From Bean To Cup

Ensuring A Sustainable Coffee Value Chain For One Of
The World's Leading Coffee Trading Houses

The Client

The Client is a leading sustainable Farm to Roaster coffee company, with a family tradition in commodities that stretches back to 1905. Today, with more than **1,031 employees in 29 countries**, the group is one of the leading coffee trading houses in the world, and one of the few focused entirely on coffee. Their extensive supply chains span from producer-facing export operations to destination sales offices around the world.

The Challenges

The client has a firm commitment to adapting technologies and best practices to ensure consistent quality and compliance with environmental and social standards. Therefore, implementing a single centralised system for managing the entire coffee value chain held **significance in sound planning and inventory management for the client.**

- Each stage along the coffee value chain i.e preharvest (cultivation and sales) and post harvest (processing and storage) details were recorded on different systems, leading to **discrepancies in data storage and analysis.**

- Lack of accurate means to geo-tag plots

- Need for centralized system for sending advisories to farmer on weather and PoPs (package of practices)

- Lack of visibility on the activities of the field staff

- Difficulty in monitoring the quantity of agrochemicals used by farmers

- Look out for improved and evidence based system to document and track farmer training activities

- Ineffective means to manage farmer certifications

- Advanced post-harvest supply chain management

- No means to trace the farm/ farmer of produce after sales

CropIn Innovation

CropIn partnered with the client in Jan 2020 to support its Coffee sustainability plan, by recording and tracking all sustainability activities with farmers for projects in Uganda, Rwanda, and Burundi. CropIn's unique suite of solutions - **SmartFarm®** and **SmartWare** are leveraged for-

Pre-Harvest activities

- Digitising farms' and farmers' data
- Tracking activities of field agents
- Accurate geo-tagging of plots
- Tracking loans, interests and advances disbursed in farmer ledgers
- Managing certifications
- Monitor quantity of applications
- Sharing POPs (packages of practices) and advisories'
- Harvest module to capture the details of cherry purchasing

Post-Harvest activities

- Tracking the flow of inventory batch through various processes within the unit
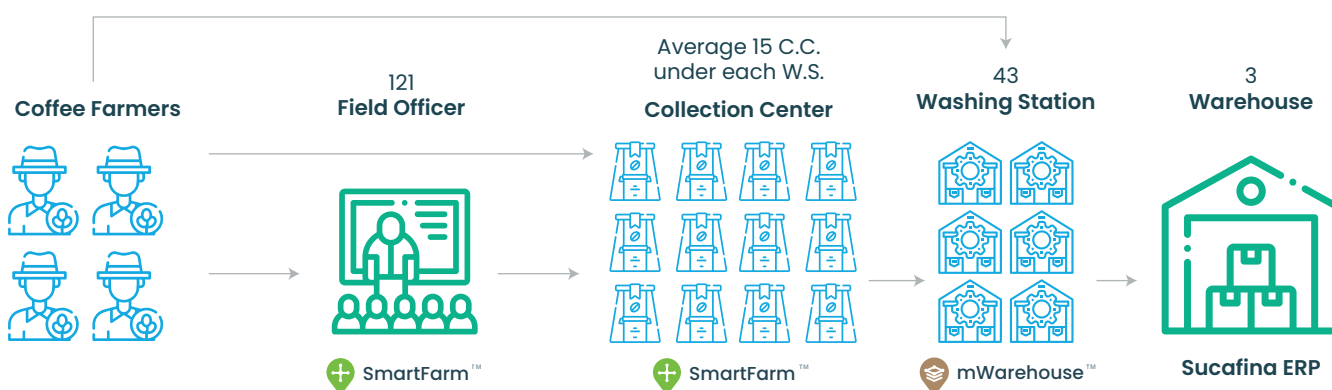- Monitor station processes like sorting, washing, drying, and packaging
- Record purchases and payments
- Manage loans and settlement for farmers

Coffee Farmers → 121 Field Officer → Average 15 C.C. under each W.S. Collection Center → 43 Washing Station → 3 Warehouse

SmartFarm™ → SmartFarm™ → mWarehouse™ → Sucafina ERP

SmartFarm Mobile App

- Digital farmer profiles with demographic and household details, geo-tag of farm, and crops grown
- Details of training programs along with feedback

Smartfarm Mobile With Limited Functionalities Enabled

- Receive harvest from registered famers and allocate it to WS
- Record payments to farmers

SmartWare Mobile & Web

- Manage and Monitor all washing station processes
- Web Application capability to receive harvest, record payments, register farmer

SmartFarm® is an end-to-end farm data management solution that monitors all processes leading up to harvest. The solution leverages ground-truth data, weather advisory, and accurate insights based on satellite monitoring to enable data-driven farm and business operations. By tracking, managing and monitoring every step — from input to execution — all in one place, SmartFarm® helps achieve efficiency, improves traceability and output predictability.

SmartWare® is a packhouse solution offered by CropIn that enables food traceability and quality compliance. The platform empowers users to manage inventory and monitor warehouse operations remotely, while also identifying issues and taking corrective measures immediately. For producers, mWarehouse simplifies the process of quality assurance and certification by incorporating Global GAP and other compliance requirements.

Farmer ⟷ **Client** ⟷ **Roaster** ⟷ **Consumer**
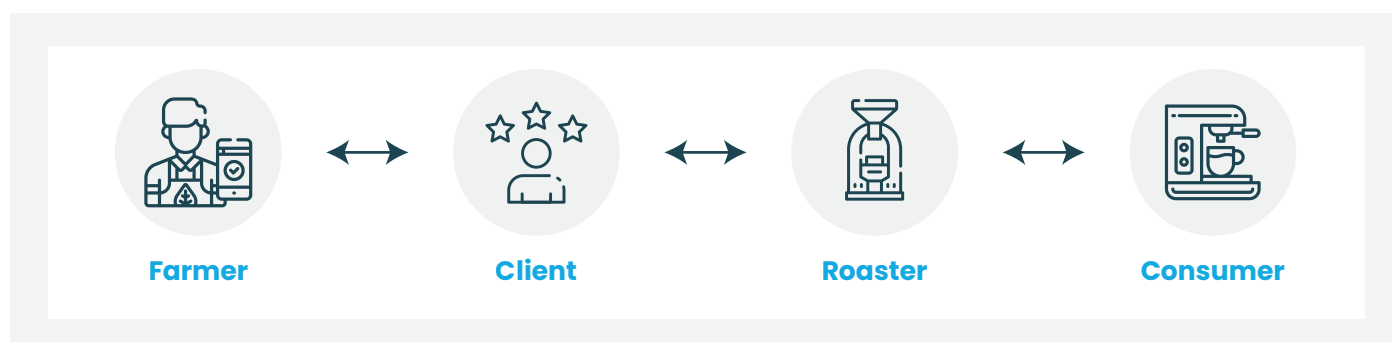
Result

■ Successful Digitisation

- Remotely manage 93,000+ plots and audit over 60,000+ hectares of coffee plantations across Uganda, Rwanda, and Burundi

- 85+ field staffers have digitally captured data of over 30,000 farmers' and their cultivated land

- Well planned, documented and evidence based farmer trainings. These are verifiable using time stamped photos of participants taken, GPS coordinates of event location, among others.

- Integrated an SMS option that will help us in mobilization of farmers and sending of pricing information when the coffee season begins.

■ Coffee Purchasing Data

- Data is collected from washing stations or registration counters of collection centers on centralized SmartFarm app. This also facilitated direct purchases, collection site purchase, comparative analysis of crops purchases, deliveries of cherry.

■ Centralised Platform

- By configuring the platforms to each user level's specific requirements, the field staff was able to **accurately track and capture essential** data points, even from activities that were unplanned

- Users at multiple levels across departments accessed farm-level data and insightful reports on the activities, to further improve **people, process and performance**

■ Monitoring of field activities for intensive quality control

- Configuring the best package of practices and creating a detailed activity plan based on the growth cycle ensured higher quality produce that is compliant with international market regulations and standards.

■ Farmer & Plot tags for categorisation

- Farmers can be categorized as certified and uncertified. Tags can be created for every producer group/unions with the leader of the group separately identified and member farmers linked to the leader.

* Various mill locations & smaller locations within the large processing unit configured separately to monitor the inventory flow from one location to another.

* Details of every inventory item that comes into the processing units is captured and assigned a batch number for unique identification.

■ Post harvest supply chain management

- SmartWare captured information regarding the warehouse and drying mill locations for processing and packaging.

■ Coffee processing

- Daily, weekly and monthly status reports on how much coffee processed per CWS, as well as reports on individual processes. Batches can be uniquely identified in the system and tracked using QR Codes.
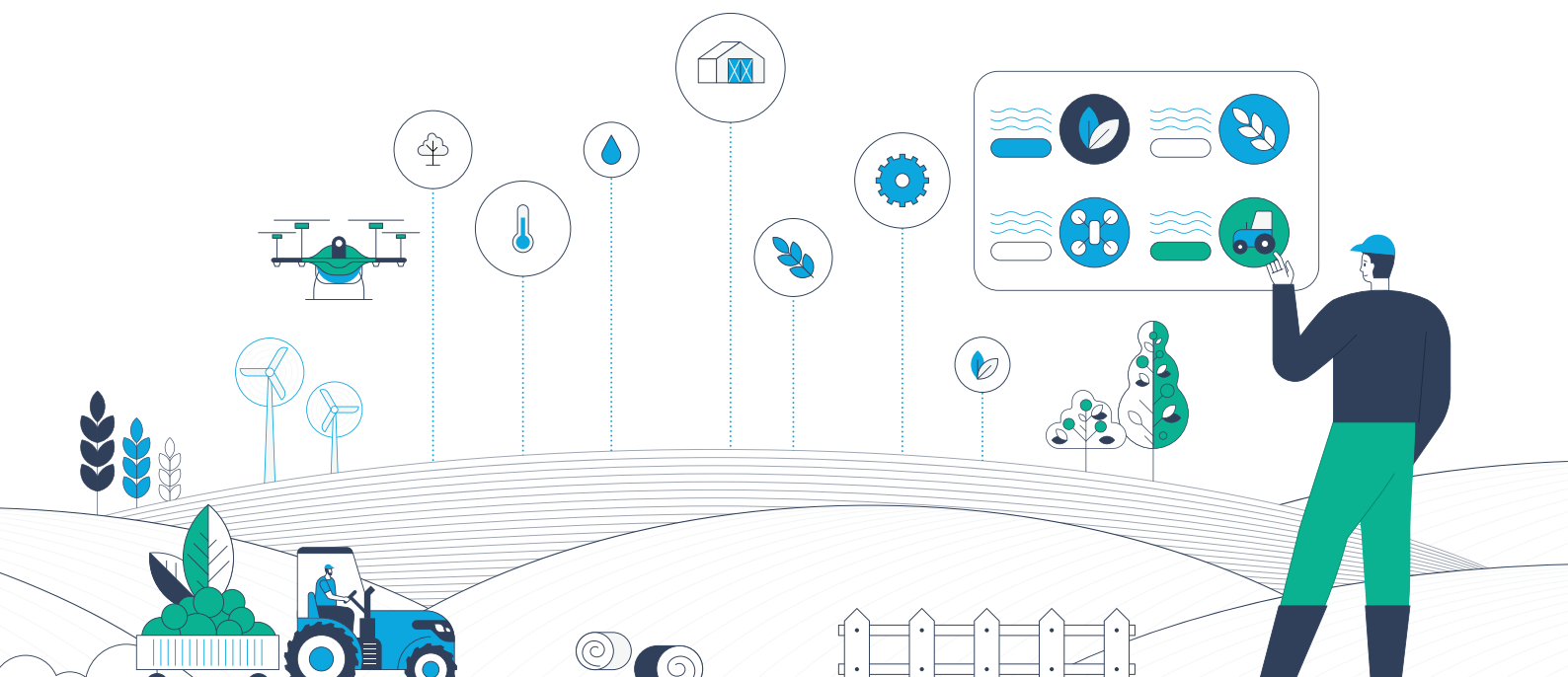
Impact Numbers

30,000+
Farmer's

60,000
Hectare of land

93,000
Plots

ONGOING UGANDA OPERATIONS IN NUMBERS-

50+ Field Supervisors
trained and using the system

175
trainings

365 input loans
requested and tracked

20,898 farmers
registered, followed-up and verified for certifications

725 farm
plots visited and geo-tagged

More than
1,000 individual
coffee purchase transactions

SmartFarm ™
FARM MANAGEMENT SOLUTION

SmartRisk ™
AGRI BUSINESS INTELLIGENCE SOLUTION

SmartWare™
PACKHOUSE SOLUTION & TRACEABILITY

RootTrace ™
THE SEED-TO-SHELF TRACEABILITY SOLUTION TO PRESERVE GLOBAL FOOD INTEGRITY

AcreSquare ™
A B2B FARMER ENGAGEMENT APPLICATION

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