The Global Language of Business

Application of Global Data Standards for Supply Chain Connectivity
CTI21/2015A

Durian Traceability Project

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Table of Contents

Executive Summary 4

Introduction & Objective 5

Project Background and Context 5-6

Data Acquisition 7
- Business Steps 7-10
- Data Capturing and Sharing Platform 11
- GS1 Keys and Data Capturing Mechanism 12

Implementation & Data Capture 13
- Fresh Durian from Malaysia to Hong Kong 13
  - Shipment #1 13
    - Product & Quantity 13
    - SSCCs 13-14
    - Traceability Report from Mi-Trace 14-15
  - Shipment #2 16
    - Product & Quantity 16
    - SSCCs 16
    - Traceability Report from Mi-Trace 17
  - Shipment #3 18
    - Product & Quantity 18
    - SSCCs 18-19
    - Traceability Report from Mi-Trace 19-20
  - Implementation Photos 21
- Frozen Durian Fruitlet from Malaysia to China 22
  - Shipment #1 22
    - Product & Quantity 22
    - SSCCs 22
    - Traceability Report from Mi-Trace 22-23
    - Traceability Report from China Trace 24
  - Implementation Photos 25

Achievements and Results 26
- KPIs 26

Summary and Conclusion 27-28

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Executive Summary

The focus of the APEC funded Global Data Standards pilot project has been to explore and verify, how better visibility and risk management processes in the international supply chain can improve Malaysian exports to China and Hong Kong, China. Specifically, the project aimed to measure how smarter use of supply chain data can enable new ways to improve consumer safety, improve supply chain efficiency and demonstrate the added value to industry, customs, health authorities/food safety authorities for multi jurisdiction product identification and supply chain visibility. It also contributed to combat and reduce the risk of counterfeiting by enabling authentication of product by the consumers.

This pilot project has successfully demonstrated that the possibility of cross-border trading traceability can be achieved by using the GS1 standards supported by the EPCIS data sharing platform to improve the Musang King Durian supply chain from Malaysia to China and Hong Kong, China. The result of the pilot has also indicated the significant improvement in the overall supply chain performance.

The information captured by the data sharing platform is a full set of data collected from one end to another which opens the possibility of performing advance analysis and data analytics by the stakeholders to know more about the supply chain events. The communication between the stakeholders is more effective as all the stakeholders are using and performing actions on platforms using the same standards. Product recall process can be significantly improved by identifying the batch and serial number of the defect products.

With regards to visibility the pilot has shown the benefits real time package tracking, where each individual item can be easily located and identified throughout the supply chain processes. The status and data of each package was made available in real time upon data capture including details like location, shipment details, time of capture and captured event. This increased the package tracking visibility to 100%.

The product information of the items or products shipped are also uploaded onto the platform and can be made available to the custom and port authority for clearance and safety inspection, including the certification details, production details and necessary required documents directly from the digital copy on the platform by a single scan on the barcode. By placing all the necessary documents on the digital platform, it ensures the full availability of information and documents. Stakeholders across the supply chain can have a better and continuous tracking and data exchange on the product movement.

The pilot is showing how using GDS can increase the efficiency speeding up the custom clearance to avoid container detention and incomplete documentation which would incur added cost to the exporter. The time and effort to check on the particular status and information on the products has also improved.

With regards to integrity, each scan of the individual barcode will be recorded into the EPCIS platform including the SGTIN to provide the information of the scan of a specific item and trigger the alert of possible fraud/counterfeiting activities if necessary to the brand owner for further analysis. Transforming from the conventional method of manual recording of data to the digital EPCIS platform is a significant innovation which contributed by GDS, using the GS1 Tag Standards demonstrated a significant efficiency gain by capturing the data to a shared cloud platform.

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Introduction

Malaysia is one of the world's leading producer and exporter of durians. This is based on natural abundance and a well-developed, internationally competitive industry sector. Hong Kong, China and China are key markets for Malaysian durian export due to market size and potential for growth. The "Musang King" is a variant of durian which is only available in Malaysia and it is considered as a premium product, exporting to China and Hong Kong, China with high market price.

Smarter use of the supply chain data can enable new ways to improve consumer safety, by integrating the Government safety functions in the supply chain with the use of Global Data Standards. This will in turn improve consumer safety by enabling, more efficient controls of imports at the border, and ensure the end user of the authenticity and source of the product used. Taking this into consideration the focus of the pilot project has been to explore, how better visibility and risk management processes in the international supply chain can improve Malaysian exports to Hong Kong, China and greater China.

Objective of the Project

- Measure the improved supply chain efficiency and demonstrate the added value to industry, customs, health authorities/food safety authorities for multi jurisdiction product identification data sharing by use of GS1 GTIN/GSIN for cross-border product identification, admission underpinned by visibility platform.

- Combat and reduce the risk of counterfeiting of premium products to ensure the authenticated product verified by the consumers before purchased and consumed by using the visibility platform and GS1 Serialization adoption.

Project Background and Context

With the increment of trade flows, a number of challenges have arisen along the cross-border supply chain :

- The border authorities faced new challenges in balancing control and trade facilitation,
- Consumers wish to ensure the premium products they purchased are authentic and safe to be consumed,
- For the stakeholders, starting with the brand owner up to the retailer in the supply chain to be able to communicate to ensure the visibility of the shipment, real-time tracking of the shipment as well as smooth flows of trade procedures.

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To rectify the challenges above, the border authorities required a platform that enables the communication between the stakeholders (manufacturers, traders and end users) giving the authorities the ability to effectively monitor the market and control the product distribution by exchanging information such as shipment details, real time tracking, temperature and product information. The platform used is based on the Electronic Product Code Information System (EPCIS), which is compliant with ISO.

To facilitate and improve the effectiveness of the platform, identification of products, logistic units and location are essential elements that need to be in place. This is achieved by using the Global Data Standards (GDS) that enable the possibility of identification across the full supply chain, and allow for traceability up to each single item level seamlessly across the border.

The authorities can leverage on the platform integrated with the GDS to identify, verify, control and screen the products in international or domestic markets in an unambiguous manner. Consumers benefit and are protected from buying fake products through the authentication of the products upon purchase. The stakeholders across the supply chain will have full visibility and traceability of their products as well as a way to alert them of possible risks to the supply chain integrity.

Global Data Standards Identifiers such as Global Trade Item Number (GTIN) assigned to each product type can identify the product and brand owner information with the documentation and certification details. Having a Serial Number on each single packaging will enable the identification of item level to facilitate the tracking and authentication of the item. It also allows for the retrieval of further information like batch no., best before date and the number of scans performed on a specific serial number. Serial Shipping Container Code (SSCC) is the main key used to identify the logistic units in carton up to the pallet level. Global Shipment Identification Number (GSIN) and GIAI (Global Individual Asset Identifier) are the keys used for traceability of the asset details of the shipment at different levels. Last but not least the Global Location Number (GLN) is used to identify the location where the event occurred and to identify the stakeholder of the event.

The integration of the EPCIS platform and the Global Data Standards formed a powerful system for the objective to address most of the challenges in the cross-border trading. The movement of products, real-time tracking of the shipment details, authorities' procedure facilitation, product information authentication are the main achievable results achieved through this pilot project.

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Data Acquisition

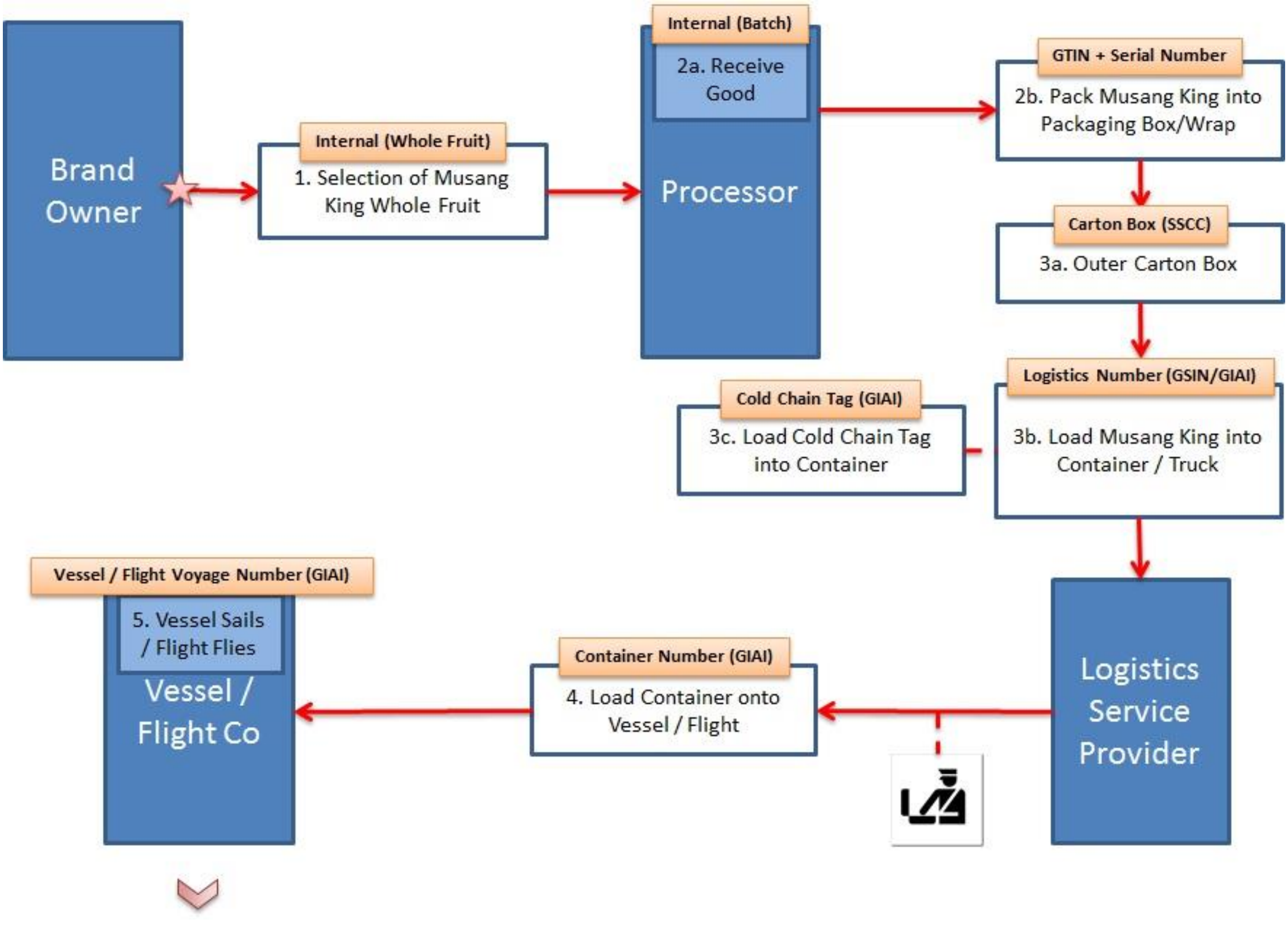
i. Business Steps

Data acquisition process is an important process to capture the data at different point with the necessary information needed at the particular stage. To achieve this, a complete and mutual agreed business step has to be built for all the stakeholders in the project to understand the data to be captured and to inform the stakeholders on their enrolment in the data capturing process.

Business Steps for Malaysia to Hong Kong route

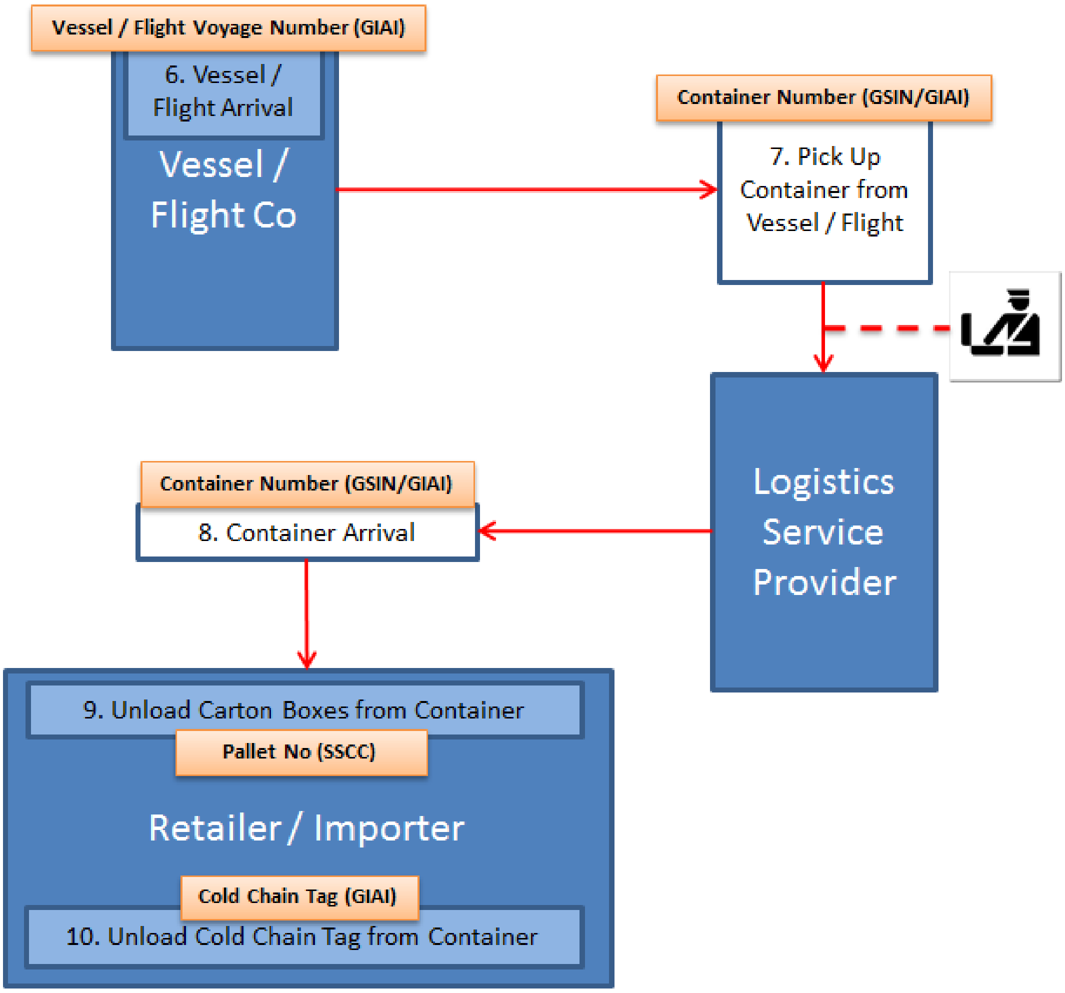
a. Steps and Data Capture for Malaysia side (Processing Plant to the Terminal)

The below flow diagram represented the step on how the data capture being done at different stages from the brand owner to the outbound terminal (air transport) at Malaysia border.


Brand Owner
Internal (Whole Fruit)
1. Selection of Musang King Whole Fruit
Internal (Batch)
2a. Receive Good
Processor
GTIN + Serial Number
2b. Pack Musang King into Packaging Box/Wrap
Carton Box (SSCC)
3a. Outer Carton Box
Logistics Number (GSIN/GIAI)
3b. Load Musang King into Container / Truck
Cold Chain Tag (GIAI)
3c. Load Cold Chain Tag into Container
Logistics Service Provider
Container Number (GIAI)
4. Load Container onto Vessel / Flight
Vessel / Flight Voyage Number (GIAI)
5. Vessel Sails / Flight Flies
Vessel / Flight Co

b. Steps and Data Capture for Hong Kong side (Terminal to the Warehouse)

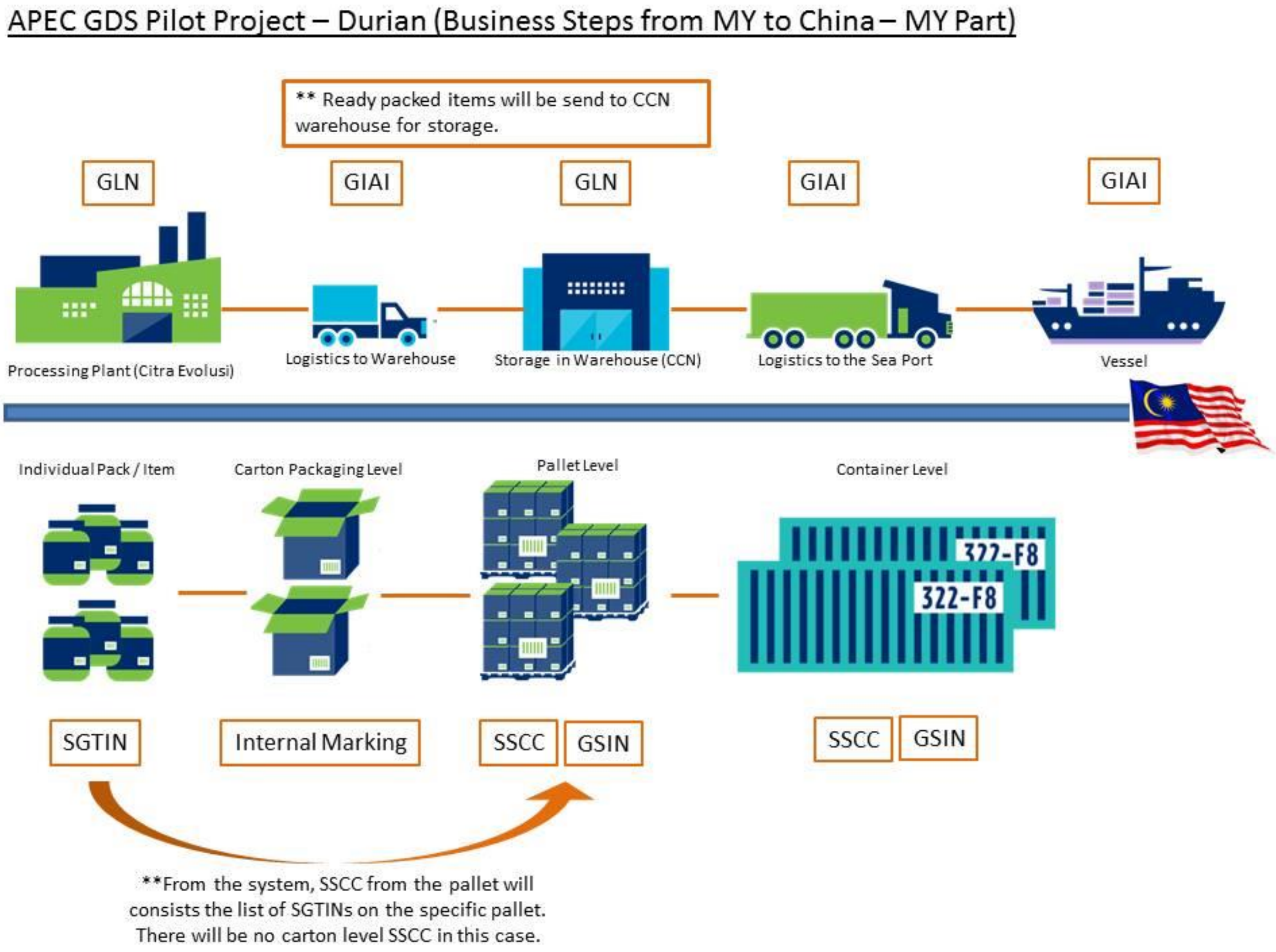
The below flow diagram represented the step on how the data capture being done at different stages from the Hong Kong inbound terminal (air transport) to the importer or retailer in Hong Kong.


Vessel / Flight Voyage Number (GIAI)
6. Vessel / Flight Arrival
Vessel / Flight Co
Container Number (GSIN/GIAI)
7. Pick Up Container from Vessel / Flight
Logistics Service Provider
Container Number (GSIN/GIAI)
8. Container Arrival
9. Unload Carton Boxes from Container
Pallet No (SSCC)
Retailer / Importer
Cold Chain Tag (GIAI)
10. Unload Cold Chain Tag from Container

Business Steps for Malaysia to China route

a. Steps and Data Capture for Malaysia side (Processing Plant to the Terminal)

The below flow diagram represented the steps on how the data capture being done at different stages from the brand owner to the outbound terminal (sea transport) at Malaysia border.


APEC GDS Pilot Project – Durian (Business Steps from MY to China – MY Part)
** Ready packed items will be send to CCN warehouse for storage.
GLN
GIAI
GLN
GIAI
GIAI
Processing Plant (Citra Evolusi)
Logistics to Warehouse
Storage in Warehouse (CCN)
Logistics to the Sea Port
Vessel
Individual Pack / Item
Carton Packaging Level
Pallet Level
Container Level
322-F8
322-F8
SGTIN
Internal Marking
SSCC
GSIN
SSCC
GSIN
**From the system, SSCC from the pallet will consists the list of SGTINs on the specific pallet. There will be no carton level SSCC in this case.

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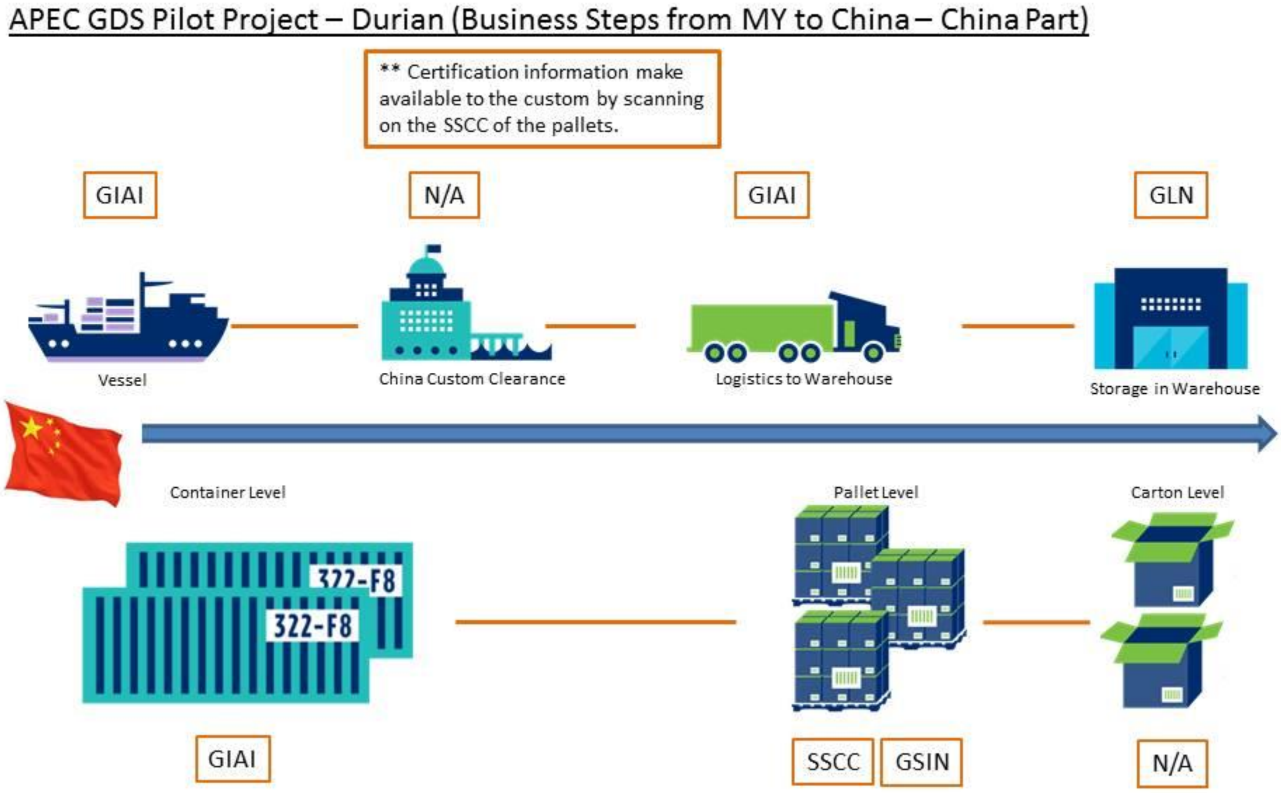
b. Steps and Data Capture for China side (Terminal to the Warehouse)

The below flow diagram represented the steps on how the data capture being done at different stages from the China inbound terminal (sea transport) to the importer or retailer in China.


APEC GDS Pilot Project – Durian (Business Steps from MY to China – China Part)
** Certification information make available to the custom by scanning on the SSCC of the pallets.
GIAI
N/A
GIAI
GLN
Vessel
China Custom Clearance
Logistics to Warehouse
Storage in Warehouse
Container Level
Pallet Level
Carton Level
322-F8
322-F8
GIAI
SSCC
GSIN
N/A

ii. Data Capturing and Sharing Platform

The project uses interoperable EPCIS platforms to capture data throughout the supply chain based on the above business steps and exchange the data with each other to provide the full visibility and information to the relevant parties.

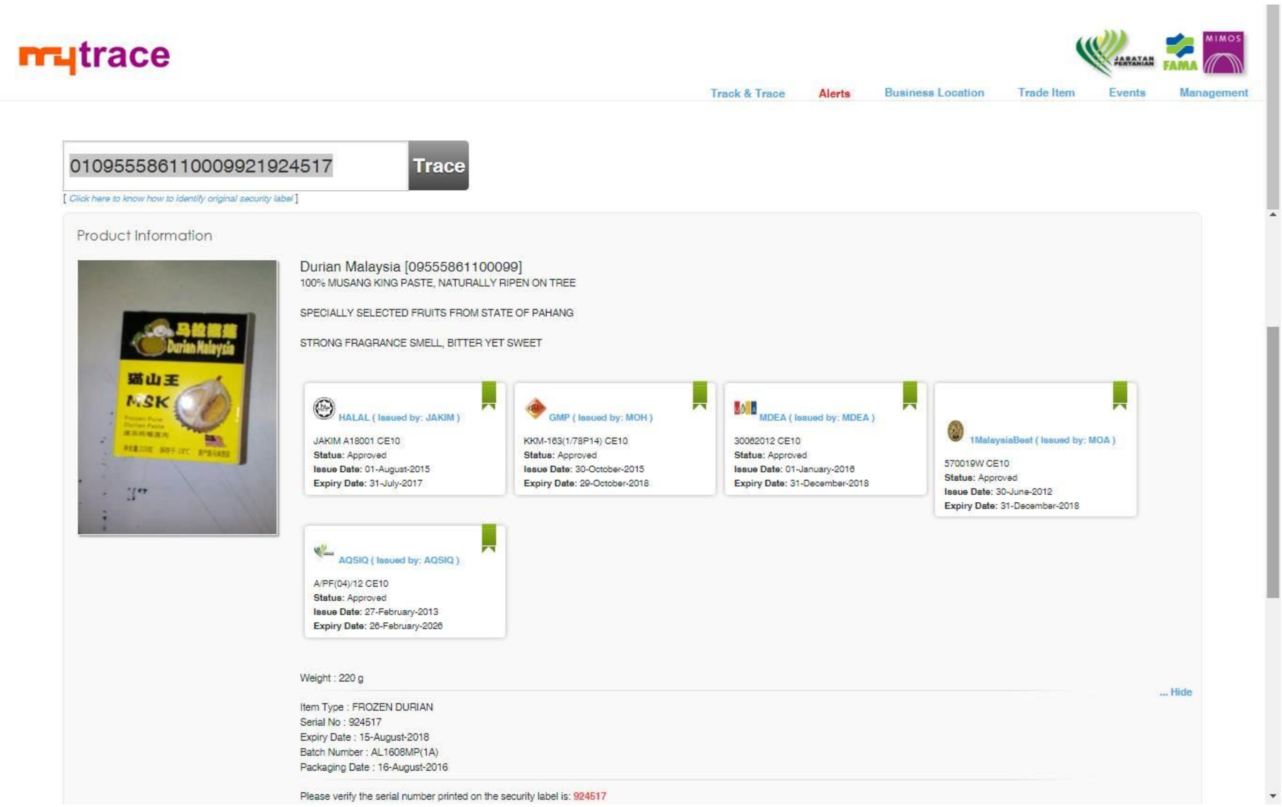
- Hong Kong EPCIS Platform (Ez-Track) from GS1 Hong Kong, China
- China EPCIS Platform (ChinaTrace) from GS1 China
- Malaysia EPCIS Platform (Mi-Trace) from MIMOS

Mi-Trace System

The system was developed by MIMOS with the support of Ministry of Agriculture (MOA) of Malaysia and uses Global Data Standards to access and share the product information.

Objectives of Mi-Trace are to:

- Platform to provide a full visibility and traceability of the products (from farm to fork).
- Platform to provide the right product information for authentication on the product and ensure the products are genuine from Malaysia.
- Ensuring and preserving the quality and integrity of the exported products.
- Provide full compliance on certification for verification purpose at the border and local authorities: CoC, Halal, Export Permit, HACCP, MyGAP (Malaysian Good Agricultural Practices), SALM (Good Farm Practice Scheme Malaysia), Good Manufacturing Practices (GMP), etc.



010955586110009921924517

[Click here to know how to identify original security label]

Product Information

Durian Malaysia [09555861100099]
100% MUSANG KING PASTE, NATURALLY RIPEN ON TREE

SPECIALLY SELECTED FRUITS FROM STATE OF PAHANG

STRONG FRAGRANCE SMELL, BITTER YET SWEET

HALAL (Issued by: JAKIM)
JAKIM A18001 CE10
Status: Approved
Issue Date: 01-August-2015
Expiry Date: 31-July-2017

GMP (Issued by: MOH)
KKM-163(1/78P14) CE10
Status: Approved
Issue Date: 30-October-2015
Expiry Date: 29-October-2018

MDEA (Issued by: MDEA)
30062012 CE10
Status: Approved
Issue Date: 01-January-2016
Expiry Date: 31-December-2018

1MalaysiaBest (Issued by: MOA)
570019W CE10
Status: Approved
Issue Date: 30-June-2012
Expiry Date: 31-December-2018

AQSIQ (Issued by: AQSIQ)
A/PF(04)/12 CE10
Status: Approved
Issue Date: 27-February-2013
Expiry Date: 26-February-2026

Weight : 220 g

Item Type : FROZEN DURIAN
Serial No : 924517
Expiry Date : 15-August-2018
Batch Number : AL1608MP(1A)
Packaging Date : 16-August-2016

Please verify the serial number printed on the security label is: 924517

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iii. GS1 Keys and Data Capturing Mechanism

- **GTIN (Global Trade Item Number)**
  - GTIN is used to provide identification to the durian products based on the variant, weight and packaging.

- **Serial Number**
  - Serial number is a randomised unique number assign to each single product item and combined with the GTIN to produce a unique identification to the package known as SGTIN (Serial GTIN). SGTIN is displayed on the packaging using a **GS1-128** barcode.

- **Batch No**
  - Batch No is much related to the manufacturing or production details of the product item where the information is usually linked to the manufacturer database to retrieve more information on the production using this number. Batch number is **stored at the database** backend based on the SGTIN as the identification key.

- **SSCC (Serial Shipping Container Code)**
  - SSCC is used to identify the logistic units such as cartons and pallets during the shipment. SSCC will linked to the information of each single SGTIN contains in the logistic units to provide the information about the quantity and the specific product information and certification via the Mi-Trace platform. SSCC label is printed using the **GS1-128** barcode and attached to the every cartons and pallets.

- **GSIN (Global Shipment Identification Number)**
  - GSIN carries the information on the entire shipment. GSIN is printed onto the logistic label together with SSCC in text format to indicate that the group of SSCCs are on the same shipment reference, hence to increase the efficiency of custom clearance on the shipment. GSIN number is printed together with the SSCC on the **logistic label** in readable number format.

- **GIAI (Global Individual Asset Identifier)**
  - GIAI is used to capture the information on the asset used along the supply chain. GIAI will carry the information of the cold chain truck during the transportation from the processing plant to the terminal, the container used for the shipment as well as the vessel number or the flight no. used for the shipment.

- **GLN (Global Location Number)**
  - GLN is known as the identification of a location. It is captured at each point of process in the business step to provide the information of the location of the event. The information of the location will also carry the information of the stake holders' identity.

Implementation & Shipment Scenario

The section below showed the details of each shipment such as the date, product variant, quantity of the shipped products and the logistic units involved in the shipment using SSCCs. It also showed the traceability result retrieved from the EPCIS platform indicated how the platform provides the full traceability and data exchange for each shipment.

Fresh Durian from Malaysia to Hong Kong

Shipment #1 (MY to HK)

Shipment Date : **09th August 2016**

Product and Quantity

Product	GTIN	Quantity (unit)
Durian BB D13	09555861100006	52
Durian BB D28	09555861100013	40
Durian BB D101	09555861100020	80
Durian BB D888	09555861100037	100
Durian BB XO	09555861100044	120
Durian BB D175	09555861100051	80
Durian BB D163	09555861100068	100
Durian BB MSK	09554100253367	160
Total		**732**

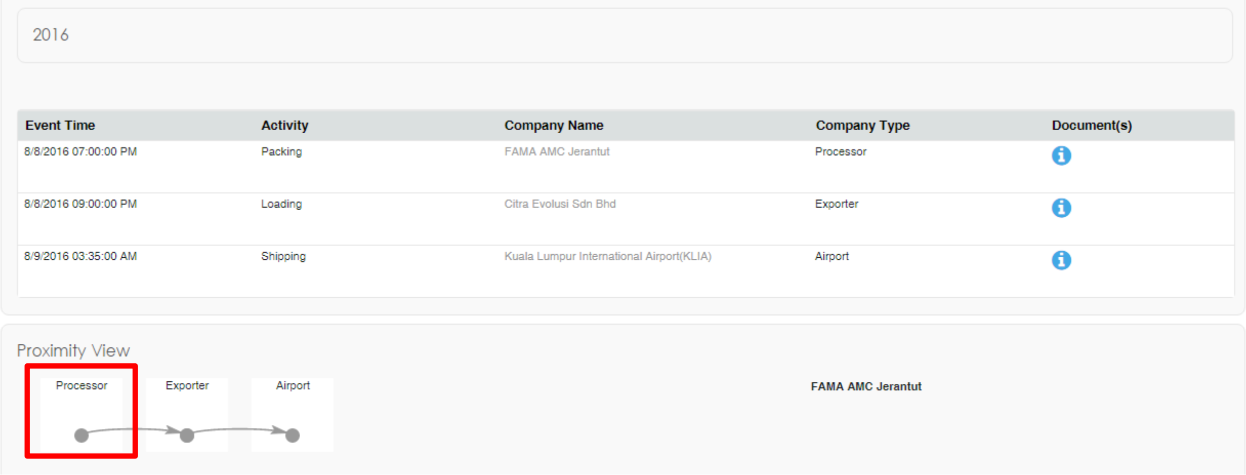
SSCCs

Durian BB MSK	09554100253367	00195541003676604010
Durian BB MSK	09554100253367	00195541003676604027
Durian BB MSK	09554100253367	00195541003676604034
Durian BB MSK	09554100253367	00195541003676604041
Durian BB MSK	09554100253367	00195541003676604058
Durian BB MSK	09554100253367	00195541003676604065
Durian BB MSK	09554100253367	00195541003676604072
Durian BB MSK	09554100253367	00195541003676604089
Durian BB XO	09555861100044	00195558611060400119
Durian BB XO	09555861100044	00195558611060400126
Durian BB XO	09555861100044	00195558611060400133
Durian BB XO	09555861100044	00195558611060400140
Durian BB XO	09555861100044	00195558611060400157
Durian BB XO	09555861100044	00195558611060400164
Durian BB D175	09555861100051	00195558611060400218
Durian BB D175	09555861100051	00195558611060400225
Durian BB D175	09555861100051	00195558611060400232
Durian BB D175	09555861100051	00195558611060400249
Durian BB D163	09555861100068	00195558611060400256

Durian BB D163	09555861100068	00195558611060400263
Durian BB D163	09555861100068	00195558611060400270
Durian BB D163	09555861100068	00195558611060400287
Durian BB D163	09555861100068	00195558611060400294
Durian BB D13	09555861100006	00195558611060400201
Durian BB D13	09555861100006	00195558611060400317
Durian BB D13	09555861100006	00195558611060400324
Durian BB D28	09555861100013	00195558611060400331
Durian BB D28	09555861100013	00195558611060400348
Durian BB D101	09555861100020	00195558611060400362
Durian BB D101	09555861100020	00195558611060400379
Durian BB D101	09555861100020	00195558611060400386
Durian BB D101	09555861100020	00195558611060400393
Durian BB D888	09555861100037	00195558611060400416
Durian BB D888	09555861100037	00195558611060400423
Durian BB D888	09555861100037	00195558611060400430
Durian BB D888	09555861100037	00195558611060400447
Durian BB D888	09555861100037	00195558611060400454

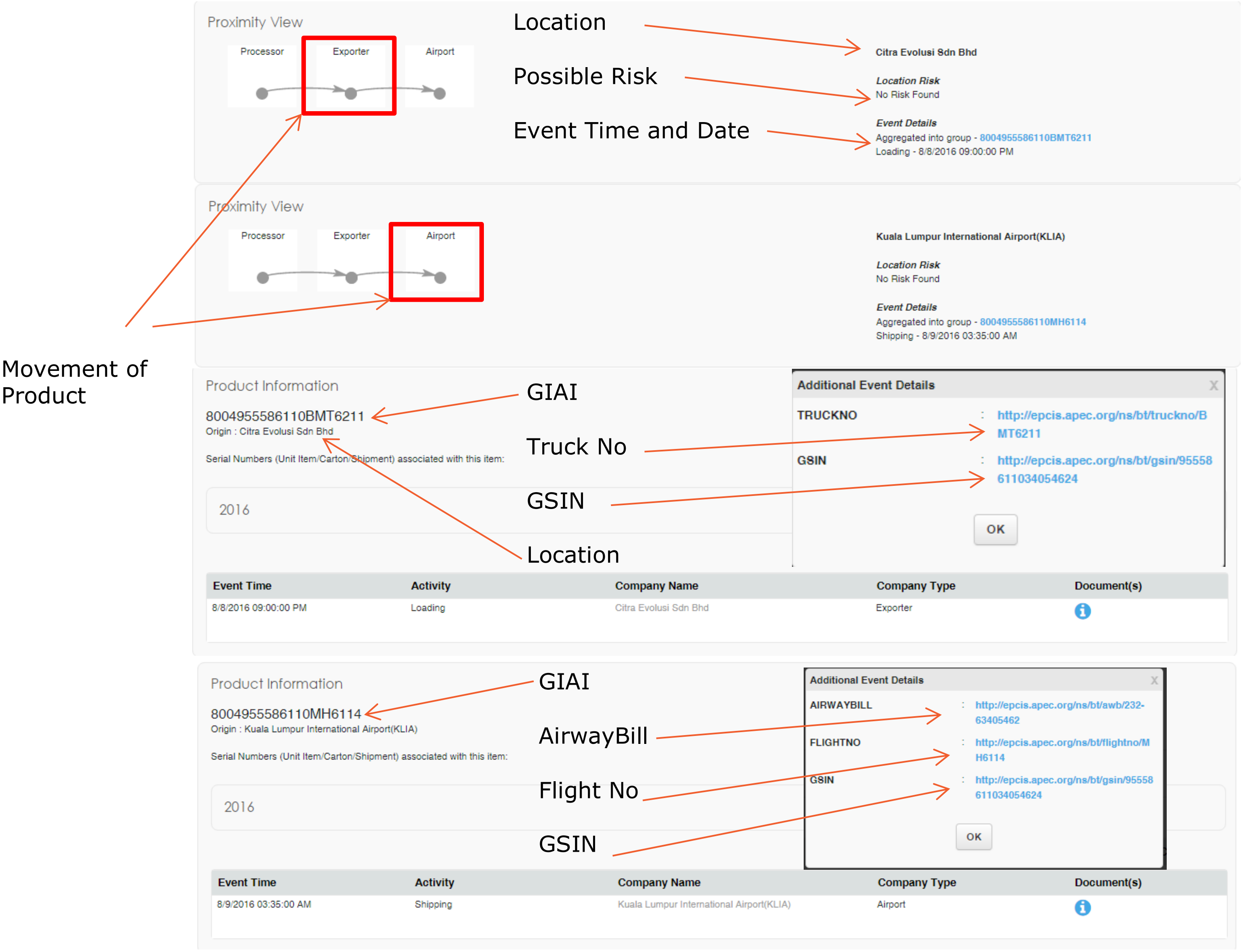
Traceability (Screenshot from Mi-Trace)

The below screenshots showed the traceability route of the shipment from the packing up to the shipping stage.



2016

Event Time	Activity	Company Name	Company Type	Document(s)
8/8/2016 07:00:00 PM	Packing	FAMA AMC Jerantut	Processor	ℹ
8/8/2016 09:00:00 PM	Loading	Citra Evolusi Sdn Bhd	Exporter	ℹ
8/9/2016 03:35:00 AM	Shipping	Kuala Lumpur International Airport(KLIA)	Airport	ℹ


Location
Possible Risk
Event Time and Date
Movement of Product
GIAI
Truck No
GSIN
Location
GIAI
AirwayBill
Flight No
GSIN
Processor
Exporter
Airport
X
OK

Proximity View

Citra Evolusi Sdn Bhd

Location Risk
No Risk Found

Event Details
Aggregated into group - 8004955586110BMT6211
Loading - 8/8/2016 09:00:00 PM

Proximity View

Kuala Lumpur International Airport(KLIA)

Location Risk
No Risk Found

Event Details
Aggregated into group - 8004955586110MH6114
Shipping - 8/9/2016 03:35:00 AM

Product Information

8004955586110BMT6211
Origin : Citra Evolusi Sdn Bhd

Serial Numbers (Unit Item/Carton/Shipment) associated with this item:

2016

Additional Event Details

TRUCKNO	:	http://epcis.apec.org/ns/bt/truckno/BMT6211
GSIN	:	http://epcis.apec.org/ns/bt/gsin/95558611034054624

Event Time	Activity	Company Name	Company Type	Document(s)
8/8/2016 09:00:00 PM	Loading	Citra Evolusi Sdn Bhd	Exporter	ℹ

Product Information

8004955586110MH6114
Origin : Kuala Lumpur International Airport(KLIA)

Serial Numbers (Unit Item/Carton/Shipment) associated with this item:

2016

Additional Event Details

AIRWAYBILL	:	http://epcis.apec.org/ns/bt/awb/232-63405462
FLIGHTNO	:	http://epcis.apec.org/ns/bt/flightno/MH6114
GSIN	:	http://epcis.apec.org/ns/bt/gsin/95558611034054624

Event Time	Activity	Company Name	Company Type	Document(s)
8/9/2016 03:35:00 AM	Shipping	Kuala Lumpur International Airport(KLIA)	Airport	ℹ

Shipment #2 (MY to HK)

Shipment Date : **10th August 2016**

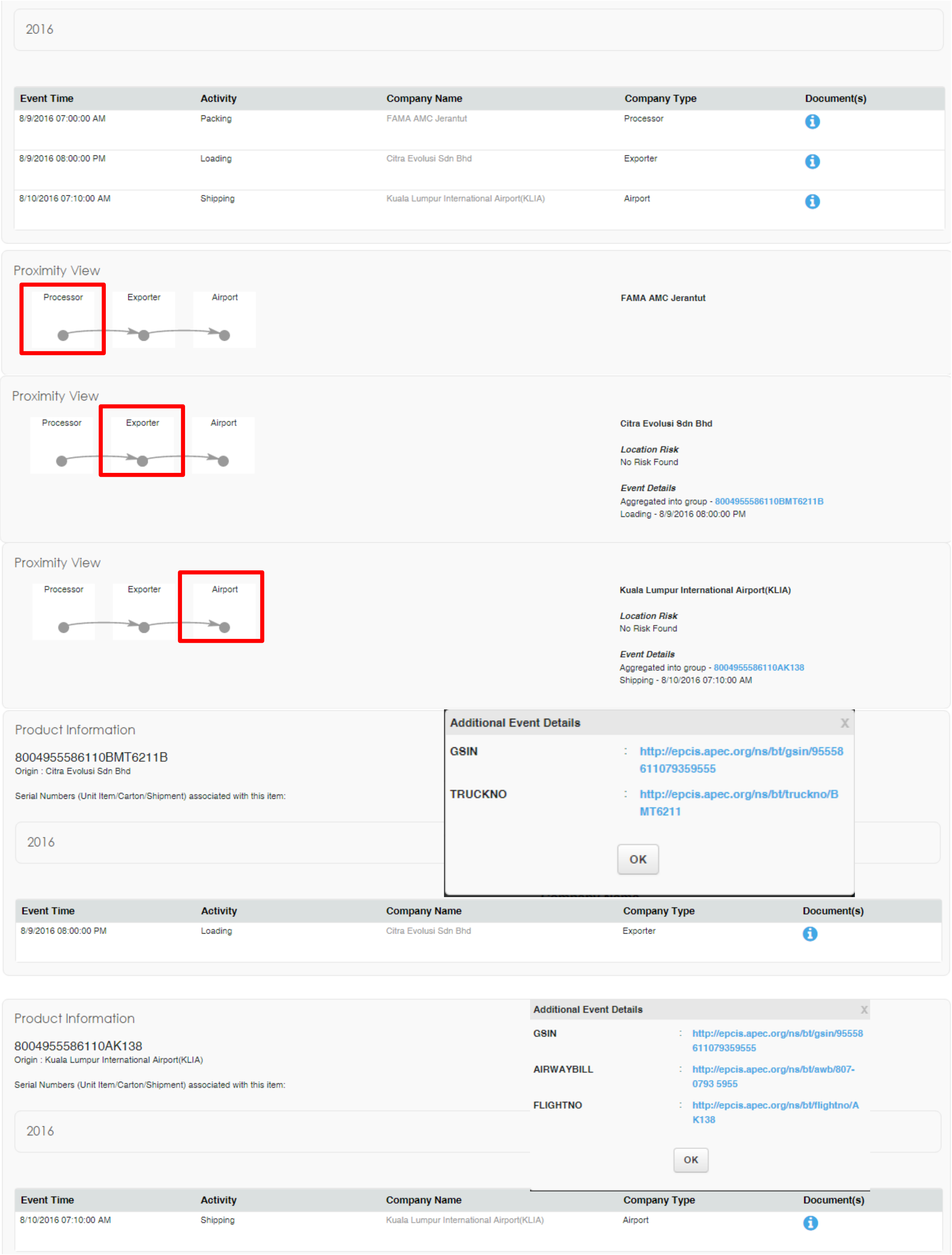
Product and Quantity

Product	GTIN	Quantity (unit)
Durian BB D13	09555861100006	0
Durian BB D28	09555861100013	0
Durian BB D101	09555861100020	60
Durian BB D888	09555861100037	40
Durian BB XO	09555861100044	80
Durian BB D175	09555861100051	0
Durian BB D163	09555861100068	60
Durian BB MSK	09554100253367	40
Total		**280**

SSCCs

Durian BB MSK	09554100253367	001955410036766040960
Durian BB MSK	09554100253367	001955410036766041020
Durian BB XO	09555861100044	001955586110604001710
Durian BB XO	09555861100044	001955586110604001880
Durian BB XO	09555861100044	001955586110604001950
Durian BB XO	09555861100044	001955586110604001020
Durian BB D101	09555861100020	001955586110604003000
Durian BB D163	09555861100068	001955586110604004610
Durian BB D163	09555861100068	001955586110604004780
Durian BB D163	09555861100068	001955586110604004850
Durian BB D101	09555861100020	001955586110604004920
Durian BB D101	09555861100020	001955586110604004090
Durian BB D888	09555861100037	001955586110604005150
Durian BB D888	09555861100037	001955586110604005220

Traceability (Screenshot from Mi-Trace)



2016

Event Time	Activity	Company Name	Company Type	Document(s)
8/9/2016 07:00:00 AM	Packing	FAMA AMC Jerantut	Processor	ℹ
8/9/2016 08:00:00 PM	Loading	Citra Evolusi Sdn Bhd	Exporter	ℹ
8/10/2016 07:10:00 AM	Shipping	Kuala Lumpur International Airport(KLIA)	Airport	ℹ

FAMA AMC Jerantut

Citra Evolusi Sdn Bhd

Location Risk
No Risk Found

Event Details
Aggregated into group - 8004955586110BMT6211B
Loading - 8/9/2016 08:00:00 PM

Kuala Lumpur International Airport(KLIA)

Location Risk
No Risk Found

Event Details
Aggregated into group - 8004955586110AK138
Shipping - 8/10/2016 07:10:00 AM

Product Information

8004955586110BMT6211B
Origin : Citra Evolusi Sdn Bhd

Serial Numbers (Unit Item/Carton/Shipment) associated with this item:

2016

Additional Event Details

GSIN : http://epcis.apec.org/ns/bt/gsin/95558611079359555

TRUCKNO : http://epcis.apec.org/ns/bt/truckno/BMT6211

Event Time	Activity	Company Name	Company Type	Document(s)
8/9/2016 08:00:00 PM	Loading	Citra Evolusi Sdn Bhd	Exporter	ℹ

Product Information

8004955586110AK138
Origin : Kuala Lumpur International Airport(KLIA)

Serial Numbers (Unit Item/Carton/Shipment) associated with this item:

2016

Additional Event Details

GSIN : http://epcis.apec.org/ns/bt/gsin/95558611079359555

AIRWAYBILL : http://epcis.apec.org/ns/bt/awb/807-0793 5955

FLIGHTNO : http://epcis.apec.org/ns/bt/flightno/AK138

Event Time	Activity	Company Name	Company Type	Document(s)
8/10/2016 07:10:00 AM	Shipping	Kuala Lumpur International Airport(KLIA)	Airport	ℹ

Shipment #3 (MY to HK)

Shipment Date : **13th August 2016**

Product and Quantity

Product	GTIN	Quantity (unit)
Durian BB D13	09555861100006	0
Durian BB D28	09555861100013	60
Durian BB D101	09555861100020	120
Durian BB D888	09555861100037	120
Durian BB XO	09555861100044	200
Durian BB D175	09555861100051	100
Durian BB D163	09555861100068	100
Durian BB MSK	09554100253367	300
Total		**1000**

SSCCs

Durian BB MSK	09554100253367	00195541002533606013
Durian BB MSK	09554100253367	00195541002533606020
Durian BB MSK	09554100253367	00195541002533606037
Durian BB MSK	09554100253367	00195541002533606044
Durian BB MSK	09554100253367	00195541002533606051
Durian BB MSK	09554100253367	00195541002533606068
Durian BB MSK	09554100253367	00195541002533606075
Durian BB MSK	09554100253367	00195541002533606082
Durian BB MSK	09554100253367	00195541002533606099
Durian BB MSK	09554100253367	00195541002533606105
Durian BB MSK	09554100253367	00195541002533606112
Durian BB MSK	09554100253367	00195541002533606129
Durian BB MSK	09554100253367	00195541002533606136
Durian BB MSK	09554100253367	00195541002533606143
Durian BB MSK	09554100253367	00195541002533606150
Durian BB XO	09555861100044	00195558611060600168
Durian BB XO	09555861100044	00195558611060600175
Durian BB XO	09555861100044	00195558611060600182
Durian BB XO	09555861100044	00195558611060600205
Durian BB XO	09555861100044	00195558611060600205
Durian BB XO	09555861100044	00195558611060600212
Durian BB XO	09555861100044	00195558611060600229
Durian BB XO	09555861100044	00195558611060600236
Durian BB XO	09555861100044	00195558611060600243
Durian BB XO	09555861100044	00195558611060600250
Durian BB D175	09555861100051	00195558611060600267
Durian BB D175	09555861100051	00195558611060600274

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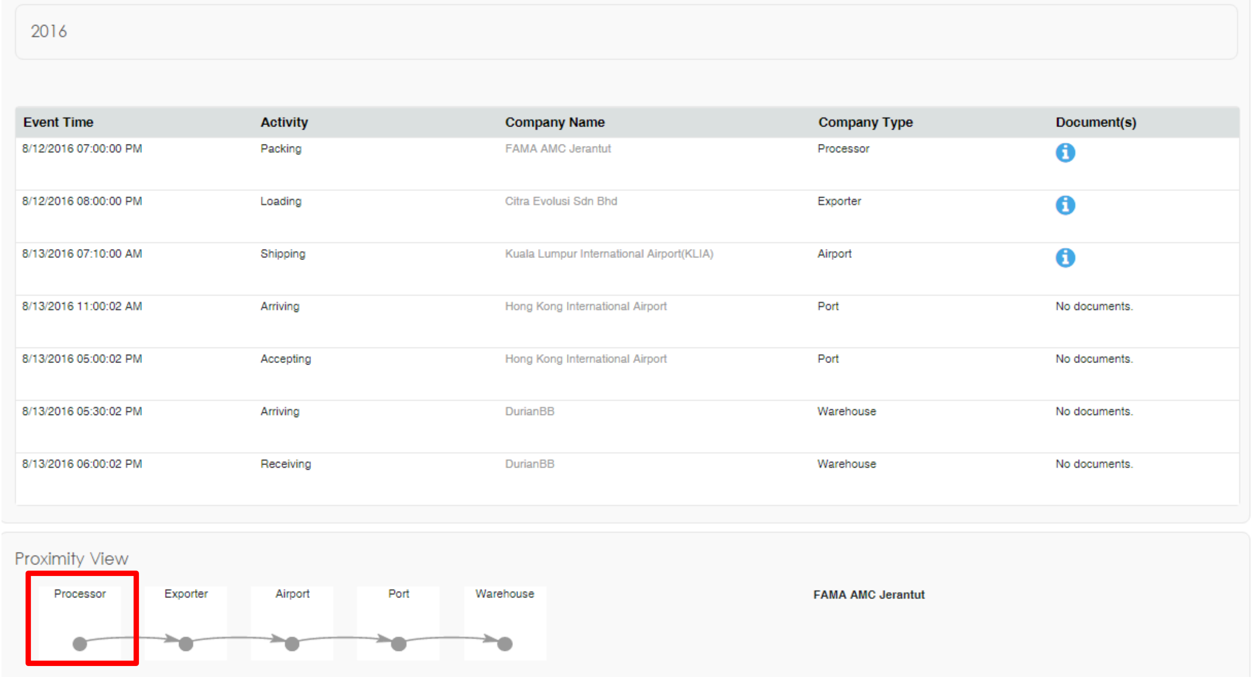
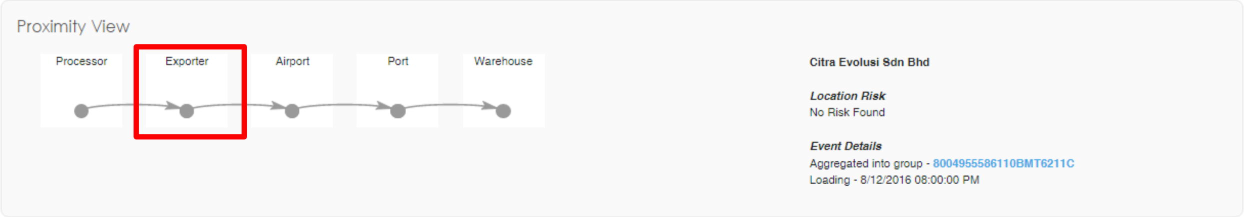
Durian BB D175	09555861100051	00195558611060600281
Durian BB D175	09555861100051	00195558611060600298
Durian BB D175	09555861100051	00195558611060600304
Durian BB D163	09555861100068	00195558611060600311
Durian BB D163	09555861100068	00195558611060600328
Durian BB D163	09555861100068	00195558611060600335
Durian BB D163	09555861100068	00195558611060600342
Durian BB D163	09555861100068	00195558611060600359
Durian BB D101	09555861100020	00195558611060600366
Durian BB D101	09555861100020	00195558611060600373
Durian BB D101	09555861100020	00195558611060600380
Durian BB D101	09555861100020	00195558611060600397
Durian BB D101	09555861100020	00195558611060600403
Durian BB D101	09555861100020	00195558611060600410
Durian BB D28	09555861100013	00195558611060600427
Durian BB D28	09555861100013	00195558611060600434
Durian BB D28	09555861100013	00195558611060600441
Durian BB D888	09555861100037	00195558611060600458
Durian BB D888	09555861100037	00195558611060600465
Durian BB D888	09555861100037	00195558611060600472
Durian BB D888	09555861100037	00195558611060600489
Durian BB D888	09555861100037	00195558611060600496
Durian BB D888	09555861100037	00195558611060600502

Traceability (Screenshot from Mi-Trace)



2016

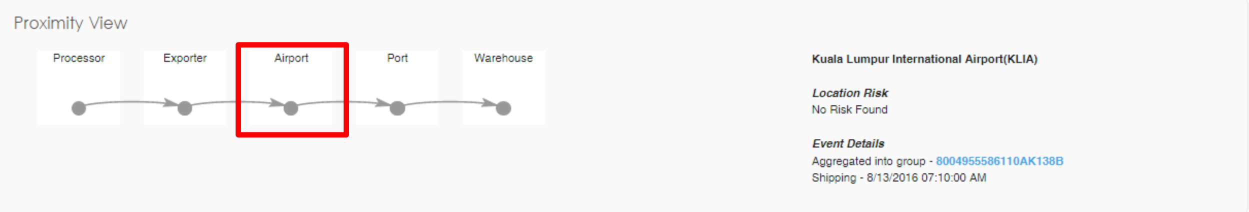
Event Time	Activity	Company Name	Company Type	Document(s)
8/12/2016 07:00:00 PM	Packing	FAMA AMC Jerantut	Processor	ℹ
8/12/2016 08:00:00 PM	Loading	Citra Evolusi Sdn Bhd	Exporter	ℹ
8/13/2016 07:10:00 AM	Shipping	Kuala Lumpur International Airport(KLIA)	Airport	ℹ
8/13/2016 11:00:02 AM	Arriving	Hong Kong International Airport	Port	No documents.
8/13/2016 05:00:02 PM	Accepting	Hong Kong International Airport	Port	No documents.
8/13/2016 05:30:02 PM	Arriving	DurianBB	Warehouse	No documents.
8/13/2016 06:00:02 PM	Receiving	DurianBB	Warehouse	No documents.


Proximity View
Processor
Exporter
Airport
Port
Warehouse

Citra Evolusi Sdn Bhd

Location Risk
No Risk Found

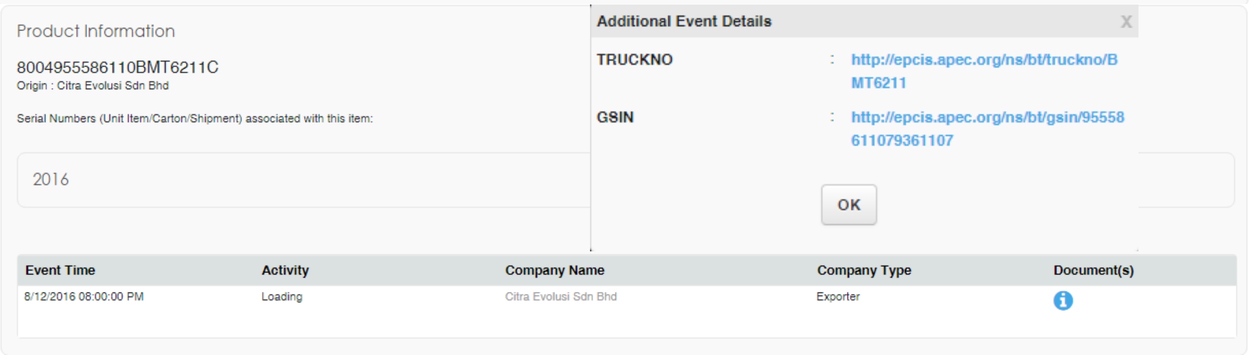
Event Details
Aggregated into group - 8004955586110BMT6211C
Loading - 8/12/2016 08:00:00 PM


Proximity View
Processor
Exporter
Airport
Port
Warehouse

Kuala Lumpur International Airport(KLIA)

Location Risk
No Risk Found

Event Details
Aggregated into group - 8004955586110AK138B
Shipping - 8/13/2016 07:10:00 AM


Product Information

8004955586110BMT6211C
Origin : Citra Evolusi Sdn Bhd

Serial Numbers (Unit Item/Carton/Shipment) associated with this item:

2016

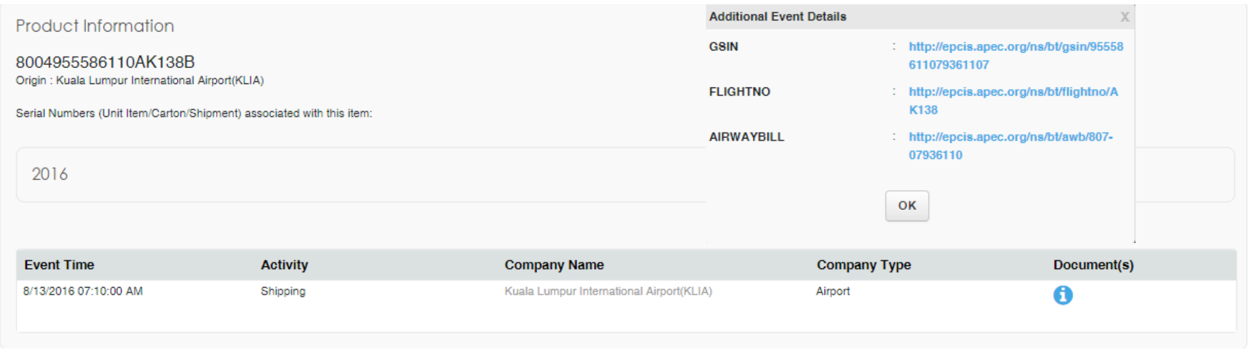
Event Time	Activity	Company Name	Company Type	Document(s)
8/12/2016 08:00:00 PM	Loading	Citra Evolusi Sdn Bhd	Exporter	ℹ

Additional Event Details

TRUCKNO : http://epcis.apec.org/ns/bt/truckno/BMT6211

GSIN : http://epcis.apec.org/ns/bt/gsin/95558611079361107

X
OK


Product Information

8004955586110AK138B
Origin : Kuala Lumpur International Airport(KLIA)

Serial Numbers (Unit Item/Carton/Shipment) associated with this item:

2016

Event Time	Activity	Company Name	Company Type	Document(s)
8/13/2016 07:10:00 AM	Shipping	Kuala Lumpur International Airport(KLIA)	Airport	ℹ

Additional Event Details

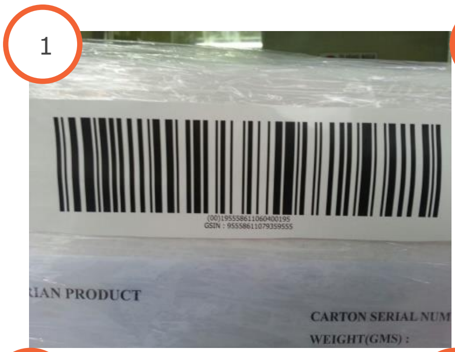
GSIN : http://epcis.apec.org/ns/bt/gsin/95558611079361107

FLIGHTNO : http://epcis.apec.org/ns/bt/flightno/AK138

AIRWAYBILL : http://epcis.apec.org/ns/bt/awb/807-07936110

Implementation Photos

1


IAN PRODUCT
CARTON SERIAL NUM
WEIGHT(GMS) :

2

3

RIAN PRODUCT
CARTON SERIAL NUM
WEIGHT(GMS) :
SIZE :

4

5

6

Picture 1 : The logistic label used to attached to every carton and contains the GS1-128 barcode, SSCC and GSIN number.

Picture 2 : The packed cartons ready to be shipped.

Picture 3 : The logistic label used to attached to every carton and contains the GS1-128 barcode, SSCC and GSIN number.

Picture 4 : Vacumm sealed fresh whole durian.

Picture 5 : 4 to 5 fresh whole durians are packed into a carton depends on the size of the durians.

Picture 6 : Each carton is attached with logistic label (SSCC & GSIN) before loaded onto the cold chain truck.

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Frozen Durian Fruitlet from Malaysia to China

Shipment #1 (MY to China)

Shipment Date : **11th October 2016**

Product and Quantity

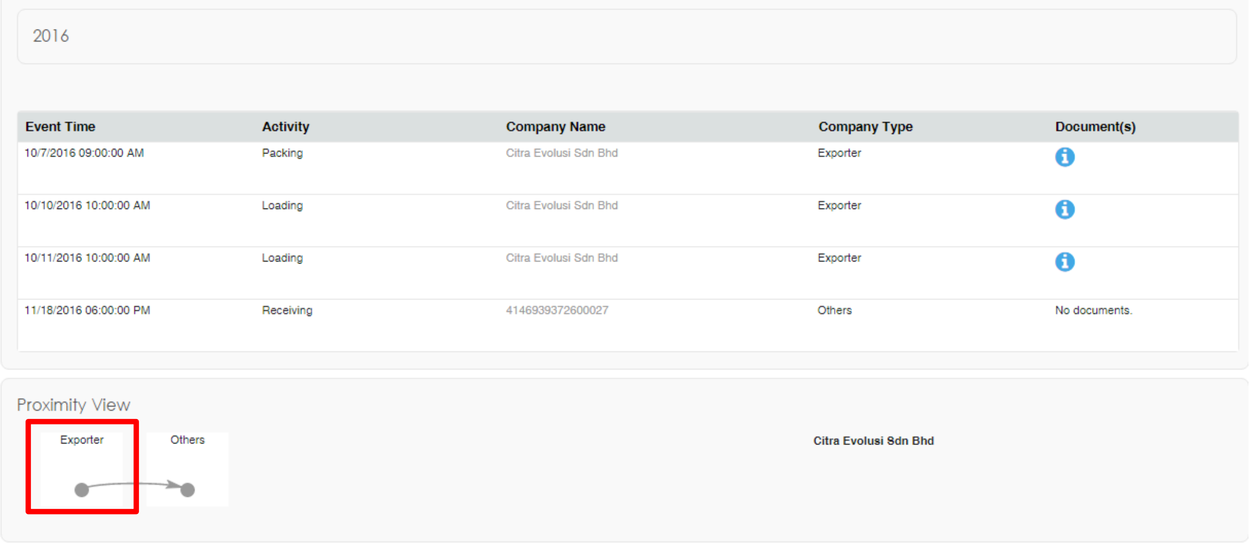
Product	GTIN	Quantity (unit)
AHLUNG MSK Paste	09555861100075	2016
Durian Malaysia MSK Paste	09555861100099	2400
AHLUNG D24 Paste	09555861100105	3000
Total		7416

SSCCs

AHLUNG D24 Paste	09555861100105	001955586110609000015
AHLUNG D24 Paste	09555861100105	001955586110609000022
AHLUNG D24 Paste	09555861100105	001955586110609000039
AHLUNG D24 Paste	09555861100105	001955586110609000046
AHLUNG D24 Paste	09555861100105	001955586110609000053
Durian Malaysia MSK Paste	09555861100099	001955586110609000060
Durian Malaysia MSK Paste	09555861100099	001955586110609000077
AHLUNG MSK Paste	09555861100075	001955586110609000084
AHLUNG MSK Paste	09555861100075	001955586110609000091
AHLUNG MSK Paste	09555861100075	001955586110609000107
AHLUNG MSK Paste	09555861100075	001955586110609000114

Traceability (Screenshot from Mi-Trace)

The below screenshots shows the traceability route of the shipment from the packing up to the shipping stage.



Event Time	Activity	Company Name	Company Type	Document(s)
10/7/2016 09:00:00 AM	Packing	Citra Evolusi Sdn Bhd	Exporter	ℹ
10/10/2016 10:00:00 AM	Loading	Citra Evolusi Sdn Bhd	Exporter	ℹ
10/11/2016 10:00:00 AM	Loading	Citra Evolusi Sdn Bhd	Exporter	ℹ
11/18/2016 06:00:00 PM	Receiving	4146939372600027	Others	No documents.

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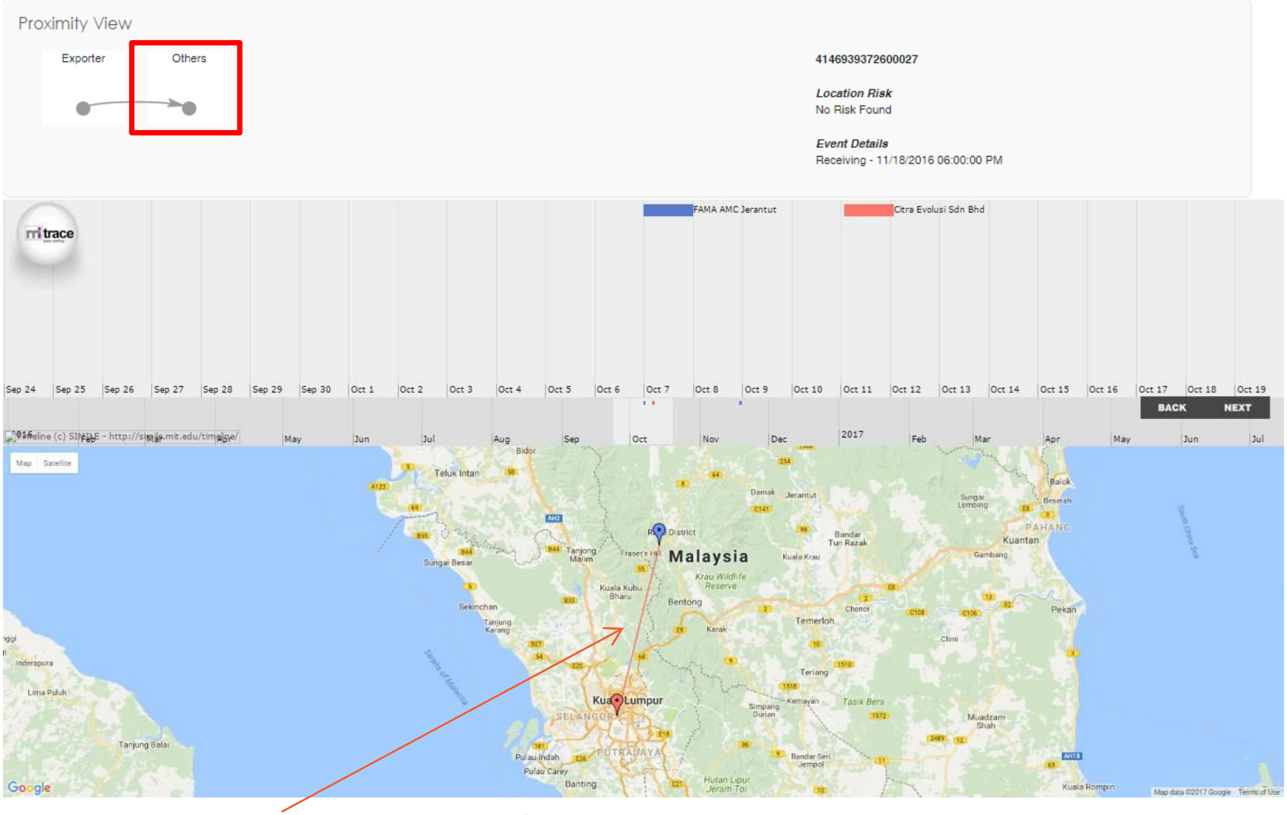
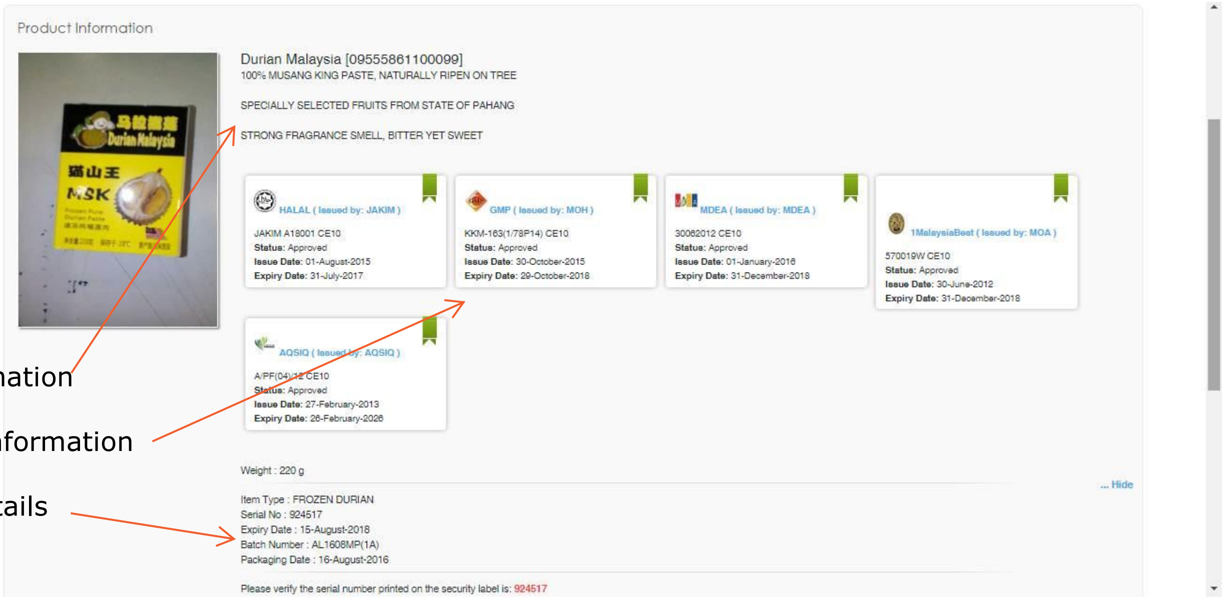

Proximity View
Exporter
Others
mi trace
FAMA AMC Jerantut
Citra Evolusi Sdn Bhd
Sep 24
Sep 25
Sep 26
Sep 27
Sep 28
Sep 29
Sep 30
Oct 1
Oct 2
Oct 3
Oct 4
Oct 5
Oct 6
Oct 7
Oct 8
Oct 9
Oct 10
Oct 11
Oct 12
Oct 13
Oct 14
Oct 15
Oct 16
Oct 17
Oct 18
Oct 19
BACK
NEXT
Timeline (c) SIMILE - http://simile.mit.edu/timeline/
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2017
Feb
Mar
Apr
May
Jun
Jul
Map
Satellite
Malaysia
Kuala Lumpur
Google
Map data ©2017 Google
Terms of Use

4146939372600027

Location Risk
No Risk Found

Event Details
Receiving - 11/18/2016 06:00:00 PM

The overview movement and route of the shipment plotted using the GLN and the GPS coordinate information.


Product Information
... Hide

Durian Malaysia [09555861100099]
100% MUSANG KING PASTE, NATURALLY RIPEN ON TREE

SPECIALLY SELECTED FRUITS FROM STATE OF PAHANG

STRONG FRAGRANCE SMELL, BITTER YET SWEET

HALAL (Issued by: JAKIM)
JAKIM A18001 CE10
Status: Approved
Issue Date: 01-August-2015
Expiry Date: 31-July-2017

GMP (Issued by: MOH)
KKM-163(1/78P14) CE10
Status: Approved
Issue Date: 30-October-2015
Expiry Date: 29-October-2018

MDEA (Issued by: MDEA)
30062012 CE10
Status: Approved
Issue Date: 01-January-2016
Expiry Date: 31-December-2018

1MalaysiaBest (Issued by: MOA)
570019W CE10
Status: Approved
Issue Date: 30-June-2012
Expiry Date: 31-December-2018

AQSIQ (Issued by: AQSIQ)
A/PF(04)/12 CE10
Status: Approved
Issue Date: 27-February-2013
Expiry Date: 26-February-2026

Weight : 220 g

Item Type : FROZEN DURIAN
Serial No : 924517
Expiry Date : 15-August-2018
Batch Number : AL1608MP(1A)
Packaging Date : 16-August-2016

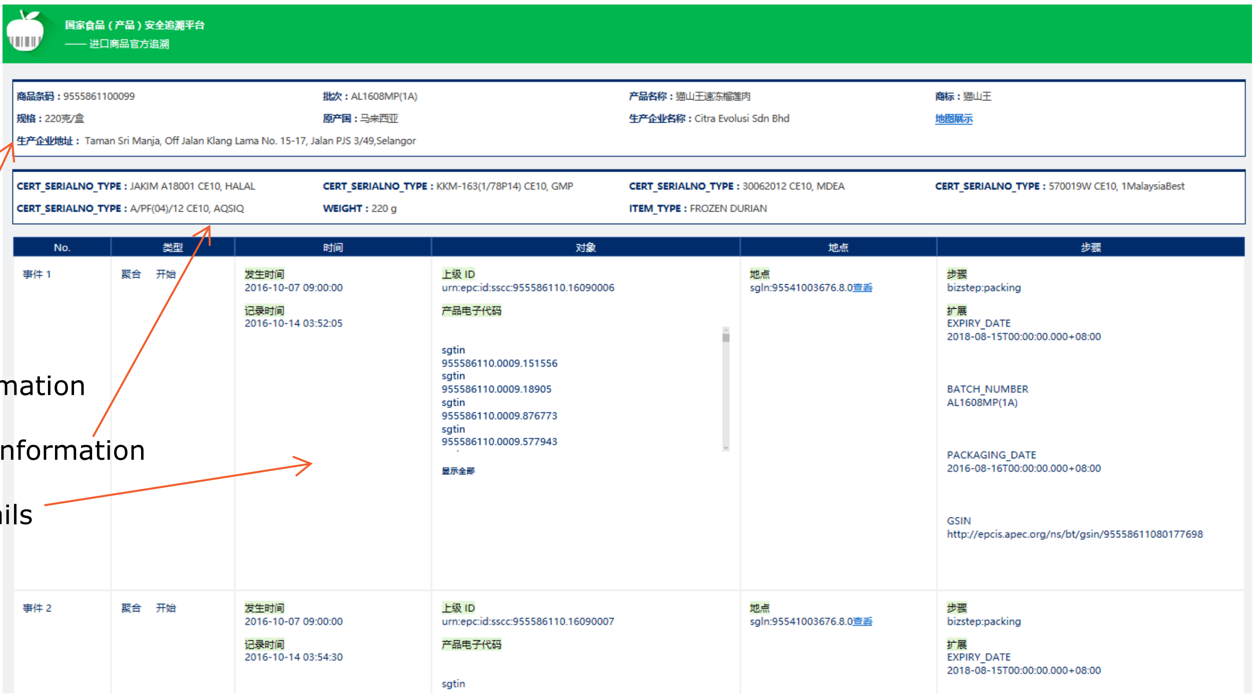
Please verify the serial number printed on the security label is: 924517

Product Information

Certification Information

Production Details

China EPCIS (Chinatrace)



商品条码：9555861100099
批次：AL1608MP(1A)
产品名称：猫山王速冻榴莲肉
商标：猫山王
规格：220克/盒
原产国：马来西亚
生产企业名称：Citra Evolusi Sdn Bhd
地图展示
生产企业地址： Taman Sri Manja, Off Jalan Klang Lama No. 15-17, Jalan PJS 3/49,Selangor

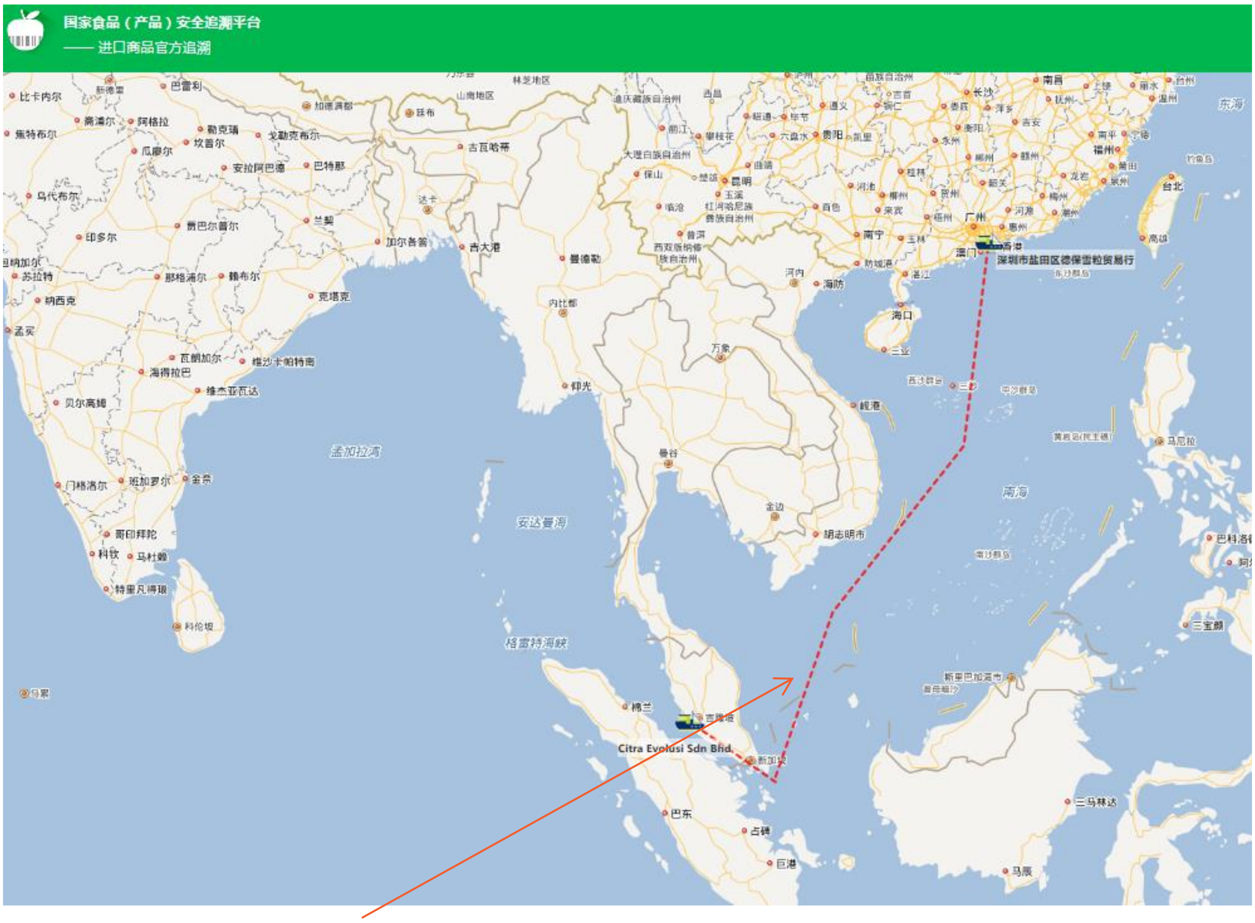
CERT_SERIALNO_TYPE：JAKIM A18001 CE10, HALAL
CERT_SERIALNO_TYPE：KKM-163(1/78P14) CE10, GMP
CERT_SERIALNO_TYPE：30062012 CE10, MDEA
CERT_SERIALNO_TYPE：570019W CE10, 1MalaysiaBest
CERT_SERIALNO_TYPE：A/PF(04)/12 CE10, AQSIQ
WEIGHT：220 g
ITEM_TYPE：FROZEN DURIAN

No.	类型	时间	对象	地点	步骤
事件 1	聚合　开始	发生时间 2016-10-07 09:00:00 记录时间 2016-10-14 03:52:05	上级 ID urn:epc:id:sscc:955586110.16090006 产品电子代码 sgtin 955586110.0009.151556 sgtin 955586110.0009.18905 sgtin 955586110.0009.876773 sgtin 955586110.0009.577943 显示全部	地点 sgln:95541003676.8.0查看	步骤 bizstep:packing 扩展 EXPIRY_DATE 2018-08-15T00:00:00.000+08:00 BATCH_NUMBER AL1608MP(1A) PACKAGING_DATE 2016-08-16T00:00:00.000+08:00 GSIN http://epcis.apec.org/ns/bt/gsin/95558611080177698
事件 2	聚合　开始	发生时间 2016-10-07 09:00:00 记录时间 2016-10-14 03:54:30	上级 ID urn:epc:id:sscc:955586110.16090007 产品电子代码 sgtin	地点 sgln:95541003676.8.0查看	步骤 bizstep:packing 扩展 EXPIRY_DATE 2018-08-15T00:00:00.000+08:00

Product Information

Certification Information

Tracking Details

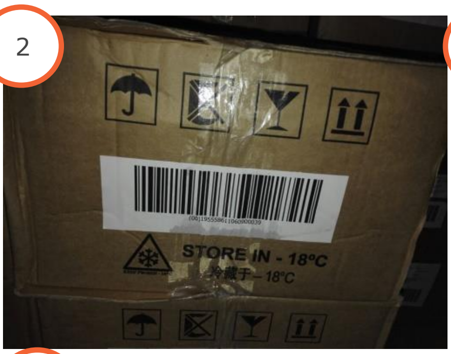


The overview movement and route of the shipment plotted using the GLN and the GPS coordinate information.

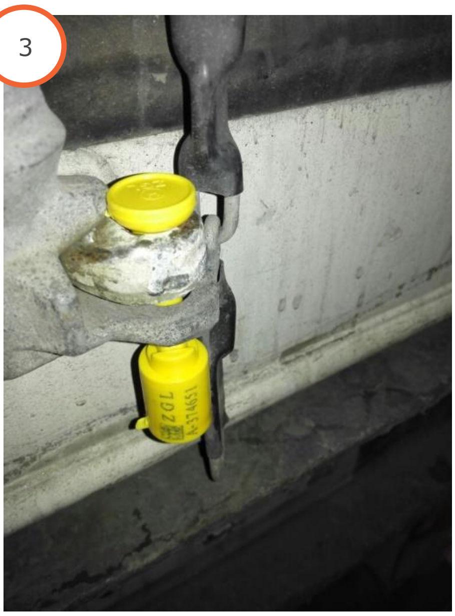
Implementation Photos

1

2



3



4

5

Picture 1 : The carton boxes loaded into the cold chain truck.

Picture 2 : The carton box with logistics label attached.

Picture 3 : The container seal used to ensure the container had not been tampered throughout the shipment.

Picture 4 : The carton boxes loaded onto the cold chain truck and ready to be transported to the sea terminal.

Picture 5 : The carton boxes loaded onto the container.

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Achievements and Results

i. KPI Sets

KPI Metrics	Performance Attribute	Definition	Base Line	Objective
Real Time Package Tracking	Visibility (Traceability)	- Allocate identifier to each individual item and logistics unit using SGTIN and SSCC. - Identify the same shipment batches using GSIN. - Location of the capture point defined by using the GLN. - Transportation and asset used across the supply chain defined using GIAI.	40%	100%
Compliance	Efficiency (Time & Cost)	Facilitates the shipment clearance at the custom with faster clearance and avoid detention of the shipment with cost involved.	Time delays due to shipment detention and incomplete documentation.	0% shipment detention & 100% documentation compliance.
	Integrity (Authenticity)	Fulfil and improve the cross-border trade facilities by providing the necessary digital documentation and certification.	Shipment detention occasionally	0 shipment detention at custom.
	Visibility (Information)	To provide the information of the products to the custom and port authority for recognition and safety inspection.	Information and documentation is insufficient.	Full information and documentation in placed.
Data Accuracy, Completion and Consistency	Innovation (Data Analytics)	EPCIS platform to capture the necessary data and provide accurate and consistent information to the stakeholders and consumers for data analysis and validation.	Manual data capture and retrieval.	Real Time data capture and retrieval. Increased the visibility by 60%.
Responsiveness in Authentication & Product Recall	Integrity (Authenticity)	Product authentication by using the EPCIS Platform to retrieve the information of the product using the SGTIN. Each scan on the product will be recorded and sent to the platform for further analysis.	Not Available	Provide 100% visibility and information for authentication.
	Innovation (Customer Services)	With the SGTIN identification in placed, product recall can be significantly improved by identify the batch and serial number of the defected products.	Not Available	Provide 100% visibility and information for authentication.
Cold Chain Integrity	Integrity (Quality)	Information of the temperature across the shipment process to be included in the platform for monitoring and to ensure the quality of the delivered products.	Manual temperature record and verification	Temperature to be recorded in the EPCIS platform for verification.
Platform Collaboration and Data Exchange	Efficiency (Time)	Increase the time and effort to check on a particular status and information of the products received and delivered.	Not Available	Real Time data capture and retrieval.
	Visibility (Traceability)	To allow better tracking and visibility to the stakeholders on the products movement by providing real time information of the shipment.	Not Available	Real Time data capture and retrieval.
	Innovation (Customer Services)	To allow consumer to obtain the trusted information of the products by exchanging information over the EPCIS platform for cross border imported products.	Not Available	Real Time data capture and retrieval.

Summary & Conclusion

This pilot project has successfully demonstrated that the possibility of cross-border trading traceability can be achieved by using the GS1 standards supported by the EPCIS platform. The result of the pilot has also indicated the significant improvement in the overall supply chain performance.

- Visibility
    1. With real time package tracking, each individual item can be easily located and identified throughout the process. Prior to GDS implementation, manual tracking (using email and phone with data recorded on paper) required at least half a day to retrieve the information and status of the package upon request. The overall visibility of the package tracking is only around 40% where the information can be only obtained when the package arrived at certain points in the supply chain.
    2. With the data captured using GS1 keys such as SSCC and GLN at different points, the status and data of a package was made available in real time upon data capture including the event details like location, shipment details, time of capture and captured event. Hence, it increased the package tracking visibility to 100%.
    3. The product information of the items or products shipped are also uploaded onto the platform to made available to the custom and port authority for clearance and safety inspection, including the certification details, production details and necessary required documents directly from the digital copy on the platform by a single scan on the barcode (note that customs and border authority in the end did not partake in pilot project).
    4. By placing all the necessary documents on the digital platform, it ensure the full information and documents are in-placed. This can be compared to the previous way of dealing with the documents where each time the custom asked for the missing documentation, it took time for the exporter to resubmit the document and this was being done with different standards of recognition from different ports; due to this there was always a problem of insufficient or non-recognized documents.
    5. Stakeholders across the supply chain would have a better and continuous tracking and data exchange on the product movement.

- Efficiency
    1. The pilot has proven the improvement in terms and costs by increasing the efficiency speeding up the custom clearance to avoid container detention and incomplete documentation hold back that would incur added cost to the exporter.
    2. The time and effort to check on the particular status and information on the products was also improved as it was in real time.
    3. For example, a shipment that would normally take 1 week for custom clearance would be further delay for another week because of a simple documentation error and for the exporter to correct the problem. This can be avoided by leveraging the digital documentation made available via the platform, hence this saves on the detention charges and close to 50% of the time for clearance.

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- Integrity
    1. The full documentation that met the requirement from multiple ports might increase the compliance of each shipment to any ports involved and ensure the authenticity of the shipped items.
    2. Each scan of the individual barcode will be recorded into the EPCIS platform including the SGTIN to provide the information of the scan of a specific item and trigger the alert of possible fraud/counterfeiting activities if necessary to the brand owner for further analysis.
    3. The temperature recorded across the supply chain would also be captured into the EPCIS data exchange for monitoring and to ensure the quality of the delivered products.

- Innovation
    1. Transforming from the conventional method of manual recording of data to the digital EPCIS platform, using the GS1 Tag Standards demonstrated a significant efficiency gain by capturing the data to a shared cloud platform.
    2. The information captured by the platform has a full set of data collected from one end to another end hence it opens the possibility of performing advance analysis and data analytics by the stakeholders to know more about the event.
    3. The product information made available to the consumer is valuable information that can be used to authenticate the products purchased and to ensure the products are safe to be consumed.
    4. Product owners benefit from the data captured and the algorithm of the system to trigger an alert to any condition of possible risk of their products enables them to take necessary action to reduce the wastage and losses.
    5. The communication between the stake holders is more effective as all the stakeholders are using and performing actions on platforms using the same standards.
    6. Product recall process can be significantly improved by identifying the batch and serial number of the defect products.

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PIC : Dato' Paul Mak
Position : Group CEO/Director
Mobile : +6012-3835510
Email : *paulmak@citraevolusi.com*

Customer (Hong Kong)
Durian BB Limited
PIC : Mr KK Yuen
Position : Director
Contact : +8526339 8144
Email : *kakui.yuen@gmail.com*

Customer (China)
Shenzhen Turboice Trade Business
PIC: Mr Pen Cheng
Position : Director
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