



Photo © RunHui



RunHui Agriculture Authenticate & Traceability System

INTRODUCTION

Kezzler was selected by Shandong Runhui Agricultural Comprehensive Development Co. Ltd (referred to as RunHui) to provide a traceability and authentication solution to The National Modern Agricultural Industrial Park in Hanting District, Weifang, Shandong Province in China. The area is well known for its agricultural produce, such as Hanting watermelons and Weixian radish. The authentication and traceability solution was launched in November 2019 for Weixian radishes and will be extended to cover Hanting watermelons in 2020.

The industrial park has developed a big data platform, together with Beijing Aokemei Tech & Service Ltd, to improve product quality, to secure the supply chain and enable consumers to verify the provenance of the products. Kezzler's platform enabled RunHui Agriculture to efficiently develop a unit level traceability solution by utilizing Kezzler's market leading and patented technology. Consumers can scan a unique QR code through the popular WeChat application and instantly experience the journey of the Weixian radish from plantation to the dining table. They can also verify the product's authenticity to be reassured that it is genuine.



Background



Photo © RunHui

According to PWC, food fraud is estimated to cost the global food industry between US\$30 to \$40 billion every year*. Besides the financial implications, illicit trade in agricultural goods poses a risk to public health as consumers can be exposed to harmful ingredients. It also has a negative effect on local agricultural markets, which support sustainable food production and the economic development of the local community and beyond.

China has been taking active measures to assure food safety and quality. The first food traceability pilot zone was set up as far back as 2011 and in recent years The Food Safety Law has brought about more stringent controls on Chinese food companies. An increased oversight over the entire food supply chain is helping to improve safety for food from production to consumption.

To help restore confidence in home-grown produce and restore the trust of Chinese consumers, China is adopting new

technologies and improving best practices. As a result, the government has approved the creation of 20 national agricultural industrial parks.

The agricultural parks are pioneering centers helping to revitalize local communities through a focus on production, processing, technology, and branding. The modern production facilities promote sustainable farming, help standardize best practice processes for planting and breeding, whilst making the most of modern technology.

The National Modern Agricultural Industrial Park in Hanting District, is one of the national parks approved by the Chinese government. The project helps to optimize quality by establishing a unified scientific and standardized approach to seed production and planting. With full traceability across the entire supply chain, they can ensure both quality and taste for their consumers. The new approach also allows farmers to make significant increases in both output and revenue.

The first product protected by the Kezzler solution, the Weixian radish, is a famous local delicacy both in China and abroad. The radishes are rich in nutritional ingredients and the Chinese government has taken several measures to protect the status of this historical product and the area in which it is grown. In 2004 the radish was identified as a green food A-grade product by the China Green Food Development Center and in 2006 the region was granted Protected designation of origin status.

* Source: <https://www.pwc.com/gx/en/services/food-supply-integrity-services/food-fraud-vulnerability-assessment.html>



RunHui Agricultural Authenticate & Traceability

Each individual radish pack is given a unique, secure and traceable identity. A label with a unique QR code, and a hidden authentication PIN, is applied to each of the packs during packaging. The QR code is

used both for tracking the radish through the supply chain, and by the consumers to see the product journey. The hidden PIN is used to verify the product's authenticity. This helps to build trust in the brand and eliminate any concerns regarding fraudulent products

The solution is integrated with China's popular WeChat platform, allowing consumers to scan directly from within the app.

Photo © RunHui



QR code to webshop

Hidden pin

Unique Kezzler QR code

Photo © RunHui

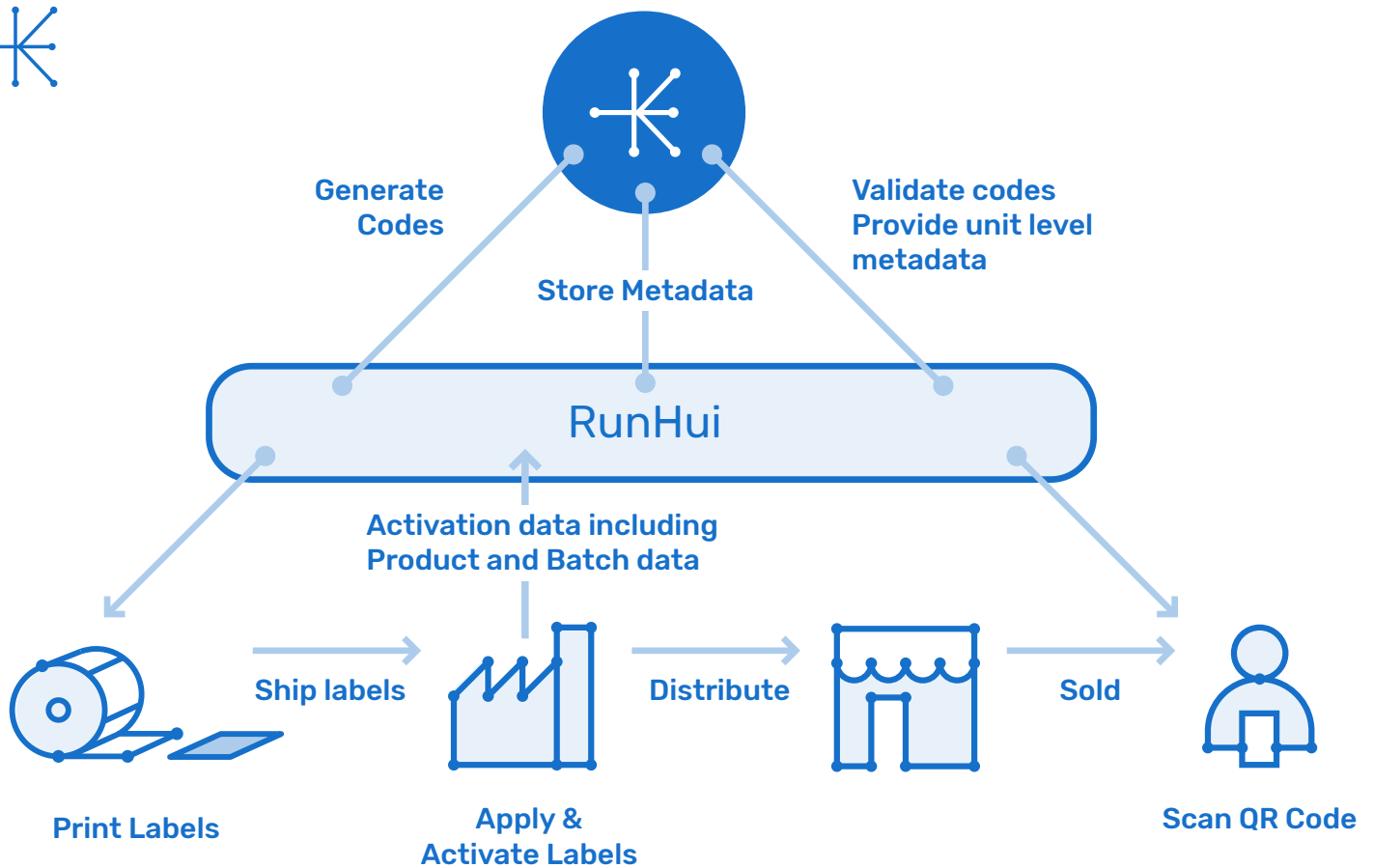
Why Kezzler?

Kezzler's state of the art traceability and authentication platform could be quickly integrated with RunHui's existing IT infrastructure and logistical systems, leaving them well-positioned for continued rollout. The Kezzler platform can be used in any industry where unit-level traceability is needed either due to government requirements, consumer demand or internal drivers such as lack of product flow visibility or other inefficiencies.

Main reasons for selecting Kezzler for a traceability project:

- ✓ Extensive experience in delivering platforms for securing the supply chain and consumer loyalty

- ✓ Proven scalability in massive-volume serialization projects globally; in 2019 serialized over 6 billion products
- ✓ A platform with the agility to be adapted to future company needs
- ✓ Local presence and multiple running projects in China ensure the ability to support such complex deployments within China.
- ✓ Provides brand protection and customer authentication, helping to achieve the goals of the Industrial Park



Project Overview

In the first phase of the project, Kezzler performed the serialization for the production of Weixian radish. This is possible thanks to the integration with Beijing Aokemei Tech and Service Ltd, the Industrial Park's Big Data Platform.

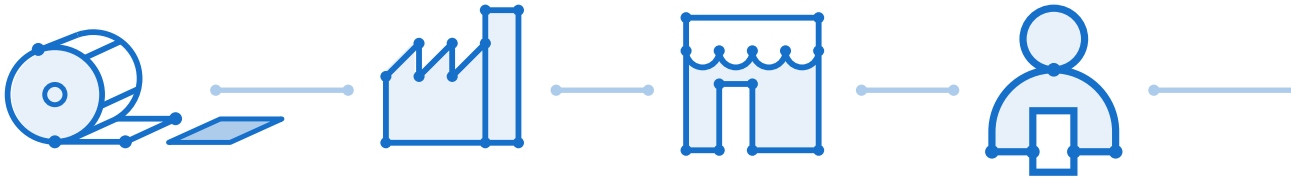
Kezzler generates the unique identity codes for Runhui who in turn provide this information to the local label printing vendor. The printer prints the codes and updates the roll information before shipping the labels to the Industrial Park.

The labels are received by the packaging line, where all upstream information related to the radishes (such as batch, farm, picking dates, inspection and testing) is associated to each individual pack. The codes are activated and the integration with Aokemei ensures that each pack now has all the

relevant data stored in one central platform allowing for full traceability.

The radishes are then distributed through the various supply channels to retail stores and online customers.

Upon receipt of the radishes, customers are able to scan the product using their mobile phone, either through the popular WeChat application or the standard QR scanner on the mobile phone. Scanning the unique Kezzler QR code and entering the hidden pin-code, provides consumers with a new immediate way to guarantee the authenticity of the radishes. Within milliseconds, RunHui is able to validate the Kezzler code as genuine or not and deliver all the associated metadata to the consumer. Consumers are now able to see the full traceability story from seed to the dining table.



SYSTEM INTEGRATION

One reason RunHui chose to work with Kezzler is the efficient and scalable integration process with their existing production and distribution partners. The Kezzler platform can flexibly perform integrations between Kezzler solutions and

third-party solutions in customer defined formats. By leveraging our extensive REST API library to deliver integrations with the existing Big Data platform from Aokemei, we enabled Runhui to share information and the traceability story directly with their consumers

Why unit level traceability?

- ✓ Well positioned to meet future government traceability requirements
- ✓ Unprecedented consumer and consumption insights
- ✓ Able to fulfill the increasing consumer demand for transparency
- ✓ Supply chain efficiency gains with unit level visibility end-to-end
- ✓ Reduced business risk; ensuring product integrity and protecting brand value, with a fully secured supply chain
- ✓ Insights allowing improvements to internal processes, like detection of unauthorized distribution and more targeted recalls
- ✓ Loyal customers and increased sales through enhanced product experience
- ✓ Enables authentication for consumers, promoting food safety

“ We were impressed with Kezzler’s technology and the speed and ease at which it could be integrated with our existing digital infrastructure. This enabled us to create a connected and visible supply chain to support the objectives of the Industrial Park. The solution helps ensure that our supply chain has the responsiveness to maximize productivity based on data collected and deliver high-quality and safe products. A quick and easy authentication process reassures consumers that they have purchased genuine Weixian radishes, protecting the reputation of the Weixian brand and the economic growth of the region. We look forward to our continued collaboration with Kezzler in the future. ”

Chen Hailin, **Senior Project Manager**
Shandong Runhui Agricultural Comprehensive Development Co. Ltd