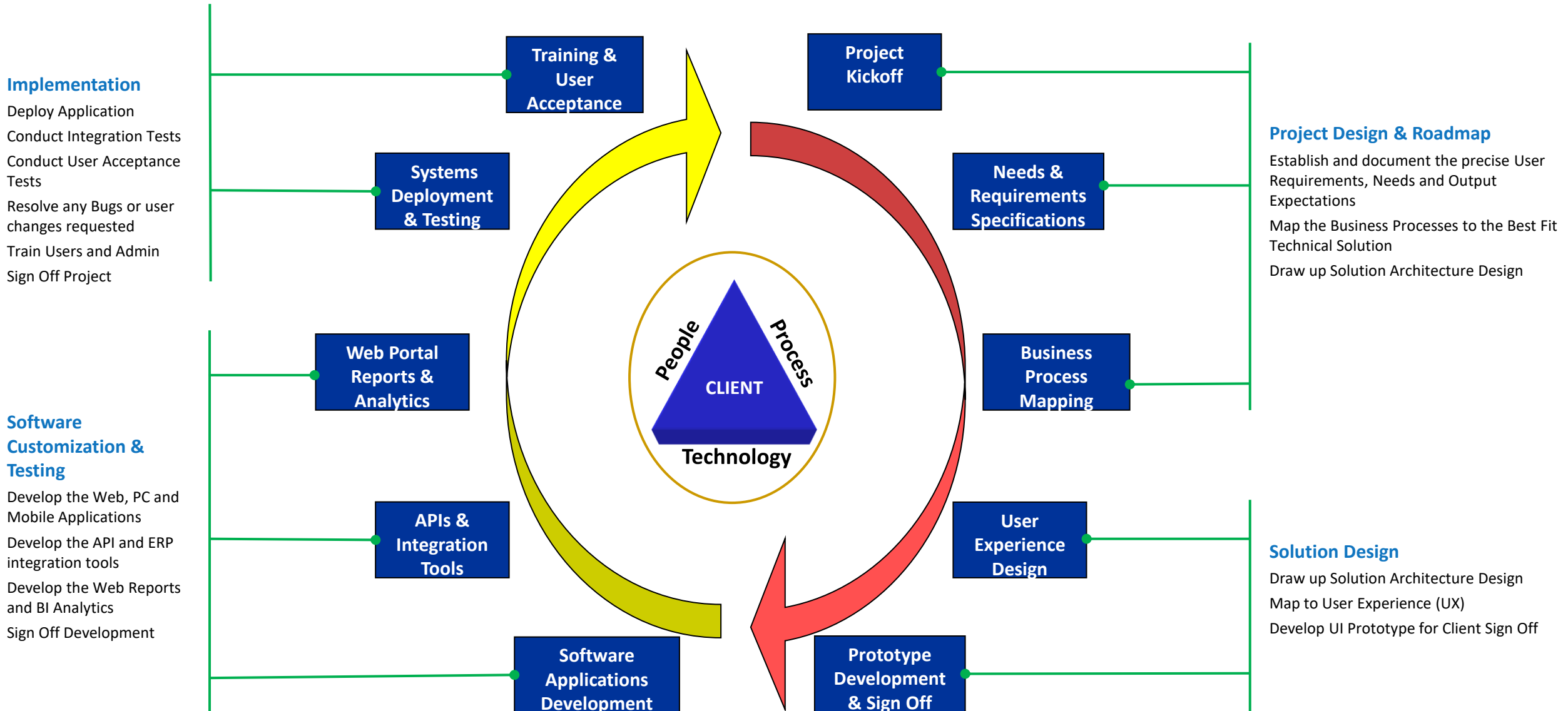


ANALYTICS PLATFORM

- The Impact Visualizations are created based on the KPIs provided for specific projects
- The targets per project and / or indicator are pre-set and then live datasets compared against this either individually or collectively
- The integrated nature of all the project stages, entities, users and datasets enables a consolidated analysis of an entire project



Project Lifecycle



Project Methodology – Planning

	Step 1 Needs Analysis	Step 2 Conceptualization	Step 3 Planning & Analysis
Objective	<ul style="list-style-type: none">• Gather the client's business process information• Develop a deployment guide	<ul style="list-style-type: none">• Build understanding of what the solution will accomplish for the client	<ul style="list-style-type: none">• To develop and obtain approval for the implementation of the solution that will meet expectations of all key stakeholders
Key activities	<ul style="list-style-type: none">• Identify project priorities• Map business process to solution• Provide a Business Requirements document for Sign off• Document a project charter to describe the purpose, scope and structure for this project	<ul style="list-style-type: none">• Develop an architecture, design and outputs with wireframes for any system customization that may be required• Appoint a suitable team that will form the project team• Identify Project Managers	<ul style="list-style-type: none">• Identify the key expectations that the system should achieve , gaps, priorities and any conflicts.• Identify preliminary set of objectives, constraints and guidelines for implementation
Virtual City & Client Involvement	<ul style="list-style-type: none">• Avail a team that represents the stakeholders project objectives to provide critical information	<ul style="list-style-type: none">• Identify what the solution will accomplish and what can be future enhancements	<ul style="list-style-type: none">• Determine required attitudes and abilities.• Identify new processes that will come with the deployment of the system and how to support them
Decision Gates	<ul style="list-style-type: none">• Business Requirements Sign Off• Project Charter Sign off• DG 1	<ul style="list-style-type: none">• Design Sign Off• DG 2	

Project Methodology – Software Development

	Step 1 Software Customization	Step 2 Integration & POC	Step 3 Pilot UAT
Objective	<ul style="list-style-type: none">• Customizations of Mobile, Hub, Enterprise and Analysis Modules• Workflow modifications to map onto designs	<ul style="list-style-type: none">• Develop link between System API and ERP• Configure cloud instance• Configure reporting and analysis servers• Create API linkages to ERP via secure Azure API Manager	<ul style="list-style-type: none">• To develop and obtain approval for the implementation of the solution that will meet expectations of all key stakeholders
Key activities	<ul style="list-style-type: none">• Localization of terminology• Software development adjustments to specific modules• UI/UX development• Prototype development	<ul style="list-style-type: none">• Integration tools development• Provisioning• Configurations• Deploy on Pilot site• Develop UAT Test Plan	<ul style="list-style-type: none">• Document User Acceptance tests to confirm features and functionality as per design• Make recommendations on adjustment to the system for any gaps, priorities and any conflicts.
Virtual City & Client Involvement	<ul style="list-style-type: none">• Software development and QA team	<ul style="list-style-type: none">• user documentation• Training material.• equipment delivery status• equipment test reports• site inspection• implementation plan	<ul style="list-style-type: none">• UAT Resources• UAT Test Results• System Adjustments recommendations
Decision Gates	<ul style="list-style-type: none">• Software Application Release• DG 3	<ul style="list-style-type: none">• DG 4	<ul style="list-style-type: none">• DG 5

Project Methodology – Implementation & Support

Step 1, Installation & Configuration

Step 2, Training

Step 3, Final UAT

Step 4, Deployment & Support

Objective

- Platform Installation & Configuration
- Application set up on premise
- Mobile devices installation & configuration
- Transfer of knowledge to the users of the system
- Achieve level 1 support
- Test completeness of the software configurations
- Gather user feedback and make adjustments if need be
- Deploy full solution
- Migrate data to “live site”
- Roll out to all premises and users
- Support and Maintain System

Key activities

- Configure Logical flow of the System (on premise or cloud)
- Virtual City instructor-led classes
- Hands-on or lab user experience
- Verify deployment readiness
- Execute the Test Plan
- Report defects and Track Resolutions
- Final cycle of testing
- Install & activate the system
- Post Implementation Support

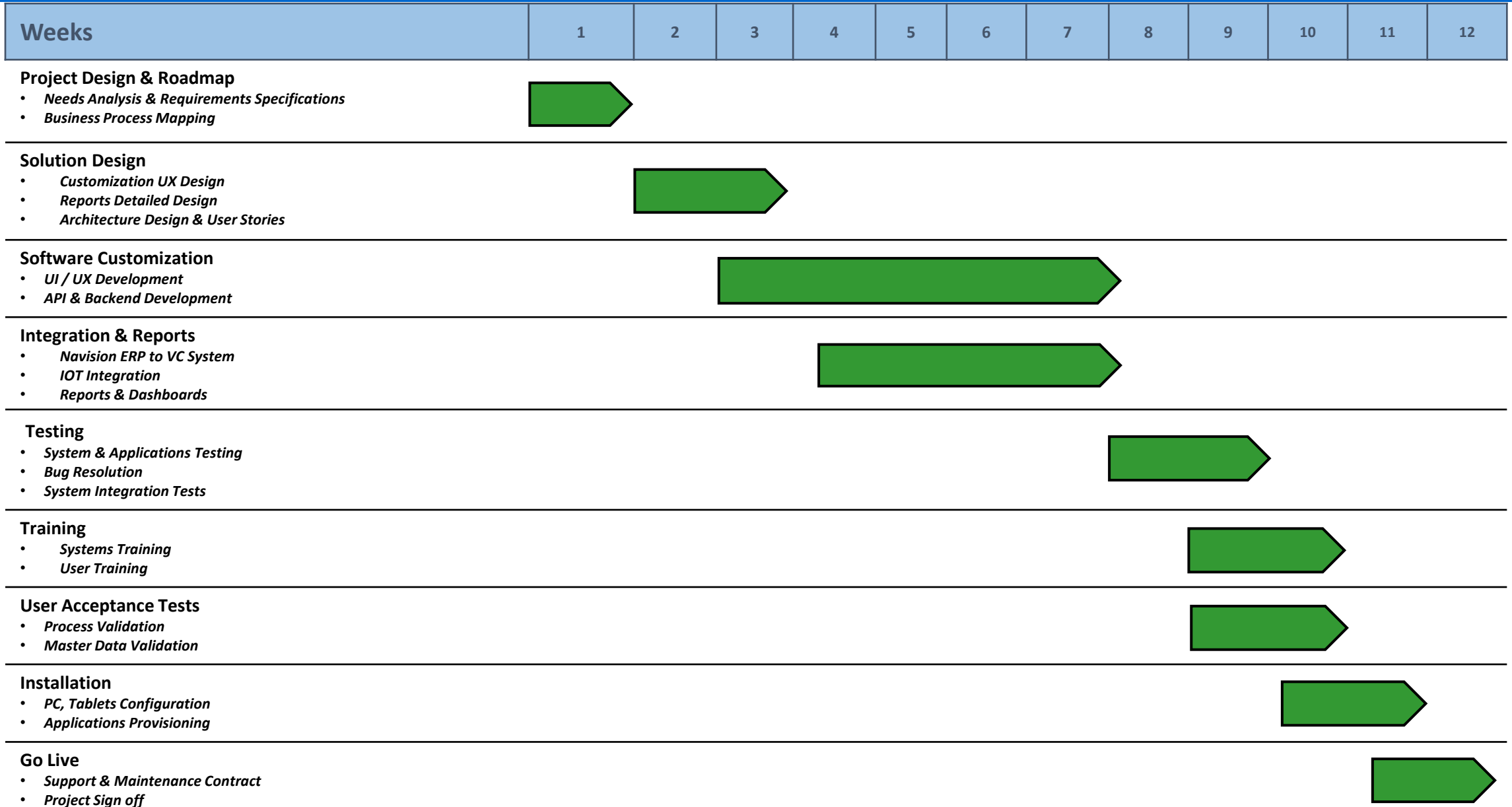
Virtual City & Client Involvement

- Confirm with Business Requirements Document sign off
- Environment & Equipment readiness
- System Administrators , Super Users & Users Training
- Provide Training resources
- Provide Training venue
- Training Sign Off
- Key stakeholders of the Project UAT Sign Off
- System sign off
- Service Level Agreement Execution

Decision Gates

- DG 6

Project Methodology – Project Plan



We offer a pay as you use monthly service



MOBILE APP

US\$10

/Month

PER SALES REP

PER ORDER CLERK

PER DELIVERY CLERK

IMPLEMENTATION @ US\$ 10 PER USER

MERCHANT PORTAL

US\$25

/Month

PER MERCHANT

PER OUTLET

INSTALLATION @ US\$ 25 PER SITE

WAREHOUSE PORTAL

US\$50

/Month

PER HUB

PER WAREHOUSE

INSTALLATION @ US\$ 50 PER SITE

ENTERPRISE PORTAL

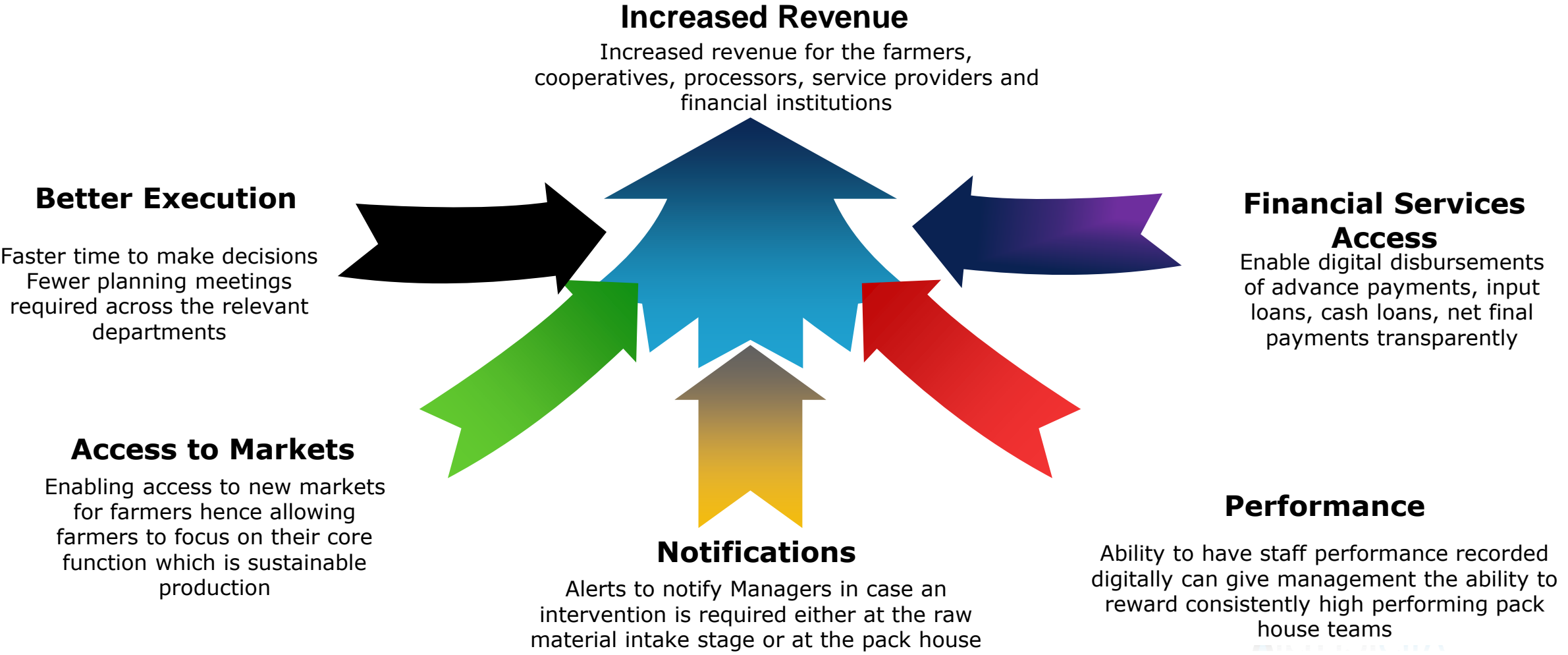
US\$250

/Month

PER PROCESSOR

IMPLEMENTATION @ US\$ 250 PER ENTERPRISE

Project Methodology – Pricing



Picture of Success

Real Time Visibility



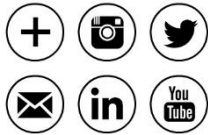
Farmers /
Suppliers



Stores /
Chillers



Inter Department
Data Sharing



Notifications
& Alerts



Communication to
Other Systems



Analysis

Departmental Impact



Enterprise

- Visibility of all stock and costs
- Instant Alerts on Cost Escalation
- End to End Business Visibility
- Faster Purchase to Cash Cycle



Finance

- Real time Data Entry
- Auto Reconciliation of Stock Items
- Integration to Navision
- Cost Accountants focus on analysis



Butchery

- Digitally Enabled
- Higher Efficiency
- Ease in Stock Reconciliation
- Conversion of Products to Sub Products



Dispatch

- Customer Satisfaction
- Increased Order Fulfilment
- Reduced Losses from cancelled orders
- Improved Forecasting

Impact



Reduced Production Costs



Improved
Productivity



Thank You