



CASE STUDY

Saaraketha Organics



Producing food, the right way, has never been a “castle in the air” in the Sri Lankan agriculture, that has paced an unprecedented way since its humble beginnings, together with organic food suppliers.

In this light, Sri Lanka’s biggest retailer and exporter of fresh, certified organic food, “Saaraketha Holdings”, initiates their journey 8 years ago, with the aim of nurturing farmers and bringing them together with those who appreciate to grow well, in the course of establishing the essence of Sri Lankan fertile soil.

All products produced at Saaraketha, has a history and a story reflecting the breathtaking process. The process starts with the propagation stage, that involves seeding of the plant. The product will then be harvested and transported to the Packhouse, where all indulging cures for the product take place. Items received at the Packhouse will be sorted, graded and cleaned prior sending to storages.



During the packing stage, every item gets individually inspected and goes through the secondary cleansing process, prior to dispatching.



Having studied the business, it can be simply stated, that Saaraketha strives to make healthy living easy and convenient for individuals by creating opportunities for rural producers to be committed for ethical and environmentally sustainable practices.

Problem

In a competitive market place with countless suppliers, consumers face the trauma of picking authentic suppliers over the unscrupulous. Trust/mistrust emerge as an important factor in deciding not only where to buy organic food products but even whether to buy organic food products or not. Therefore, food mileage, price, and the certification process could contribute significantly to organic food consumers' consumption decisions of organic food products.

In a market where consumers and suppliers pace unseeingly, failing to find the perfect match, allowing premium sellers to meet premium buyers was a nightmare. The force of the business traps laid by inferior sellers, made it almost no chance for premium suppliers. This in fact is one of the biggest challenges the organic food suppliers have to pass through.





Further, was the issue of building trust. Primarily, consumers fail to define “Quality” and thus, fail to distinguish between organic and non-organic products. Explaining quality and benefits of a quality consumption was a drama for those customers who never had quality defined the right way.

Moreover, Saaraketha provides a luxurious care for every item since its seeding stage until it gets dispatched. The business didn’t have a mechanism of showcasing this underlying process to their customers to depict the hassle, they as a business go through to ensure delivery of the best from the best to the customers.

Saaraketha as an Organic supplier, was struggling with the aforementioned challenges and was in need of a mechanism to prove their authenticity to consumers in establishing a long lasting trusted relationship.

Solution

Saaraketha Organics is an organic exporter and retailer from Sri Lanka. While not owning any farm directly, they work very closely with a growing community of 3000+ farmers from rural areas in Sri Lanka. Saaraketha nurtures this community by constant education and supervision, helping to obtain certifications, supporting farmer organizations, offering guaranteed prices, etc.

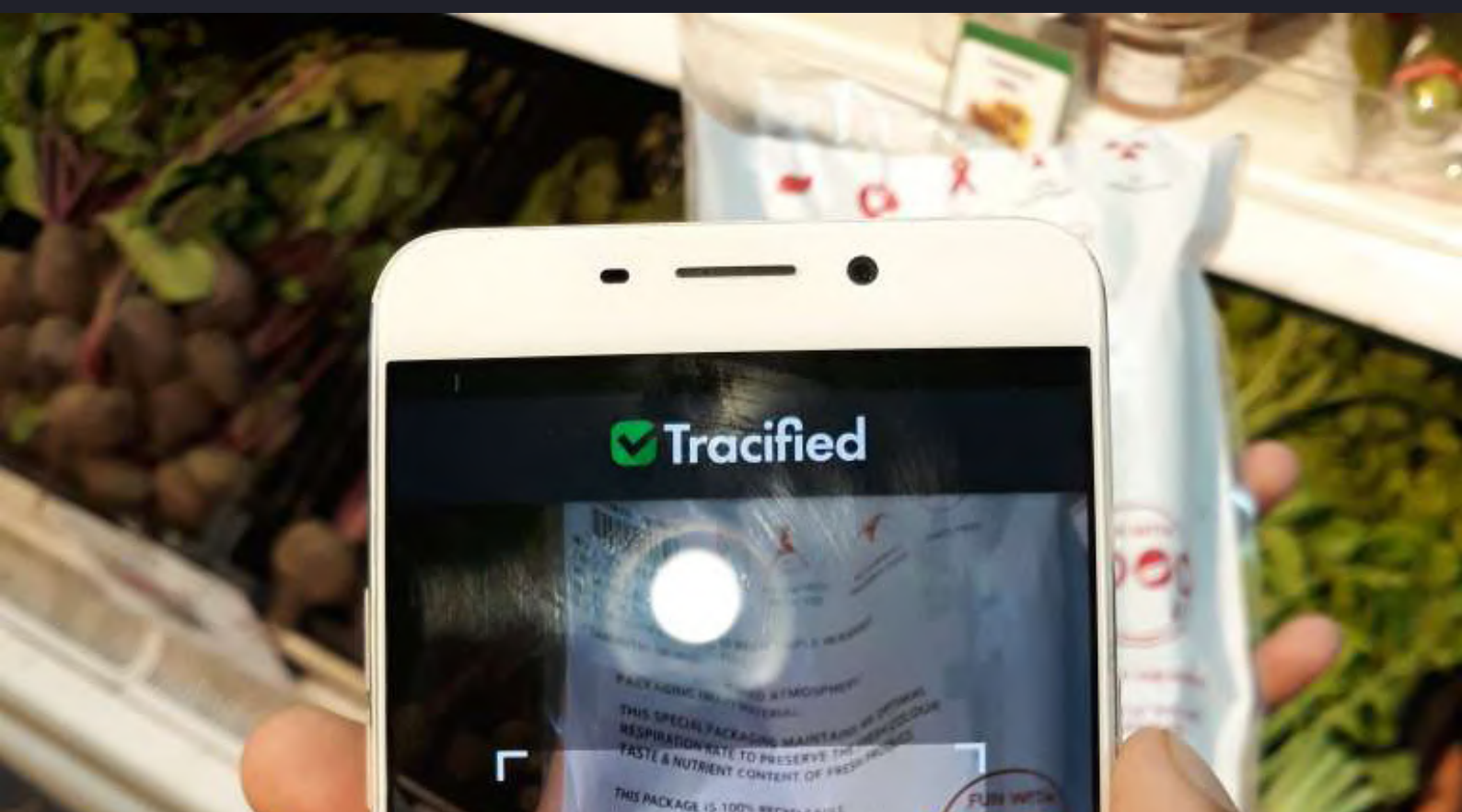
They operate a network of field officers who pay frequent visits to farms for monitoring and providing assistance. The organization maintains a quasi-integrated supply chain set up where they control each stage starting from collection up to export or local distribution. Saaraketha also runs a very active web shop selling almost their entire product range.



Tracified powered by Blockchain technology facilitates a tamper proof platform that streamlines the data flow within a supply chain, introducing a novel crypto-economic model based on a reward/penalty concept, ensuring fair distribution of gains across the chain.

The originality of the solution is further enhanced by its ability to get customized to suit the needs of a business. Tracified can capture data from a business's available data sources (e.g. ERP, CRM), IoT devices or manual data recording apps. Collected data will be sliced and diced prior presenting to different stakeholders such as end customers and business administrators.

Tracified provides a Domain Specific Language for this purpose so that business experts themselves are able to customize visualizations up to their satisfaction.



Saaraketha uses Tracified to communicate various facets of value associated with their products. This value is presented in 4 dimensions.

- **Freshness:** factors that determine how fresh the item is when the batch was harvested, when the batch was received into the packhouse, whether cold chain is maintained properly
- **Safety:** factors governing how safe the item is for consumption whether good agricultural practices were followed, product handling method
- **Sustainability:** how environment-friendly the production was composting, crop rotation, integrated pest management
- **Community:** what is the community that the buyer is supporting by purchasing the product

Percentage of women farmers involved, improvement in the education of children in poor families involved, what fraction of farmers are banked



In addition the geographic locations of farms and packing houses involved with the batch in interest is shown in a map. An image slider shows images taken of the batch at various stages. Storyline view presents a stage by stage narration of the product's journey. The buyer can see blockchain based proofs available on a seperate screen. This screen also shows people and technologies involved along with their trace power. This screen will also show seller's stakes when that functionality is implemented.

Traceability information is shown at various points in the customer journey.

1. Point-of-Sale in Saaraketha web shop (Tracified enabled)
2. Point-of-Sale in Saaraketha retail shop and supermarkets
 - a. Customer uses Tracified consumer mobile app to scan the QR code in item's packaging to see traceability information for the exact item's batch
 - b. If the customer does not have Tracified consumer mobile app installed he can use any QR code scanning app on his phone to see the traceability information in a web view
3. After-Sale traceability for e-commerce purchases via Tracified consumer mobile app or web

Master data such as farm, farmer family, farmer community, seed, weed control and fertilizer are collected from Saaraketha field officers. Infrastructure meta data such as irrigation facilities and soil characteristics are taken from government sources. Saaraketha provides meta data pertaining to its facilities and business processes such as packing houses, warehousing, washing facilities, collection & distribution trucks and field officers.

Tracking data are entered by field officers and handlers in packing houses and warehouses using the Tracified officer mobile app. Data for each batch is entered starting from seeding stage down to last mile delivery. Photographs are taken of each batch in every stage. When items move from one stage to another sometimes batch splits (one batch is divided into several new batches) and merges (several batches are aggregated into one bigger batch) occur. These are captured in the officer app by mapping identifiers of the batches involved in the respective operation.

Unique barcodes generated by Tracified web portal are used to recognize batches. Plastic tags containing these barcodes are attached to the containers that carry batches at each stage. Mobile devices with barcode scanners connected are stationed in appropriate places in the facilities for efficient scanning. Tracified officer app communicates with the barcode scanner to know the batch for which the tracking data is added.

When packing items to be sent to retail shops or e-commerce delivery trucks, a unique QR code is pasted on the pack. Before pasting the officers link the QR code to the barcode of the item's batch using Tracified admin portal. It is this QR code that the buyer scans upon receipt of the item to see its traceability. The buyer can provide his feedback as a rating plus a comment after using the item. This feedback is treated by Tracified as upstream traceability. They are correlated to the original batch information and are shown in Tracified Insights portal so that the admins can derive business intelligence by linking customer feedback to farmers, workers, processes and facilities involved. These insights are vital in triggering corrective and proactive actions to remove customer pains and improve satisfaction.

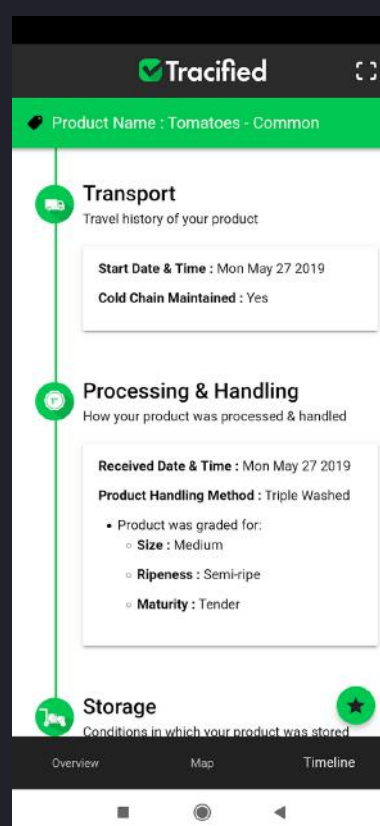
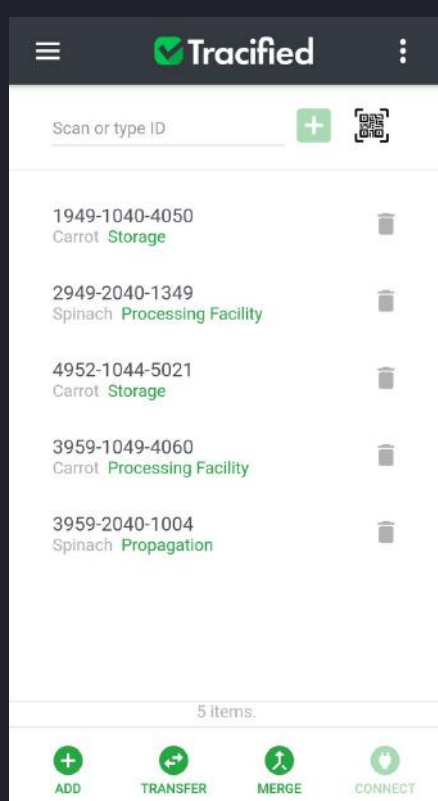
Saaraketha Organics went on live with a production beta with Tracified in June 2019. This beta included a selected number of products. Blockchain front ends were added in September 2019.

From the Tracified product suite, Saaraketha currently makes use of Tracified Web portal (for administration), Tracified Insights portal (for extended business insights), Tracified Field Officer app (for tracking the supply chain), Tracified Mobile app and Tracified Ecommerce widget (the two frontends for the consumers).



Field Officer Application

The Field Officer application is the data entering app used by Saaraketha field officers. The following screen is the landing screen of the app, after logging in. Initially it will be an empty screen, which will eventually get filled upon scanning of identifiers. Traceability data of an item will always be associated with a unique identifier.



The menu bar at the bottom depicts actions that can be performed on the identifiers. The identifiers can be transferred from one stage to another to indicate the completion of one stage of the item and getting shifted to another stage.

These will be reflected under timeline tab in Tracified application for end consumers.

E-Commerce Widget

This view provides a summary of the Traceability data from the 5 (maximum) latest batches of an item that are available in storage, as it is very likely that an online order has a high chance of getting it catered by what is available in the storage.


✓ Traceability

Description

Tracified

*Following statistics are calculated from the current stock

Trace your product



Cold chain maintained
to ensure optimum freshness throughout the product life cycle

5 out of 5 batch(es)

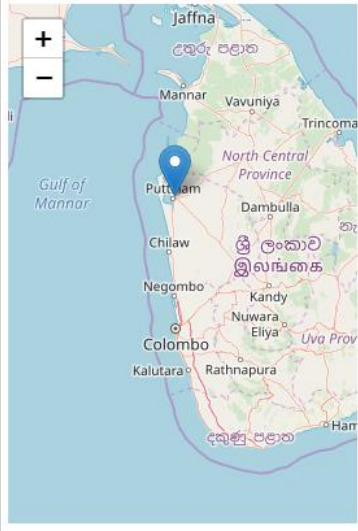
Graded for size, ripeness and maturity
for enhanced consumer experience

5 out of 5 batch(es)

Individual care given in product handling
to ensure optimum freshness throughout the product life cycle

Farms


Packhouse




Freshness

Fresh Everyday!


Effort to deliver it to you fresh from an average of 5 batches



Latest Harvested Date
Sat Jul 13 2019



Latest Packhouse Received Date
Sun Jul 14 2019





Cold Chain Maintained
Yes


Food Safety


Trusted Safety


Your product has the below standards of compliance



Product Integrity




Process Integrity





Product Handling Method
Visually Inspected


Sustainability

More than just a product

Sustainable product methods used



Composting




Crop rotation to ensure soil health


Community

Transforming Rural Lives

Your purchase helps



She Trades
18 out of 33 farmers are women



Foster Knowledge
Your purchase helps to improve education of 42 children

In the widget, the pie chart in Green provides a summary of cold chain maintenance. It is a guarantee of freshness maintenance throughout the product life cycle.

The map pinpoints the locations of farms where the product is grown and pack houses where it is packed.

The information provided under the 4 dimensions are fully customizable including the data that are displayed under each card.

The image slider at the bottom of the widget shows images taken of the batches in concern throughout the value chain. These images are automatically geo-coded, timestamped and blockchained by Tracified for guaranteeing their authenticity.



Conclusion

Saaraketha Organics acts as one of the first businesses to experience the bounds of Tracified. Tracified as a solution, created the best platform for Saaraketha to showcase the great efforts put in, to bring organic and freshly produced items to their customers, from the farms to packhouses to supermarkets. Administrators of Saaraketha is provided with admin portals to configure the business flow and oversee the data entered by the field officers. Every packaging delivered by Saaraketha, contains a unique code (QR code) containing the traceability information relevant to that particular item. End customers could scan this QR code using any QR code scanning application to view traceability information of the item prior making the purchase decision. Online customers of Saaraketha are also provided with traceability information of the stocks available as at the point of placing the order, with the use of a widget integrated to web shops. To further support the information, geocoded images are added to exhibit the individual care given in handling each item during packing and processing.

Through all this means, Tracified ensures that the business gets the opportunity to be transparent, trustworthy and promising to customers.

Thus, it can be concluded that Tracified is a complete solution for traceability of high end premier products, ensuring fair distribution of benefits among all entities in the supply chain. Via the integration made with Saaraketha, Tracified was successful in implementing industry best practices that supports the growth of an organization.



References

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Tracified