DCH Logistics Company Limited
大昌行物流有限公司

Delivering safe food products with RFID-based cold chain management

RFID 冷凍鏈管理系統　為客戶送上安全食品

大昌行物流
DCH LOGISTICS

About the Company 公司簡介

DCH Logistics provides one-stop logistics services to international branding clients throughout Hong Kong, Macau and Mainland China, offering a wide spectrum of professional services in supply chain management, sourcing, modern warehousing system, multi-temperature storage (ambient, air-conditioned, chilled and frozen), repackaging, freight forwarding, goods consolidation and distribution. DCH Logistics is particularly specialized in food and cold chain management as well as related consultancy services.

大昌行物流為香港、澳門及中國內地的國際品牌客戶提供一站式物流服務，其專業服務範圍廣泛，包括供應鏈管理、物料採購、現代倉存系統、多功能溫度倉存（包括常溫、恆溫及冷凍倉儲）、加工包裝、貨運代理、集運併櫃及運輸配送等，尤其精於食品和冷凍鏈管理以及相關的顧問服務。

GS1 standards used

- Global Trade Item Number (GTIN)
- Global Location Number (GLN)
- Serial Shipping Container Code (SSCC)
- Global Individual Asset Identifier (GIAI)
- Electronic Product Code Information Services (EPCIS)

應用的 GS1 標準

- 全球貿易貨品編碼
- 全球位置編碼
- 貨運容器序號
- 全球個體資產識別碼
- 產品電子代碼訊息服務

Solution(s) applied

- GS1 Global Traceability Standards (GTS) / Global Traceability Conformance (GTC)

- ezTRACK™ 蹤橫網™

推行方案/服務

- GS1 全球追溯標準 / 全球可追溯性準則

蹤橫網
e TRACK
Built on EPCIS

Much is at stake and the challenge is enormous. DCH Logistics is firmly committed to offering the best possible logistics service to our customers. When it comes to food, particularly temperature sensitive food products, safety is always our top priority; there is no question about our strong commitment to consumer safety and brand integrity.

「我們面對的挑戰非常艱鉅。大昌行物流矢志為客戶提供最優質的物流服務。每當須要處理食品，尤其是對溫度變化敏感的食品時，我們最關注的永遠是安全問題。本公司守護消費者安全及品牌誠信 的決心無庸置疑。」

Mr. David Kuk,
Managing Director
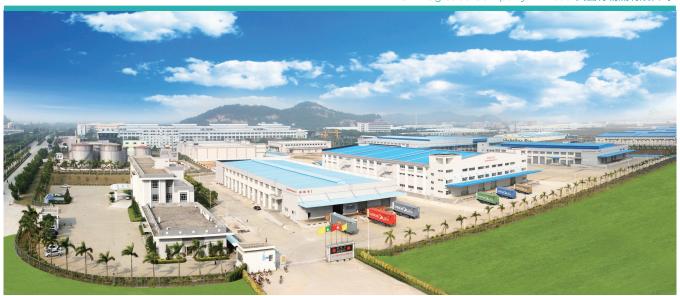董事總經理 谷大衛先生

Challenge

The rapid expansion of international trading and modern food supply chain is instrumental in bringing to consumers the benefit of a wider choice of more diversified, lower-cost and convenient food. The accelerated growth in globalised food supply has nonetheless brought with it hidden food safety risks, requiring advanced global supply chain management of industry stakeholders to ensure product quality and consumer health and safety. This is of special crucial importance to Hong Kong where over 90% of the food is imported from abroad.

Further, the risks associated with temperature sensitive food products demand even higher requirements on storage facilities and shipment arrangements. Any incident or improper temperature control at any point of the entire supply chain will not only ruin the quality of the products but also pose harm to consumers' health and the brand integrity of the business.

挑戰

國際貿易及現代食品供應鏈的迅速拓展，令消費者因而享有更多元化、廉宜及方便的食品選擇。然而，全球化食品供應系統急速擴張的背後，其實隱藏著食品安全風險，業界持份者必須擁有比以往更完善的全球供應鏈管理技巧，方能確保產品質素，保障消費者的健康和安全。香港超過九成食品均由外地進口，因此全球供應鏈管理對本港更形關鍵。

對溫度變化較敏感的食品所帶來的風險，令社會各界對倉存設備及貨運安排的要求更加嚴格。萬一供應鏈中任何一點發生意外，或者溫度未獲適當監控，不但會對產品質素構成損壞，還會危害消費者健康，損害企業的品牌誠信。

Solution

DCH turned to GS1 Hong Kong for its RFID-based cold chain management. Powered by ezTRACK™, an EPCIS standard-based globalized track and trace platform, the system enables full visibility of goods and information along the entire supply chain - from the production floor and warehouse through to logistics down to the retail shops. At each of the critical logistics point, with the RFID sensors installed, temperature and humidity can be continuously monitored, and the information uploaded to ezTRACK™ for access by different concerned parties.

DCH conducted a project applying the solution in cross-border shipment of fresh fruit (grapefruit) during June and August 2015 – on the trade route from South Africa to Shenzhen.

As the first step, the fruit was packed into pallets (numbered by SSCC) and then loaded into a container (numbered by GIAI). Cold chain RFID tags (numbered by GIAI) were installed in the container before it headed to Yantian Port, Shenzhen. After arriving at the destination, the pallets were unloaded and moved into a DCH's warehouse in Yantian together with the RFID tags. Some pallets with the RFID tags were later loaded into a truck (numbered by GIAI) bound for the retail site. With the RFID tags present along the entire supply chain, DCH was able to obtain detailed, compressive data on temperature information related to specific shipments, significantly upgrading its capabilities to ensure product quality and food safety.

As a possible next step, initiates on consumer engagement could be further explored with the assistance of GS1 Hong Kong solutions and services, with a view to boosting brand image and building consumer loyalty by enabling consumers' access to supply chain information e.g. temperature.

解決方案

大昌行決定採用香港貨品編碼協會的解決方案，設立以無線射頻識別（RFID）為基礎的冷凍鏈管理系統。系統建基於以產品電子代碼訊息服務（EPCIS）標準為本的「蹤橫網™」全球追蹤及追溯平台，令整個供應鏈流程全面透明化，從最初的生產間和倉庫，直至進入物流程序，到最後的零售商店，貨物及資訊的動向皆可一目了然。每個重要的物流點均安裝了 RFID 感應器，不斷監察溫度及濕度，並將資訊上傳至「蹤橫網™」，方便相關持份者查閱。

2015年6月至8月期間，大昌行於南非至深圳的新鮮水果（西柚）跨境貨運路線啟用了上述解決方案。

水果先被放入貨盤（已編配貨運容器序號），繼而裝進貨櫃（已編配全球個體資產識別碼）。運送往深圳鹽田港之前，貨櫃亦已貼上冷凍鏈無線射頻識別標籤（已編配全球個體資產識別碼）。在貨櫃送抵目的地後，便會把貨盤卸下，而卸下的貨盤將與無線射頻識別標籤一併轉移至鹽田區的大昌行倉庫。然後，部分貨盤將連同無線射頻識別標籤被裝上貨車（已編配全球個體資產識別碼），送往零售地點。無線射頻識別標籤在整個供應鏈流程中均附於貨物上，大昌行因而可獲得特定貨物的詳細和經壓縮的溫度數據，大幅提升其保障產品質素及食品安全的能力。

在香港貨品編碼協會的解決方案及服務的幫助下，大昌行未來還可能推出進一步的顧客連繫措施，讓消費者可以取得諸如溫度等供應鏈資訊，從而改善大昌行的品牌形象，並建立客戶忠誠度。

"Above all, with this advanced RFID-based system on cold chain management, it gives us the needed assurance we seek to ensure the products we delivered are safe and sound. The new system has also uplifted the positioning of the company as a pioneer value-adding logistics service provider." Kuk adds.

谷大衛先生亦指：「最重要的是，這套先進的RFID冷凍鏈管理系統為我們提供所需要的保障，讓我們得以確保所運送產品的安全和質素。新系統同時提高了本公司的定位，令我們成為 提供增值物流服務的先驅。」

Benefits

With enhanced traceability and visibility achieved by RFID-based cold chain management and ezTRACK™, DCH can readily monitor and detect any irregularities that may have a deleterious effect on the quality and safety of the products. Specifically DCH can now:

1. Obtain accurate temperature records to identify any damage or compromise to the products, greatly enhancing consumer safety.

2. Record information in electronic forms, reducing human cost and improving information exchange efficiency.

3. Connect various stakeholders along the supply chain seamlessly and minimise time delay during the shipment process.

4. Achieve full supply chain visibility, providing confidence to both its upstream and downstream trading partners.

效益

以 RFID 為基礎的冷凍鏈管理方案以及「蹤橫網™」平台成功 提升供應鏈內的可追溯性及透明度，大昌行因而可以輕易監察 並找出任何可能影響產品質素及安全的問題。這些解決方案讓 大昌行可以：

1. 獲取準確的溫度記錄，以發現產品的任何損壞或其他問題， 保障消費者安全。

2. 以電子形式記錄資訊，節省人力成本，並改善資訊交流的效率。

3. 在供應鏈不同持份者間建立無縫連繫，把貨運延誤減至最少。

4. 達到供應鏈全面透明化，鞏固上游及下游貿易夥伴的信心。