



EFFICIENCY



VISIBILITY

BUSINESS CASEBOOK 2010

FINDING THE EDGE THROUGH
GLOBAL STANDARDS AND LOCAL SOLUTIONS



**QUALITY &
SAFETY**

FINDING THE EDGE THROUGH GLOBAL STANDARDS AND LOCAL SOLUTIONS

全球化標準配合本地方案
為您創優增值



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ABOUT GS1 HONG KONG

香港貨品編碼協會



- Founded in 1989, GS1 Hong Kong is a not-for-profit industry support organization, committed to enhancing Hong Kong enterprises' competitiveness through the provision of global supply chain standards, technology and practices underpinned by GS1 philosophy.

As GS1's local chapter, GS1 Hong Kong is the only organization who is authorized to issue and administer GS1 system of standards, including barcode, B2B e-commerce services, Electronic Product Code™/Radio Frequency Identification (EPC/RFID) and Global Data Synchronization (GDS). The organization hosts a variety of conferences and training courses to facilitate knowledge transfer for SCM standards, principles, methodologies and strategies.

The GS1 community has over one million corporate members spanning over 100 countries and more than 20 industries around the world.

For more information about GS1 Hong Kong, please visit www.gs1hk.org.

- 香港貨品編碼協會 (GS1 Hong Kong) 於一九八九年成立，是一個非牟利的工商業界支援組織，以推廣及支援一系列以GS1標準為基礎的供應鏈管理最佳實務及應用技術為己任，協助企業在營運效率上尋求突破，提高在國際市場的競爭能力。

作為GS1國際組織的本地分會，香港貨品編碼協會是唯一獲認可簽發及管理GS1識別碼的機構，包括條碼、商業對商業 (B2B) 商貿電子服務、產品電子代碼/無線射頻識別、以及GS1全球數據同步。此外，協會更舉辦一系列培訓課程，促進業界對推行全球供應鏈管理標準的知識傳授，分享技術和最佳實務。

GS1組織現時擁有逾100萬個企業會員，遍佈全球100個國家，覆蓋20多個行業。

有關更多香港貨品編碼協會詳情，可瀏覽本會網頁 www.gs1hk.org。

FOREWORD 序

GS1 Hong Kong plays a leading role in the Hong Kong business community. As the local chapter of a global not-for-profit organization that develops and promotes global supply chain standards, we are committed to providing a wide range of business support services and transferring our knowledge to help more than 6,000 local enterprises achieve supply chain excellence. In *Finding the edge through global standards and local solutions*, we have recorded 12 of the supply chain management projects that GS1 has been involved in 2009 and 2010. Spanning a wide range of industry sectors, including retailing, food and produce, healthcare and logistics and transportation, these case studies provide insight into how we worked with enterprises to increase supply chain visibility, optimize operational efficiency, and uplift product quality and safety.

Local enterprises that help to facilitate trade between Mainland China and the rest of the world face enormous challenges in today's global marketplace, including the growing complexity of international trade relationships and ever-increasing demands of end-consumers. By sharing our knowledge here in *Finding the edge through global standards and local solutions* about our cutting-edge supply chain solutions and applications of the GS1 system of global standards, including the GS1 BarCode, B2B e-commerce services, Electronic Product Code™/Radio Frequency Identification (EPC/RFID) and GS1 Global Data Synchronization Network (GDSN), our mission is to help local enterprises to meet these challenges and fulfill their potential as globally competitive businesses.

Anna Lin

Chief Executive, GS1 Hong Kong



香港貨品編碼協會乃GS1的香港分會，負責開發及推廣全球供應鏈標準之非牟利組織，一直積極推動本地工商業的發展。本會致力透過一系列廣泛的工商業支援服務以及知識傳授的活動，協助本地超過6,000家企業達致最佳供應鏈效率。本特刊「全球化標準配合本地方案 為您創優增值」記錄了GS1於2009年及2010年參與的12個供應鏈管理項目，涵蓋的界別包括零售、食品及農產品、醫療護理以及物流及運輸業。上述的案例能讓各界對本會如何協助企業增加供應鏈透明度、優化運作效率、及提升產品的質量及安全度有更深入的了解。

在現今的環球市場，國際貿易關係愈趨複雜，消費者的需求亦與日俱增，本地企業在促進中國內地與世界各國的貿易時面對極大的挑戰。透過「全球化標準配合本地方案 為您創優增值」特刊與各界分享採用GS1全球標準並具卓越效能的供應鏈解決方案及應用技術，包括GS1條碼、商業對商業電子商貿服務、產品電子代碼/無線射頻識別，以及GS1全球數據同步網絡。本會矢志協助本地企業面對以上的挑戰、及發揮潛力成為具全球競爭力的企業。

林潔貽

香港貨品編碼協會總裁

"GS1 Hong Kong's ezTRADE is assisting to reduce our administrative costs and make our purchasing procedures faster and more efficient, because the working process is extensively streamlined between Nuance-Watson and our global suppliers. The documents are exchanged in a simple, accurate, and secure way," said Mr. Andrew Shek, Senior Manager, Information Technology Department, Nuance-Watson (HK) Limited.

Nuance-Watson (HK) Limited 資訊科技部高級經理石世邦先生說：「使用了香港貨品編碼協會的通商易服務後，公司與全球供應商的連繫大幅度地簡化。除了有助減低行政成本，令採購流程變得更快更有效率外，傳遞商業文件的方式現在亦既簡單又安全準確。」



Automating procurement across multiple time zones with a global standard based e-commerce solution

透過以國際標準為基礎的電子商貿方案執行跨時區的自動化採購流程

NUANCE-WATSON (HK) LIMITED



GS1 STANDARDS USED
應用的GS1標準

- **GTIN (Global Trade Item Number)**
國際貨品編碼
- **GLN (Global Location Number)**
國際位置編碼
- **GS1 EANCOM®**
(GS1 eCom Communication standard based on UN/EDIFACT)
GS1 EANCOM® (以UN/EDIFACT為基礎的GS1電子數據聯通標準)



SOLUTION APPLIED
推行方案

- **ezTRADE¹**
通商易



BUSINESS BENEFIT
商業效益

- **Lowering administrative costs and enabling faster inventory replenishment**
降低行政成本，實現更快的補貨程序



ULTIMATE GOAL 最終目標

Optimize operational efficiency
優化運作效率

Remarks:

¹ ezTRADE: An industry-wide B2B platform facilitating electronic transaction messaging via EDI and Web to support electronic ordering, invoicing and shipment notices.

通商易：一個經由EDI及互聯網以支援電子訂單、發票、貨運通知的跨業界商業對商業電子數據交換平台。

BACKGROUND

Nuance-Watson (HK) Limited is a joint venture between the A.S. Watson Group and The Nuance Group, a major global market leader in travel retail. The company began its operations at Hong Kong International Airport (HKIA) in July 1998 and is the leading retail operator at HKIA. It manages more than 40 duty free outlets, offering branded fashion clothing and accessories, fine jewelry and world-class timepieces, consumer electronics, personal care products, premium food products and souvenirs, and a wealth of wonderful perfumes and cosmetics. Recently, Nuance-Watson has expanded its operations outside Hong Kong to places including Macau and Zhuhai.



CHALLENGES

"As a world-class travel retail operator, we offer a substantial number of renowned perfumes and cosmetics products in our outlets. These products are delivered by brands from around the world, including leading brand owners such as LVMH, Estée Lauder and L'Oreal," said Ms. Joann Chung, Controller, Merchandising Planning, Supply Chain & Special Projects, Nuance-Watson (HK) Limited.

Our suppliers and brands are located all over the world. Collaborating with multiple suppliers, data entry and documentation checking for purchase orders and invoices required significant manpower and investments. Management of procedures are further complicated as our suppliers and respective regional offices are located in different time zones.

SOLUTIONS

ezTRADE was used in traditional retail industry between the local suppliers and supermarkets or convenience stores. However, this is not the only case anymore. To assist in resolving the above challenges, Nuance-Watson decided to implement ezTRADE, the standard-based e-commerce solution developed by GS1 Hong Kong. With ezTRADE since 2009, all purchase orders, dispatch advice and invoices exchanged between Nuance-Watson offices and its suppliers adopted the standardized GS1 EANCOM® Electronic Data Interchange (EDI) format and are automatically processed through the company's Hong Kong Office for central processing.

BENEFITS

Cost savings and faster procurement

The deployment of ezTRADE with GS1 EANCOM® EDI allowed the company to initiate the automation and streamlined the purchase order and invoice checking procedures.

"The benefits of this solution will reduce our administrative costs and make our purchasing procedures faster and more efficient, because working process is extensively streamlined between Nuance-Watson and our global suppliers. The documents are exchanged in a simple, accurate, and secure way," said Mr. Andrew Shek, Senior Manager, Information Technology Department, Nuance-Watson (HK) Limited.

Region-wide rollout to maximize ROI

With the project proving capable of generating a return on investment by lowering administrative costs and raising operational efficiency, the company plans to expand the scope of the initiative. "We're planning to roll out this solution to other APAC operations and their own country suppliers," Ms. Chung concluded. Ultimately, by enhancing administrative processes, ezTRADE will help Nuance-Watson maintain its competitiveness and world-class retail operation.

背景

Nuance-Watson (HK) Limited 由屈臣氏集團及全球首屈一指的機場零售商 The Nuance Group 合資經營，於1998年7月在香港國際機場正式開業，乃香港國際機場最具規模之零售商。該公司旗下逾40間免稅店，提供多元化的優質商品，由名牌時裝與配飾、影音及電子產品、珠寶首飾及名貴腕錶、個人護理產品，以至優質包裝食品與紀念品、世界名牌香水與化妝品等應有盡有。最近，Nuance-Watson 之業務已擴展至香港以外的地方，包括澳門和珠海。



挑戰

Nuance-Watson (HK) Limited 採購策劃及供應系統暨特殊項目總監鍾凌茜小姐表示：「我們是世界級的機場零售營運商，店鋪出售的名牌香水和化妝品品牌多不勝數。貨品來自全球多間供應商，包括知名品牌路易·威登 (LVMH)、雅詩蘭黛 (Estée Lauder) 及歐萊雅 (L'Oreal)。」

Nuance-Watson 的供應商及品牌均來自世界各地。由於與多個供應商合作，需要就訂單及發票輸入數據並核對文件，此舉耗費大量人力及資源分配。由於供應商及區域辦事處分佈於不同的時區，採購程序管理顯得更為繁複。

方案

以往，通商易服務主要被傳統零售業用作與本地供應商、超市或便利店建立商務連繫。今天，通商易的服務範圍已大大擴闊。Nuance-Watson 為了解決上述的問題，於2009年使用了由香港貨品編碼協會開發，以標準為基礎的電子商貿解決方案。透過通商易，Nuance-Watson 與各國供應商之間的購貨訂單、發貨通知及發票文件往來，均採用標準化的 GS1 EANCOM® 電子數據聯通 (EDI) 格式自動傳遞，並經香港辦事處作中央式處理。

效益

節省成本 加快採購速度

採用了 GS1 EANCOM® 電子數據聯通的通商易服務後，Nuance-Watson 處理採購訂單與核對發票的程序開始自動及簡化。



Nuance-Watson (HK) Limited 資訊科技部高級經理石世邦先生說：「使用了此解決方案後，公司與全球供應商的連繫大幅度地簡化。除減低了行政成本，採購流程變得更快更有效率外，傳遞商業文件的方式現在既簡單亦安全準確。」

進行地區性推廣 大幅提升投資回報

基於此項目有效減低行政成本及提高運作效率，帶來可觀的投資回報，該公司遂計劃進行積極擴展。鍾凌茜小姐總結說：「我們正計劃利用此解決方案，改善公司在其他亞太地區的運作，協助它們與當地的供應商建立更緊密的連繫。」通商易改善了該公司的行政程序，將有助 Nuance-Watson 維持競爭力及保持世界級的零售業運作。



기능성牛乳
機能性牛乳

롯데가 만든
안전한 프랜시스
Wiseselect
WISEREST
SAVE
30일간의 안전

"The new system has significantly enhanced consumer safety in Korea by effectively and efficiently blocking the sale of unsafe products as quickly as 30 minutes after detection."

「這個新系統，只需短短30分鐘便能有效阻截不安全產品流入市場，大大提高韓國消費者的安全。」

est 110
410 절약
2,110
1,700

롯데카
Happy together

아아

Improving consumer safety by blocking the sale of unsafe products with the use of GS1 BarCodes

以GS1條碼阻截不安全產品流入
有效保障消費者

GS1 KOREA WITH KOREAN GOVERNMENT AND MAJOR RETAILERS GS1韓國分會與韓國政府以及主要零售商



GS1 STANDARD USED
應用的GS1標準

- **GTIN (Global Trade Item Number)**
國際貨品編碼



SOLUTION APPLIED
推行方案

- **Unsafe Products Screening System with the use of KorEANnet**
大韓商會 KorEANnet 網站支援的
不安全產品自動阻隔系統



BUSINESS BENEFIT
商業效益

- **Shorten the time in stopping the sale of unsafe products and increase customer buying confidence**
遏止不安全產品銷售
縮減阻截時間
加強消費者購物信心



ULTIMATE GOAL 最終目標

Uplift product quality and safety
提升產品質量及安全度

BACKGROUND

In Korea, as well as throughout the world, there has been growing concern over consumer product safety, especially with respect to food products, toys and other items destined for use by children. Both government and industry in Korea have been making increased efforts to protect consumers from unsafe products by tightening regulations.



CHALLENGES

Three Korean government bodies perform sample inspections to ensure consumer safety: the Korean Agency for Technology and Standards (KATS) under the Ministry of Knowledge Economy (MKE) for consumer packaged goods (except food); the Korea Food & Drug Administration (KFDA) for food and drugs; and the Ministry of Environment (ME) for toys and other products for kids. These organizations post information about unsafe products on their websites, make it public through mass media, and send

notifications directly to retailers to block the sale of unsafe products to consumers.

However, the performance of these efforts was not satisfactory, primarily because sharing of information about unsafe products was ineffective and inefficient.

SOLUTIONS

In order to improve the situation, GS1 Korea established the Unsafe Products Screening System (UPSS) in cooperation with the relevant government bodies (MKE, KATS, KFDA, and ME) and leading retailers. The system is designed to enhance consumer safety by using the GS1 System of standards to effectively and efficiently share information about unsafe products. Five major retailers participated in the project: Shinsegae E-MART, LOTTE Mart, the Hyundai Department Store chain, the Bokwang FamilyMart, and GS Retail. Together these hypermarkets and supermarkets number 8,771 stores and serve 5 million customers per day throughout South Korea.

Under the new UPSS, government bodies communicate information about unsafe products to KorEANnet (the GS1-compliant e-Catalog run by GS1 Korea) as soon as they identify a product safety issue. KorEANnet in turn sends the information to retailers on a real time basis and retailers then block the sale of those products to consumers at their point-of-sale (POS) terminals. Throughout the information sharing process, the GS1 GTIN (Global Trade Item Number) is used as the product identifier.

BENEFITS

GS1 Korea and its partners launched the UPSS project in February 2009 and system development was done from May to September. The UPSS has been successfully operating since October 2009, covering packaged foods, products for kids, and electrical appliances.

To Retailers

The UPSS has significantly enhanced consumer safety in Korea by effectively and efficiently blocking the sale of unsafe products. Before the system was put in place, it took at least 4 hours to stop selling unsafe products; thanks to UPSS that now happens as quickly as within 30 minutes. This, in turn, has improved consumer confidence in participating retailers.

To Consumers

Information about the unsafe products recalled by suppliers can be shared through the system and its sale will be blocked at the Point-of-sale terminals in the storefront. With the UPSS, consumers will no longer worry about purchasing unsafe products from the retailers participating in this project.

背景

韓國以至世界各地日趨重視消費品安全性，當中對食品、玩具和其他兒童用品的安全性問題尤為注視。為此，韓國政府以及當地業界不斷完善安全監管體系及加強法規，讓消費者免受不安全產品的影響。

挑戰

為保障消費者的安全，韓國政府內三個部門正負責對產品進行抽樣檢查：韓國知識經濟部 (MKE) 轄下的韓國科技標準局 (KATS) 負責檢查預先包裝消費品 (食品除外)；韓國食品藥物管理局 (KFDA) 負責檢查食品及藥物；環境部 (ME) 則負責檢查玩具及兒童用品。上述部門把不安全產品的資訊刊載於其網站，並透過大眾傳播媒體向外發放有關資訊，以及直接向零售商發出通知，阻止他們銷售不安全產品予消費者。

然而，有關措施的成效未如理想，主要原因是由於不安全產品資訊傳遞遲緩、欠缺效率。

方案

為了改善這種情況，GS1 韓國分會與相關政府部門 (MKE, KATS, KFDA, ME) 及五家主要零售商攜手合作，共同研發不安全產品自動阻隔系統 (UPSS)，旨在透過 GS1 標準系統有效地發放及擷取不安全產品的資訊，藉以提高消費者的安全。參與該項目的零售商，包括新世界易買得、樂天超市、現代百貨連鎖店、普光全家及 GS 零售。此等大型綜合超市及超級市場共有 8,771 家，每天為南韓的 500 萬名客戶提供服務。

在新的不安全產品自動阻隔系統下，政府部門一旦發現產品存在安全隱患，便會把資訊傳輸至大韓商會 KorEANnet 網站 (由 GS1 韓國分會管轄、符合 GS1 標準的電子目錄)。KorEANnet 隨即以實時方式將有關資訊發給零售商，零售商可即時阻截有關產品在其銷售點銷售。在整個資訊分享的過程中，GS1 國際貨品編碼被用作產品標識。

效益

GS1 韓國分會及其合作夥伴於 2009 年 2 月宣布推出不安全產品自動阻隔系統，並在 5 月至 9 月間進行系統開發。不安全產品自動阻隔系統於 2009 年 10 月開始運作，監控範圍包括預先包裝食品、兒童商品及電器用品。

對零售商的效益

不安全產品自動阻隔系統能有效阻截不安全產品流入市面，大大提升韓國消費者的安全。在此系統未開始運作前，有關方面至少需要四小時才可阻截出售不安全產品；在不安全產品自動阻隔系統的支援下，該過程在 30 分鐘內便可完成，有效提高消費者對參與該項目的零售商的信心。

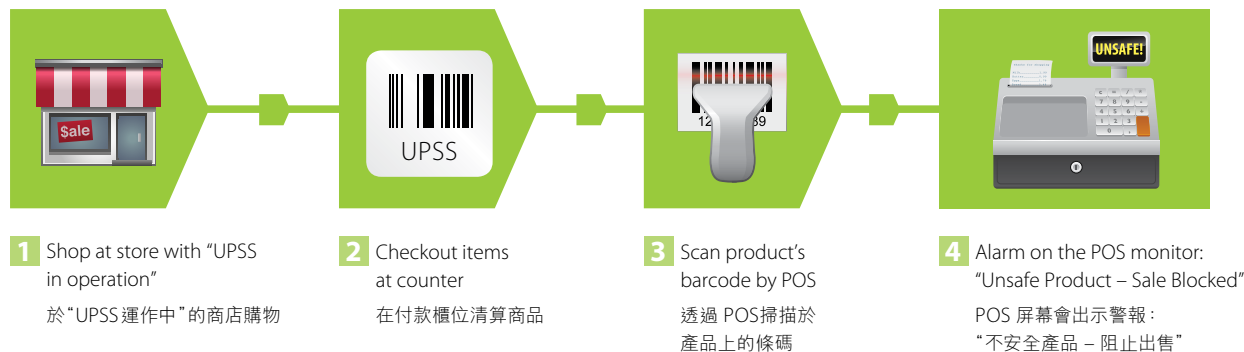
對消費者的效益

有關供應商回收不安全產品的資訊，可以通過該系統與有關方面作資訊分享，藉以阻截銷售點出售有關產品。不安全產品自動阻隔系統給予消費者信心，讓他們毋須擔心會從參與該項目的零售商購入不安全的產品。



PROCESS OF UNSAFE PRODUCTS SCREENING SYSTEM

不安全產品自動阻隔系統流程





“Innovation in extended packaging is creating a direct relationship between the brand or retailer and the consumer, by offering the consumer trusted product information, discount offers and instructions for use.”

「產品延伸性包裝為消費者提供可靠的產品資訊，購物優惠及使用說明，並透過這種創新的推廣方式，為消費者、零售商或品牌持有人成功創造出更直接的連繫。」



Revolutionizing the retail experience with interactive mobile applications

以互動的流動電話應用 締造嶄新的零售體驗

GS1 FRANCE WITH MARCHÉ FRANPRIX AND CARREFOUR

GS1法國分會、MARCHÉ FRANPRIX及家樂福



GS1 STANDARDS USED
應用的GS1標準

- **GTIN (Global Trade Item Number)**
國際貨品編碼
- **EAN/UPC BarCode**
EAN/UPC 條碼
- **GS1 DataMatrix BarCode**
GS1 DataMatrix 條碼



SOLUTIONS APPLIED
推行方案

- **CodeOnLine¹**
- **GEPIR (Global Electronic Party Information Registry)²**
全球電子公司資料庫 (GEPIR)



BUSINESS BENEFIT
商業效益

- **Providing new marketing capabilities through extended packaging to help enterprises reach out directly to consumers**
以產品延伸性包裝的嶄新推廣形式協助企業與消費者建立更直接的連繫



ULTIMATE GOAL 最終目標

Uplift product quality and safety
提升產品質量及安全度

Remarks:

¹ CodeOnLine: A cross-platform barcode reading software application for smart phones.

CodeOnLine : 一個適用於智能手機的跨平台閱讀條碼程式。

² GEPIR: A global online directory of suppliers, with information of over 1 million companies worldwide.

全球電子公司資料庫 : 提供全球逾一百萬家供應商資訊的網上資料庫。

BACKGROUND

With over four billion users in the world, mobile communications devices are central to how businesses and consumers interact today. Using built-in cameras and access to mobile data services, today's smart phones and other mobile communications devices can be used by consumers to scan a product's barcode to access extended packaging from a trusted source of information, such as the brand owner itself. In this way, these technologies are bringing the consumers and brands closer.

Extended packaging is an emerging area of innovation in the mobile services space that can enable richer interaction between consumers and brands. Essentially, extended packaging services provide consumers with access to trusted product information and related services via mobile communications devices.

CHALLENGES

Consumers have changed their behavior and expectations with regard to shopping and brand loyalty. The move to the self-service format was a massive cultural change. For consumers, self-service means choice, convenience and value. However, it also involves learning how to find their way around a new environment. Over the years, retailers have learnt how to design the shopping environment to better meet shoppers' needs and to drive sales. But to grow business, retailers need to continue

to look for innovative ways to engage consumers and provide them trusted product information.

SOLUTIONS

CodeOnLine, developed by GS1 France, is a cross-platform barcode reading software application for smart mobile devices, which can be downloaded from Apple's App Store or Google's Android Market. By using the built-in camera on a smart phone to read a barcode, the user can obtain more information about a product than its manufacturers are able to print on the outside of the packaging.

CodeOnLine automatically manages the links between the product barcodes and the information made available by companies for consumers. The information can be accessed by scanning a conventional EAN/UPC barcode or a new generation DataMatrix barcode. CodeOnLine then redirects the user to the brand owner's online resources via the GS1 Global Electronic Party Information Registry (GEPIR), which contains details of more than a million companies that use the GS1 standards.

Marché Franprix deploys CodeOnLine for promotional event

One leading retailer that collaborated with GS1 France on a pilot CodeOnLine project was supermarket chain Marché Franprix during its annual Foire aux Vins or Wine Fair in 2009. Held from September 10 to 20 in 700 stores, the Foire aux Vins is a yearly promotional event that invites customers to discover new and classic wines.

In the 2009 Foire aux Vins, the Marché Franprix supermarket chain wanted to put the emphasis on technology and accessibility by helping customers choose their wine in-store using mobile communications.

Using the CodeOnLine mobile application to take a photograph of the barcode on any of the bottles on display, shoppers were able to access additional information about the product, including a description of the wine, food to serve with the wine, ideal serving temperature, awards or medals, comments from the producer, notes provided by the retailer, and excerpts from professional guides.

Carrefour pilots 2-D barcode on mobile phones since January 2010

Separately, leading international supermarket chain Carrefour included DataMatrix barcodes for items promoted in its 2010 January brochure for consumer electronic products, which was distributed nationwide in France. Consumers could scan the barcodes in the Carrefour promotional catalogue to get more information about the featured products from the web portal. In so doing, the initiative saved space in the catalogue and encouraged consumer interaction. CodeOnLine was downloaded more than 150,000 times and more than 350,000 barcodes were scanned.

BENEFITS

Barcodes: new lease of life

By taking advantage of the new opportunities offered by mobile communications devices, barcodes now have a new lease of life thanks to CodeOnLine. Using a mobile device with

a built-in camera and mobile data services, consumers can access trusted information on any product or any service by photographing the barcode whether at home, in a store or at the office.

The space-free era of packaging

A new space-free era of packaging has arrived. In the future, packaging, leaflets and point of sale materials will no longer need to carry all brand information, as it will be easily accessible by using barcode via mobile data communications.

A new relationship between consumers and brands

Innovation in extended packaging is creating a direct relationship between the brand or retailer and the consumer, by offering the consumer trusted product information, discount offers and instructions for use. The range of possible applications for the technology is impressive.



背景

現時全球已有超過四十億用戶的流動通訊設備，已成為工商界連繫消費者及作出互動的渠道。現今的智能手機和其他流動通訊設備，能透過內置相機和流動數據服務，讓消費者掃描產品的條碼，從可靠的資料來源擷取產品延伸性包裝的資訊，當中包括品牌持有人的詳細資料。此技術成功拉近消費者與品牌之間的距離。

產品延伸性包裝是一項創新的流動通訊應用，能為消費者及品牌創造更緊密的互動。品牌商能透過流動通訊工具為消費者提供可靠的產品資訊及相關的互動服務。

挑戰

消費者的購物習慣、對品牌的期望以及忠誠度已開始發生轉變；現今，自助消費卻成為潮流，這是一個文化上的重大轉變。對消費者來說，自助購物就是代表購物的選擇權、便利和價值。可是，這也意味著消費者必須在新的環境下摸索。一直以來，零售商設法締造更理想的購物環境，一方面滿足消費者的要求，另一方面亦能增加產品銷路。為了業務需要，零售商必須持續地努力創新，與顧客建立更緊密的連繫，並提供更可靠的產品資訊。

方案

由GS1法國分會開發的CodeOnLine，是一個適用於智能手機的跨平台閱讀條碼程式，並可於蘋果App Store或谷歌Android Market下載。用戶可透過智能手機的內置相機閱讀條碼，以擷取印在產品包裝以外的相關產品資料。

CodeOnLine能自動通過產品條碼為企業及顧客提供網絡間的資訊連繫。當用戶掃描傳統的EAN/UPC條碼或新一代的DataMatrix條碼時，CodeOnLine會將用戶轉導到附載全球逾一百萬家使用GS1標準的公司之網上資料庫 - GS1的全球電子公司資料庫(GEPIR)，讓用戶擷取品牌持有人的網上資訊。

Marché Franprix 採用 CodeOnLine 作市場推廣活動

法國知名零售商Marché Franprix與GS1法國分會於2009年攜手推出了一個以CodeOnLine為解決方案的試點項目，在該公司的年度葡萄酒博覽會上展示。此博覽會是該公司的年度推廣活動，於每年的9月10日至20日分別在700家店舖舉行，來自各界的顧客會被邀請到場品嚐新產品和經典葡萄酒。

在2009年度的盛會上，Marché Franprix決定將重點放在技術及輔助功能之上，透過協助顧客利用流動通訊設備在店內揀選葡萄酒。顧客可使用CodeOnLine的流動電話應用程式，拍攝

貼在葡萄酒瓶上的條碼，以擷取更多有關該產品的資訊，包括產品描述、伴酒食品、理想飲用溫度、曾獲獎項、製造商評語，零售商備註、以及專家推介文章摘錄。

家樂福自2010年1月開始試行流動電話二維條碼

國際知名連鎖超市家樂福於2010年1月印製了一本發行全法國的消費電子產品簡介。此推廣目錄展示了多款電子產品，並印上DataMatrix條碼。消費者只須掃描此目錄內的條碼，再透過互聯網便可擷取更多有關該產品的資訊。此舉不但可節省目錄所用的空間，及能製造更多與消費者的互動機會。CodeOnLine已被下載超過15萬次，經掃描的條碼亦超過35萬。

效益

條碼：注入新的動力

CodeOnLine的出現，令條碼從流動通訊中注入新的動力，發揮嶄新的功能。不論身處家中、店舖，還是辦公室之內，消費者只須利用流動電話的內置相機拍下條碼，配合流動數據服務，即可隨時隨地輕易擷取可靠的產品資訊。

節省包裝空間的新世紀

一個毋需任何空間即能提供包裝訊息的時代已經到來。將來，產品包裝、宣傳單張以至設在銷售點的促銷推廣都不須附載有關某品牌的所有資訊，這是由於消費者已經可以使用條碼及透過流動網絡輕易擷取有關的產品資訊。

為品牌與消費者建立新的關係

產品延伸性包裝能為消費者提供可靠的產品資訊、購物優惠及使用說明，並透過這種創新的推廣方式，為消費者、零售商或品牌持有人成功創造出更直接的連繫。事實上，這種技術的應用潛能甚為廣闊。

STEPS OF USING CODEONLINE CODEONLINE 使用程序



1 Install and open CodeOnLine application
安裝及開啟CodeOnLine程式

2 Scan EAN/UPC or DataMatrix barcode on product
掃描於產品上EAN/UPC或DataMatrix條碼

3 Access additional product information and offer
擷取更多產品資訊及優惠



"ezTRACK™ and GENUINE Product Authentication have allowed us to adopt best practices in product authentication and raise customer satisfaction, becoming the best-in-class solution in supply chain management of China's luxury food industry," said Mr. Anthony Cheung, CEO, China Rise International Investments Limited.

中昇國際投資有限公司行政總裁張華英先生表示：「縱橫網™及『正貨』驗證讓我們以最佳實務實踐產品驗證及進一步滿足顧客需求，藉此成為中國高級食品市場中供應鏈管理的最佳方案。」

Beating the counterfeiters with product authentication
and EPC/RFID technology

利用產品驗證結合EPC/RFID技術
打擊偽冒產品

CHINA RISE INTERNATIONAL INVESTMENTS LIMITED 中昇國際投資有限公司



GS1 STANDARDS USED
應用的GS1標準

- **SGTIN (Serialized Global Trade Item Number)**
國際貨品編碼序號
- **GLN (Global Location Number)**
國際位置編碼
- **SSCC (Serial Shipping Container Code)**
貨運容器序號
- **EPC (Electronic Product Code)**
產品電子代碼
- **EPCIS (Electronic Product Code Information Services)**
產品電子代碼資訊服務



SOLUTIONS APPLIED
推行方案

- **ezTRACK™¹**
縱橫網™
- **GENUINE Product Authentication²**
「正貨」驗證



BUSINESS BENEFIT
商業效益

- **Improving customer satisfaction and protecting brand integrity**
提升顧客滿意度 保護品牌形象



ULTIMATE GOAL 最終目標

Uplift product quality and safety
提升產品質量及安全度

Remarks:

¹ ezTRACK™: EPCIS-standard traceability network enabling real-time visibility of goods and information flow from point of manufacturing to point of destination.
縱橫網™: 以EPCIS為標準的追溯網絡, 能提供由生產點至目的點的實時透明度及資訊流。

² GENUINE Product Authentication: A product authentication solution powered by the EPCIS network enabling supply chain e-pedigree visibility.
「正貨」驗證: 一個產品驗證的解決方案, 利用EPCIS網絡提供供應鏈電子系譜透明度。

BACKGROUND

China Rise International Investments Limited (China Rise) was founded in 2000 and manufactures premium ready-to-eat dried abalone and sharks' fin soup products from centralized manufacturing facilities in Mainland China.

CHALLENGES

China Rise's ready-to-eat dried abalone is a premium packaged food delicacy. Because of its high value, its dried abalone product was an attractive target for counterfeiters. The company considered this to be a critical business issue, as consumers would lose confidence in the brand if counterfeiting of its products was not brought under control. "To protect our brand, we needed to find a way to allow consumers to easily authenticate our premium products. We realized we also had to ensure there was transparency throughout our logistics operations to enable



us to closely track inventory movements from our manufacturing facilities through to distribution locations and the storage facilities of retailers," said Mr. Anthony Cheung, CEO, China Rise.

SOLUTIONS

To address the issue, China Rise decided to implement two solutions from GS1 Hong Kong. It deployed an EPC/RFID-based track-and-trace system integrated with EPCIS via GS1 Hong Kong's ezTRACK™ platform, and it attached secure labels with unique serial identification provided by GENUINE Product Authentication to its ready-to-eat dried abalone products.

To ensure the products remain secure in the manufacturing plant and are not stolen and illegally distributed, the status of the GENUINE Product Authentication labels are set to 'Not Available for Sale' prior to shipment. Immediately before stock-out, the EPC-compliant RFID tags on the cartons are read using a RFID handheld reader and the product information and status uploaded to ezTRACK™. The cartons are then marked as authenticated and ready for sale. When the shipments arrive at the retailers' storage facilities, the EPC-compliant RFID tags on the cartons are read to verify the shipment and confirm arrival with the information and status updated on ezTRACK™.

BENEFITS

Combating counterfeiting and protecting brand equity

"The EPC/RFID-based track-and-trace system, along with GS1 Hong Kong's ezTRACK™ platform, allowed us to effectively track shipment movements from the point of manufacturer to the retailers," Mr. Cheung said. This end-to-end visibility along the supply chain, combined with the GENUINE Product Authentication secure labels, provided the company with a powerful anti-counterfeiting solution. In addition, the system provided item-level visibility so each pack of dried abalone could be accounted for in the system's event history.

Protecting brand integrity and building trust with consumers

Consumers these days are increasingly weary of counterfeiting and want to know the source of the food they purchase, especially luxury delicacies. With an accurate track-and-trace system, efficient supply chain management and product authentication, China Rise can now provide consumers with the assurances they want, thus protecting and enhancing its brand integrity. "ezTRACK™ and GENUINE Product Authentication have allowed us to adopt best practices in product authentication and raise customer satisfaction, becoming the best-in-class solution in supply chain management of China's luxury food industry," Mr. Cheung concluded.

背景

中昇國際投資有限公司(中昇國際)於2000年成立，在中國內地以中央廚房模式生產貴價即食乾鮑及即食魚翅湯。

挑戰

中昇國際生產的即食乾鮑為預先包裝食品。由於價格昂貴，成為偽冒商覬覦的對象。中昇國際認為事態嚴重，如偽冒情況未受控制，消費者便會對其產品失去信心。中昇國際行政總裁張華英先生表示：「若要保護我們的品牌，必須讓消費者以簡單的方法驗證我們的優質產品。我們亦了解到，公司必須在物流運作上有足夠的透明度，使我們能夠緊貼追蹤貨品由生產單位運送至分銷點以至到達零售商貨倉的流向。」

方案

為了解決上述的問題，中昇國際決定採用香港貨品編碼協會提供的兩個解決方案。首先，該公司使用了以EPC/RFID技術為基礎的追蹤和追溯系統，並通過香港貨品編碼協會的

縱橫網™平台與產品電子代碼資訊服務進行整合。其次，便是在其即食乾鮑貼上載有個別之識別序號的「正貨」驗證防偽標籤。

為避免貨品在工廠內遭盜取及非法分銷，生產線內貨物的防偽標籤狀況會先設定為「非供發售」。在貨物運出前，員工會以RFID手提讀寫器來讀取紙箱上的EPC/RFID標籤資料，有關資料便會傳送回縱橫網™的數據庫，員工便隨即把紙箱上的防偽標籤狀況更新為「可供發售」，以表示貨物已經驗證。當貨物到達零售商的貨倉後，員工再會讀取紙箱上的EPC/RFID標籤進行驗證，確認收妥貨物，有關資料亦會即時傳返縱橫網™的數據庫。

效益

打擊魚目混珠 保護品牌資產

張先生表示：「利用EPC/RFID技術為基礎的追蹤及追溯系統，以及香港貨品編碼協會的縱橫網™平台，我們便能夠有效地追蹤貨物由生產點到零售點的流向。」供應鏈上點對點的透

明度，結合「正貨」驗證防偽標籤，為該公司提供了一個有力的防偽解決方案。此外，系統亦能讓供應鏈透明度達至逐件貨物的層面，讓該公司可以有效追蹤每包乾鮑在供應鏈上的流向紀錄。

保護品牌信譽 贏取消費者的信任

現時，消費者十分關注所購買的食品來源，尤以名貴的食品更甚，並愈來愈厭偽冒產品。憑藉準確的追蹤及追溯系統配合高效的供應鏈管理模式，及「正貨」驗證服務，中昇國際便為消費者提供所需的保證，更可藉此保護和鞏固其品牌的信譽。張先生總結而言：「縱橫網™及『正貨』驗證讓我們以最佳實務實踐產品驗證及進一步滿足顧客需求，藉此成為中國高級食品市場中供應鏈管理的最佳方案。」

PRODUCT AUTHENTICATION SOLUTION WITH TRACK-AND-TRACE TECHNOLOGY 可追蹤及追溯技術的產品驗證解決方案



- 1 Prepare GENUINE Product Authentication secure labels for each single product and EPC/RFID tags for cartons

員工於貨品入倉前預備用於個別產品上的「正貨」驗證防偽標籤及用於紙箱上的EPC/RFID標籤

- 2 Attach GENUINE Product Authentication secure labels that are set to 'Not Available for Sale'

為貨品貼上先設定為「非供發售」的「正貨」驗證防偽標籤

- 3 Collect stock-out data on EPC/RFID label by RFID handheld readers and synchronize to ezTRACK™ platform

出倉時用RFID手提讀寫器來讀取紙箱上的EPC/RFID標籤資料並於縱橫網™平台作資訊同步

- 4 Besides access real-time track-and-trace information, the products are also marked as authenticated and ready for sale

擷取實時的追蹤及追溯資訊外，防偽標籤狀況更新為「可供發售」以表示貨物已經驗證

“Thanks to GS1 Hong Kong, our customers will be able to input our product’s GTIN into BarcodePlus web portal or scan the product’s barcode using the mobile application to retrieve relevant product information. This will allow consumers to make better-informed purchasing decisions and easily learn more about products after they make a purchase,” said Ms. Phyllis Cheuk, Executive Director and CEO of Kampery Development Limited (China & Hong Kong).

金百加發展有限公司（中國及香港）執行董事兼行政總裁卓鳳婷女士表示：「在香港貨品編碼協會的協助下，我們的客戶可將於BarcodePlus網站直接輸入產品的國際貨品編碼，或以流動電話的應用程式掃描產品條碼以擷取重要的產品資訊。有了此等資訊，消費者便能作出更明智的購物選擇，在購物後亦可簡便地擷取更多有關該產品的資訊。」



Building consumer trust by providing extended packaging information through BarcodePlus

**透過BarcodePlus提供延伸性產品包裝資訊
建立消費者對品牌的信心**

GREENDOTDOT.COM LIMITED 点点綠有限公司



GS1 STANDARDS USED
應用的GS1標準

- **GTIN (Global Trade Item Number)**
國際貨品編碼
- **EAN/UPC BarCode**
EAN/UPC 條碼



SOLUTIONS APPLIED
推行方案

- **BarcodePlus¹**
- **MobileCom²**



BUSINESS BENEFIT
商業效益

- **Providing a cost-effective channel for engaging consumers and building brand awareness**
提供一個與消費者建立連繫及提高品牌知名度的有效推廣渠道



ULTIMATE GOAL 最終目標

Uplift product quality and safety
提升產品質量及安全度

Remarks:

¹ BarcodePlus: A product and location information portal allowing businesses to access and share quality data using GS1 Keys like GTIN and GLN via the Internet, mobile devices and smart kiosk.

BarcodePlus：透過GS1識別碼如國際貨品編碼及國際位置編碼，能使不同商業用戶經由互聯網、流動設備及智能訊息站擷取並分享產品及位置資料的資訊平台。

² MobileCom: A mobile phone tool that enable businesses to give consumers access to extended packaging information.

MobileCom：一個讓業界向消費者提供延伸性產品包裝資訊的流動電話工具。

BACKGROUND

As local consumers have become increasingly health conscious, the organic and natural food market in Hong Kong has grown exponentially since the 1990s. Against this backdrop, small-and-medium-sized enterprises involved in health food retailing and distribution need to collaborate more closely on tackling food-related regulatory issues and educating the public about organic food products. The Association of Green, Organic at Living (abbrev. GO@L) was founded in December 2008 to facilitate this industry collaboration. Greendotdot.Com Ltd (Greendotdot), a subsidiary of Kampery Group engaged in the wholesale and retail of Greendotdot brand and other overseas brands of health food and organic food products in Hong Kong, is a founding member of GO@L.

CHALLENGES

An increasing number of today's health-conscious consumers are willing to pay a premium for health food and organic food products. However, the product information on the packaging is often insufficient and inconsistent. Consumers frequently encounter difficulty in distinguishing between organic products and in getting detailed information on nutrition, allergens, health cautions and health benefits regarding products they are interested in purchasing.

With counterfeiting another critical issue in the marketplace, the health and organic foods industry also faces the challenge of protecting its reputation and building consumer trust in its products. However, there are no trusted sources of product information for health food and organic food products available to consumers.

Like all local health food retailers and distributors, Greendotdot needed to address these product information and product quality assurance challenges in order to drive future business growth.



SOLUTIONS

In order to provide extended packaging information to consumers, a cost-effective channel was required. With the assistance of GS1 Hong Kong, Greendotdot has completed a pilot run to adopt GS1 Hong Kong's BarcodePlus web portal and mobile phone application to provide consumers with more product information through GS1 Standards – Global Trade Item Number (GTIN) and BarCode.

BarcodePlus – A window to product quality and safety

BarcodePlus is a reliable product information portal, which allows both businesses and consumers to access product quality and safety information using GS1 Standards via the Internet. Consumers can access information about any product stored in the BarcodePlus database provided by brand owners through www.barcodeplus.com.hk or the BarcodePlus iPhone application simply by entering the product's GTIN or capturing the BarCode with phone camera.

Greendotdot began the pilot initiative in April 2010 and targets to commercially launch.

BENEFITS

Cost-effective channel for engaging consumers

"The BarcodePlus website and mobile application represent a fresh, new approach to marketing for us to reach out to consumers and disseminate comprehensive information about our products in a cost-effective way", said Ms. Phyllis Cheuk, Executive Director and

CEO of Kampery Development Limited (China & Hong Kong). "Thanks to GS1 Hong Kong, our customers will be able to input our product's GTIN into BarcodePlus web portal or scan the product's barcode using the mobile application to retrieve relevant product information. This will allow consumers to make better-informed purchasing decisions and easily learn more about products after they make a purchase."

Enhanced brand awareness and product information trustworthiness

The BarcodePlus portal represents a reliable and accurate source of information for consumer products because its product information is sourced directly from the brand owners. As the BarcodePlus database grows, it will become a convenient, one-stop source of reliable information for consumer products, saving consumers the inconvenience of having to visit multiple websites to find product information. Along with the new iPhone application, BarcodePlus can help small-and-medium-sized enterprises increase their brand awareness cost effectively compared with traditional marketing solutions.



背景

隨著本地消費者的健康意識日漸提高，有機及天然產品業在香港90年代初發展迅速。因此，從事食品零售及分銷的中小型企業必須就與食品有關的法規事務及有機食品的公眾教育上相互協作。「綠機會」遂於2008年12月成立。

点点綠有限公司是「金百加集團」的子公司，該公司在香港從事点点綠品牌及其他海外健康及有機產品的批發和零售。点点綠有限公司亦是「綠機會」的創始成員。

挑戰

今日，愈來愈多消費者意識到健康的重要，並願意支付更多金錢購買健康和有機產品。然而，有關的產品包裝並未能提供足夠的資訊，該等資訊亦不時出現偏差。消費者經常難以分辨不同類別的有機產品，要進一步擷取該產品的營養資訊、過敏原、注意事項，及食用效益等資料亦遇上一定的困難。

由於市面上存在偽冒產品的問題，健康及有機食品業必須竭力保護品牌聲譽及建立消費者對產品的信心。可是，市面上仍未有一個可靠的渠道讓消費者獲取可信的健康及有機產品資訊。

点点綠和其他健康食品零售商及分銷商一樣，須解決產品資訊及產品質量保證的問題，以維持業務的增長。

方案

要為消費者提供產品延伸性包裝資訊，必須有一個具成本效益的渠道。在香港貨品編碼協會的協助下，点点綠已完成一項以BarcodePlus網站和流動電話應用程式的測試，讓消費者透過互聯網以GS1為標準的國際貨品編碼及條碼獲取更多產品資訊。

BarcodePlus — 一個通往產品品質及安全資訊的門戶

BarcodePlus是一個可靠的產品資訊入門網站，能讓企業和消費者透過互聯網以GS1標準獲取有關產品質量及安全的資訊。消費者只須登入www.barcodeplus.com.hk或使用BarcodePlus的iPhone應用程式，並輸入產品的國際貨品編碼或以手機鏡頭擷取條碼影像，便可獲取品牌持有人儲存於BarcodePlus網站內的產品資訊。

点点綠於2010年4月開始推行此試驗項目，並計劃於市面上正式推出。

效益

與消費者建立具成本效益的推廣渠道

金百加集團（中國及香港）執行董事兼行政總裁卓鳳婷女士表示：「BarcodePlus網站與流動電話應用程式是一個嶄新及新穎的市場推廣方法，讓我們可以透過具成本效益的途徑與消費者連繫，並藉此向他們傳遞全面的產品資訊。」「通過香港貨品編碼協會的協助，我們的客戶可將於BarcodePlus網站內輸入產品的國際貨品編碼，或使用流動電話的應用程式來掃描產品上的條碼以擷取重要的產品資訊。有了此等資訊，消費者便能作出更明智的購物選擇，在購物後亦可簡便地擷取更多有關該產品的資訊。」

提高品牌知名度及產品資訊可信度

由於BarcodePlus內的產品資訊是由品牌持有人直接提供，故此該網站內的消費產品資訊不但可靠而且準確。該網站的數據庫在不斷發展下，將會成為一個可靠的一站式消費產品資訊來源，消費者毋須再從不同的網站搜尋產品的資訊。有了iPhone應用程式的支援，BarcodePlus更能進一步協助中小企業，向他們提供比傳統市場推廣手法更具成本效益的渠道以提高品牌的知名度。

PROVIDING EXTENDED PACKAGING INFORMATION THROUGH BARCODEPLUS


通過BarcodePlus提供延伸性產品包裝資訊



1 Consumer to browse BarcodePlus website or open mobile application
消費者可瀏覽BarcodePlus網站或開啟流動電話的應用程式

2 Input the product's GTIN into BarcodePlus web portal or scan the product's barcode using the mobile application
於BarcodePlus網站直接輸入產品的國際貨品編碼，或以流動電話應用程式掃描產品條碼

3 Access additional product information and offer anytime
即時擷取更多產品資訊及優惠

A close-up photograph of a clear glass being filled with water. The water is captured mid-pour, creating a dynamic splash and bubbles. The glass sits on a light-colored bamboo mat. In the background, another glass is partially visible, and the overall scene is brightly lit, suggesting a clean, fresh environment.

“The use of EPC/RFID-based technology has strengthened our supply chain against counterfeiting. RFID tags with unique EPC numbers enable us to track and trace products across the supply chain from our production facilities to retail outlets, building formidable defenses against counterfeiters.”

「以EPC/RFID為基礎的技術有助我們透過提升供應鏈的效率，從而打擊偽冒產品。貨物貼上載附產品電子代碼的RFID標籤後，我們便能追蹤和追溯供應鏈上由生產線至零售點的貨物流向，有效防範偽冒產品。」



Tackling counterfeiters through EPC/RFID traceability

透過以EPC/RFID為基礎的追溯技術打擊偽冒產品

PUSH INFORMATION & AUTOMATION (CHENGDU) COMPANY LIMITED 成都普什信息自動化有限公司



GS1 STANDARD USED
應用的GS1標準

- **EPC (Electronic Product Code)**
產品電子代碼



SOLUTION APPLIED
推行方案

- **EPC/RFID-based Traceability System for Anti-counterfeiting**
以EPC/RFID技術為基礎的防偽追溯系統



BUSINESS BENEFIT
商業效益

- **Protecting brand integrity and enhancing revenue growth**
保護品牌信譽 提高盈利增長



ULTIMATE GOAL 最終目標

Uplift product quality and safety
提升產品質量及安全度

BACKGROUND

Push Information & Automation (Chengdu) Company Limited (Pushia) was founded in 2008 and specializes in the development of RFID-based automatic identification technology for anti-counterfeiting, and warehouse and logistics management applications.

Pushia's client Wuliangye Group Limited (Wuliangye) was founded in Sichuan, China in the early 1950s by a group of breweries and is mainly engaged in the production of the Wuliangye brand of Chinese liquor, which is distributed in more than 60 countries and regions. The company has a production capacity of more than 400,000 tons of liquor annually.



CHALLENGES

Wuliangye liquor is produced using traditional fermentation techniques, from five different types of grain, which give it a distinctive flavor. With its brand valued at US\$6.9 billion, Wuliangye has been ranked the top manufacturer in China's liquor industry for 15 years in succession. In 2009, its annual sales volume came to 20 million units and annual revenue was reported as US\$1.62 billion.

With a well-known and popular brand, Wuliangye became a target for counterfeiting and there was a high probability of finding counterfeit Wuliangye products in retail stores. As the counterfeiters became more sophisticated in replicating the packaging of Wuliangye to adopt products, it became increasingly difficult for consumers to distinguish counterfeit products from the genuine article. This affected the trust consumers had in the brand and eroded revenue. Pushia was tasked by Wuliangye to help address these issues.

SOLUTIONS

To combat counterfeiting, Pushia recommended Wuliangye adopt an EPC/RFID-based traceability system and product authentication technology. The project was initiated in early 2009 and the first batch of EPC-compliant RFID tags was applied to each bottle of Wuliangye liquor in December 2009. In the first quarter of 2010, over 4 million of EPC-compliant RFID tags had been applied to Wuliangye products and 10,000 RFID readers were installed in China. The system developed

by Pushia used unique identification numbers that are based on EPC Standards to identify individual bottles of Wuliangye liquor. These item-level identification tags could not be replicated by counterfeiters throughout the supply chain process.

Product authentication is implemented through an EPC/RFID track-and-trace system, which provides supply chain visibility for individual bottles from the company's production facilities through to warehouses and distribution channels, such as retail outlets and restaurants. The EPC/RFID track-and-trace system also enables more efficient warehouse management.

The project uses three types of event RFID readers to facilitate product authentication: Smart RFID kiosks deployed in retail stores and shopping malls for use by consumers; barcode and RFID handheld scanning and reading device for use by inspectors, and RFID-I gift readers also for use by consumers.

BENEFITS

With Pushia's assistance, Wuliangye has become a pioneer in the use of EPC/RFID-based systems for product track-and-trace, and anti-counterfeiting in Mainland China. With the ability to monitor the movement of its products from the production facilities to the retail outlets, Wuliangye has taken a significant step forward in combating counterfeiting. This, in turn, has helped the company protect the integrity of its brand and enhance quality assurance. In addition, the project has allowed Wuliangye to prevent revenue being lost to counterfeiting.

背景

成都普什信息自動化有限公司（普什）於2008年成立，專門開發以RFID為基礎的自動識別技術於防偽，倉庫與物流管理上之應用。

五糧液集團有限公司（五糧液）是普什的客戶，於50年代初期由多家釀酒廠在中國四川建立，該集團主要從事生產五糧液酒類品牌，銷售網遍佈60多個國家及地區，產酒量每年超過40萬噸。

挑戰

該集團以五種不同的穀物，配合傳統的發酵技術，製造出具有獨特味道的五糧液酒。目前，該品牌市值69億美元，並連續15年名列中國最佳酒類製造商。於2009年，銷售量達2,000萬瓶，年收入達16.2億美元。

五糧液隨著知名度和受歡迎程度日增，成為了偽冒商的目標，消費者因而經常會在店舖

內發現偽冒的五糧液。由於偽冒商在複製五糧液包裝的技術愈來愈高明，消費者亦愈來愈難分辨出正貨與贗品的分別。結果不但打擊了他們對該品牌的信心，同時亦削弱了該集團的盈利。五糧液集團遂尋求普什的協助以幫助解決以上問題。

方案

普什建議五糧液採納以EPC/RFID為基礎的追溯系統及產品驗證技術來打擊偽冒產品。有關項目於2009年初開始推行，首批以EPC標準為基礎的RFID標籤正式於2009年12月貼上個別的五糧液酒瓶上。在2010年第一季度，該集團已將超過400萬張RFID標籤貼在五糧液酒瓶上，並在中國境內設置了一萬個RFID閱讀器。由普什成功研發的這套系統，採用了以產品電子代碼為標準的獨特識別號碼有效識別每瓶五糧液，偽冒商亦難以在整條供應鏈上複製整套系統。

以EPC/RFID為基礎的追蹤及追溯系統來執行產品驗證有助業界提升供應鏈透明度，從而有效追蹤由生產線一直至倉庫及分銷渠道如零售店舖和餐館的貨物流向。此外，系統亦可協助企業執行高效率的倉庫管理模式。

此項目採用了三種不同類型的RFID讀寫器以執行有效的產品驗證：在零售商戶及購物商場設立了供消費者使用的智能RFID訊息站、供檢測人員使用的條碼及RFID手提掃描及讀寫器，以及為消費者而設的禮品裝RFID閱讀器。

效益

在普什的技術協助下，五糧液已成為中國內地率先成功採納以EPC/RFID為基礎的產品追蹤與追溯系統以打擊偽冒產品的先驅。五糧液已掌握了監控產品由生產線至零售點流向的技術，無疑在打擊偽冒產品的陣線上踏出重要的一步，這不但令集團能更有力地保護品牌信譽，亦能有效保證產品質量，避免贗品對盈利造成影響。



TYPES OF EVENT RFID READERS TO FACILITATE PRODUCT AUTHENTICATION

透過不同類型的RFID讀寫器執行產品驗證



Smart RFID kiosks deployed in retail stores and shopping malls for use by consumers

供消費者於零售商戶及購物商場使用的智能RFID訊息站



Barcode and RFID handheld scanning and reading device for use by inspectors

供檢測人員使用的條碼及RFID手提掃描及讀寫器



RFID-I gift readers also for use by consumers

為消費者而設的禮品裝RFID閱讀器

"Mitchells & Butlers staff are able to spot ordering, delivery and invoicing errors in advance, avoid unnecessary costs and receive up-to-date and accurate product data from suppliers – driving supply chain efficiency throughout the business."

「Mitchells & Butlers 的員工能及早察覺訂單、交付過程及發貨單上的錯誤，減免不必要的損失，以及獲取由供應商提供最新及最準確的產品資訊，有效提升整體業務上供應鏈的效率。」



Improving stock visibility and data quality for leading pub group with the use of GS1 eCom and GDS

GS1電子商貿及全球數據同步
助知名酒吧集團提升庫存透明度及數據質量

MITCHELLS & BUTLERS



GS1 STANDARDS USED
應用的GS1標準

- **GTIN (Global Trade Item Number)**
國際貨品編碼
- **GS1 XML (eXtensible Markup Language)**
GS1 XML (可擴展標識語言)



SOLUTIONS APPLIED
推行方案

- **GS1 eCom with Advanced Shipping Notices (ASNs)**
GS1 電子商貿預先發貨通知單
- **Global Data Synchronization (GDS)**
全球數據同步



BUSINESS BENEFIT
商業效益

- **Achieve a faster, more accurate, and more efficient ordering and stock control processes**
締造更快、更準確及更具效率的訂貨和庫存管理流程



ULTIMATE GOAL 最終目標

Optimize operational efficiency
優化運作效率

BACKGROUND

Mitchells & Butlers is one of the great names in licensed pub and restaurant retailing in the UK. Today, Mitchells & Butlers operates many of the UK's leading licensed retail brands including Vintage Inns, Toby Carvery, Ember Inns, as well as some of the most famous pubs in Britain. It continues to evolve and develop its estate of pub and pub restaurants to meet the ever more discerning tastes of the British public, ensuring it remains at the forefront of the UK pub industry.

CHALLENGES

As the leading operator of managed pubs and restaurants in the UK, Mitchells & Butlers has 2,000 businesses raising 15,000 orders every week. Full visibility of stock and reliable product data is vital to the efficiency of the pub group.

SOLUTIONS

To meet this need, Mitchells & Butlers implemented GS1 Standards for their centralized stock control system, using GS1 eCom Advanced Shipping Notices (ASNs) and rolling out Global Data Synchronization (GDS) with their suppliers. GS1 UK assisted the company with the planning and onboarding process to ensure full GDS compliance.

Mitchells and Butlers has now onboarded all of its drinks suppliers to the GS1 Global Data Synchronization Network following the success of its GDS pilot. Today, the company only accepts from its drinks suppliers new product lines and changes that are GDS-compliant and entered properly via the data pool.

BENEFITS

Since implementing ASNs at the pub level, the company has benefited from faster, more accurate and more efficient ordering and stock control processes. The automated ordering system has allowed pub managers to devote more time to managing their

pubs and improving customer service levels, because they have fewer time-consuming administrative tasks such as manually matching orders to delivery notes. Furthermore, with full visibility of stock, the company has been able to reallocate stock between pubs to reduce waste and make effective forecasts, which is vital during busy seasonal periods. Payments to suppliers have also become more efficient because invoicing errors can now be identified immediately by matching the invoice to the ASN.

GDS has allowed Mitchells & Butlers to benefit from all the renowned advantages of this automated and standardized way of exchanging accurate product information. The company currently identifies all of its 900 drink product lines using GS1 GTINs (Global Trade Item Numbers) and has eliminated the use of costly data translation tables which were previously needed to run its automated ordering and stock control system. Before deploying GDS, Mitchells and Butlers had identified that 37.5% of all the dimensional data received from its suppliers contained errors, so perhaps most interesting is the positive impact of data quality: With the implementation of GDS, Mitchells and Butlers are now able to identify any errors and verify the data before it enters their database, which allows them the confidence of knowing they have accurate product data at all times. With drinks suppliers fully GS1 compliant, Mitchells & Butlers is now working with GS1 UK to get the rest of its suppliers to deploy GS1 GDSN as well.



背景

Mitchells & Butlers 是英國赫赫有名的持牌酒吧及餐館零售業經營者之一。現時，Mitchells & Butlers 旗下眾多的英國知名商號包括 Vintage Inns、Toby Carvery、Ember Inns，以及一些在英國著名的酒吧。Mitchells & Butlers 一直積極革新及提升旗下酒吧及酒吧餐館的服務，以滿足英國人不斷提升的口味需求，確保集團在英國酒吧行業中繼續處領先地位。

挑戰

Mitchells & Butlers 作為業內知名酒吧集團，在英國經營 2,000 家酒吧及餐館，每週訂單數量總計 15,000 份。因此，全面的庫存透明度和可靠的產品數據，對提高該集團的營運效率尤為重要。

方案

為了達到這個目標，Mitchells & Butlers 將 GS1 標準引進其中央庫存控制系統，應用 GS1 電子商貿預先發貨通知單，並與其供應商一同採用全球數據同步 (GDS) 服務。GS1 英國分會協助該公司進行規劃和執行實施流程，以確保整個運作過程符合 GDS 標準。

Mitchells & Butlers 早前成功推行其 GDS 試驗項目，現已將旗下飲料供應商的資料上傳至全球數據同步網絡。現在，該公司只接受飲料供應商提供符合 GDS 標準及經數據池正式上傳的新產品線及有關的數據更新。

效益

自從在酒吧層面採用預先發貨通知單後，該公司的訂貨和庫存管理流程變得更迅速、準確和有效。自動訂貨系統可讓酒吧經理減省以人手進行訂單與交付紀錄核對等耗時的行政工作，從而騰出更多時間來管理酒吧及改善客戶服務水平。此外，由於該公司已能充分

掌握庫存數據，故能為旗下的眾多酒吧重新分配資源供應，減少浪費及作出有效的預測，對季節性期間的營運來說這點尤其重要。由於所有發票可與預先發貨通知單作核對，從而即時找出發票錯誤，令供應商提交貨款的流程也更具有效率。

全球數據同步讓 Mitchells & Butlers 獲得自動化和標準化產品信息交換所帶來的好處。該公司目前透過 GS1 的國際貨品編碼，成功識別旗下所有 900 款飲料生產線，藉此取締以往用來運作自動訂貨和庫存控制系統、成本高昂的數據轉換表。在未曾採納全球數據同步前，Mitchells & Butlers 從供應商獲取的數據中有 37.5% 出現錯誤，由此可見，數據質量的提高對集團之影響有多大。在使用全球數據同步之後，Mitchells & Butlers 可在輸入數據前核實數據及找出錯誤，讓其保證產品數據時刻準確。Mitchells & Butlers 的所有飲料供應商現已採納 GDS，該公司亦正與 GS1 英國分會合作，務求讓其餘的供應商採納 GS1 的全球數據同步網絡。





“Thanks to GS1 Standards, the HA and its distributors and pharmaceutical principals can harness supply chain visibility at the batch level to save time in receiving logistics units and better manage inventory,” said Ms. S. C. Chiang, Senior Pharmacist, Chief Pharmacist’s Office, Hospital Authority.

醫院管理局總藥劑師辦事處高級藥劑師蔣秀珠女士表示：「在GS1標準的支援下，醫院管理局、藥物分銷商和製藥廠都可於藥品批號的層面上提升供應鏈的透明度，藉此節省在物流運作過程如接收貨品所需的時間，更有效率地進行庫存管理。」



Increasing pharmaceutical supply chain visibility with GS1 Standards 以GS1標準增加藥物供應鏈的透明度

HOSPITAL AUTHORITY 醫院管理局



GS1 STANDARDS USED 應用的GS1標準

- **GTIN (Global Trade Item Number)**
國際貨品編碼
- **SSCC (Serial Shipping Container Code)**
貨運容器序號



SOLUTION APPLIED 推行方案

- **ezTRADE¹ with Advanced Shipping Notices (ASNs)**
「通商易」服務與預先發貨通知單



BUSINESS BENEFIT 商業效益

- **Enhancing accuracy of product flow process with batch-level traceability**
於批次層面的追溯，加強藥物物流運作過程的準確度



ULTIMATE GOAL 最終目標

Increase supply chain visibility 增加供應鏈透明度

Remarks:

¹ ezTRADE: An industry-wide B2B platform facilitating electronic transaction messaging via EDI and Web to support electronic ordering, invoicing and shipment notices.

通商易：一個經由EDI及互聯網以支援電子訂單、發票、貨運通知的跨業界商業對商業電子數據交換平台。

BACKGROUND

The Hospital Authority (HA) is the statutory body responsible for running Hong Kong's public healthcare system. Under its auspices are 41 public hospitals and institutions, 48 specialist outpatient clinics and 74 general outpatient clinics. It manages an ever-growing public healthcare expenditure, projected to grow from HK\$32.7 billion in 2007/08 to \$78 billion by 2015 and \$127 billion by 2025. The organization works with a large network of vendors, including pharmaceuticals companies, medical consumables suppliers, and third-party equipment maintenance service providers, to keep its 160 hospitals and clinics operational and well supplied.



CHALLENGES

The HA has used GS1 Hong Kong's ezTRADE Electronic Data Interchange platform for automatic identification and communication throughout its supply chain since 1996. Thanks to this platform, the organization has achieved a high level of supply chain efficiency for order processing. However, to make greater improvements in the quality and safety of public healthcare services in Hong Kong, the HA wanted to further increase visibility along its pharmaceutical supply chain by implementing traceability down to the batch level.

SOLUTIONS

To address this challenge and further modernize its pharmaceutical supply chain, the HA implemented a pilot project, involving the introduction of Advance Shipping Notices (ASNs) through ezTRADE, which would require collaboration with distributors and pharmaceutical manufacturers. GS1 Hong Kong helped facilitate this collaboration by

working with the HA to organize industry briefings for over 30 of the HA's pharmaceutical principals in the third quarter of 2010. The main objective of the briefings was to share knowledge about GS1 Standards, including the Global Trade Item Number (GTIN) and Serial Shipping Container Code (SSCC), and advocate the adoption of global standards to enhance efficiency and visibility along the healthcare supply chain.

Following the briefings, the HA began planning for implementing the pilot project with the distributors and manufacturers, using SSCCs to provide access to information, including the GTIN, expiry date and batch number. In the project, each logistics unit being shipped is assigned an SSCC and this code is included in the ASN sent to the HA via the ezTRADE platform. Upon arrival, the logistics unit is validated by scanning its SSCC with a barcode scanner. The pilot project is targeted for completion in the third quarter of 2011.

BENEFITS

The adoption of ASN with ezTRADE, along with GS1 Standards GTIN and SSCC, enhances order delivery accuracy in the product flow process. This, in turn, enables the HA to improve the quality and safety of the healthcare services it provides. "Thanks to GS1 Standards, the HA and its distributors and pharmaceutical principals can harness supply chain visibility at the batch level to save time in receiving logistics units and better manage inventory," said Ms. S. C. Chiang, Senior Pharmacist, Chief Pharmacist's Office, Hospital Authority.



背景

醫院管理局（醫管局）是一個法定機構，負責管理香港的公共醫療服務，轄下包括41間公立醫院及醫療機構，48間專科門診診所及74間普通科門診診所。醫管局管理的公共醫療開支逐年遞增，預計將由2007/08年度的327億港幣增至2015年的780億，及2025年的1,270億。為確保轄下160家醫院及診所能正常運作，並在藥物及各種醫療設備上得到充足的供應，醫管局一直維持與眾多供應商的緊密合作，包括製藥公司，醫療耗材供應商和第三方設備維修服務供應商。

挑戰

醫管局自1996年開始已使用香港貨品編碼協會的「通商易」電子數據交換平台服務，作為自動識別的工具，及為整體供應鏈作資訊傳遞之用。有了這個平台，醫管局在處理訂單上已享有高效力的供應鏈效率。為進一步提高香港公共醫療護理服務的質量及安全，該局計劃透過產品批次層面的追溯能力，以增加藥物供應鏈的透明度。

方案


為達到上述目標及進一步推動藥物供應鏈現代化，醫管局聯同藥物分銷商及製造商推出一個以「通商易」與預先發貨通知單（ASNs）的試點項目。香港貨品編碼協會透過與醫管局的合作，於2010年第三季共同為超過30家醫管局藥物供應商舉辦行業簡報會，就國際貨品編碼（GTIN）及貨運容器序號（SSCC）等GS1標準與業內人士作交流分享，促進業界採納全球標準以提升醫療供應鏈的效率及透明度。

簡報會後，醫管局與藥物分銷商及製造商聯手推行試點計劃，在貨品上附上貨運容器序號，作為載負產品資訊之用，該等資訊包括貨品的國際貨品編碼、到期日及批號。試點項目中的每個經付運的物流單位，都有一個貨運容器序號，此序號會包含在預先發貨通知內，經「通商易」傳遞到醫管局。當物流單位被運送到醫管局時，工作人員便會使用條碼讀取器掃描物流單位上的貨運容器序號以進行確認。該試點項目預計將於2011年第三季度完成。

效益

醫管局使用「通商易」及預先發貨通知，配合GS1標準的國際貨品編碼及貨運容器序號，大大提高藥物物流運作流程上貨品付運的準確性，亦因此改善了醫護服務的質量及安全。醫院管理局總藥劑師辦事處高級藥劑師蔣秀珠女士表示：「在GS1標準的支援下，醫院管理局、藥物分銷商和製藥廠都可於藥品批號的層面上提升供應鏈的透明度，藉以節省在物流運作如接收貨品上的時間，更有效率地進行庫存管理。」





"The 'single source' of item master data for health institutions in Australia, the National Product Catalogue hosted on GS1net, has been used successfully to improve the quality of data sourced for its pharmaceutical tendering process. For HPV, this resulted in a 60% improvement in data matching with items from the current contract."

「同步於GS1net平台上的澳洲國家產品目錄，是當地唯一一個為醫護機構而設的主數據儲存庫，該目錄透過提升產品資料的質素，成功改善醫療藥品招標過程的效率，為HPV進行的數據核對準確度帶來60%的重大改善。」



Health procurement leader turns to Australia's National Product Catalogue, synchronized with GS1net Data Pool to improve tendering

與GS1net數據池同步的澳洲國家產品目錄
協助醫療護理機構提高招標流程之效率

HEALTH PURCHASING VICTORIA



GS1 STANDARD USED
應用的GS1標準

- **GDSN (Global Data Synchronization Network)**
全球數據同步網絡



SOLUTION APPLIED
推行方案

- **National Product Catalogue¹**
國家產品目錄



BUSINESS BENEFIT
商業效益

- **Increase efficiency and reduce human errors in data matching during the tendering process**
提高效率，減少在招標過程中核對資料時出現的人為錯誤



ULTIMATE GOAL 最終目標

Optimize operational efficiency
優化運作效率

Remarks:

¹ National Product Catalogue: A single repository of product, pricing and healthcare data for all health industry product categories for the purpose of data synchronization, which is hosted by GS1 Australia on GS1net, a GDSN-certified data pool used in Australia and New Zealand.

國家產品目錄：為醫療用品資料同步化而建立，是唯——個集合產品目錄、價格及醫療數據的主數據儲存庫。該數據庫同步於由全球數據同步網絡認證，並在澳洲及新西蘭獲得廣泛使用及由GS1澳洲分會管理的GS1net數據池。

BACKGROUND

Health Purchasing Victoria (HPV) was established in 2001 by the Victorian State Government to facilitate access by public hospitals and other health related services to goods and services on best-value terms. HPV contracts can be accessed by 76 public hospitals and healthcare services that provide healthcare to more than 5 million Victorians. HPV achieves optimal collective procurement outcomes through innovative practices and collaborative partnerships and by engaging public health service providers, consumers, funders, regulators and suppliers.

The organization's vision is to be a health procurement leader in Australia, acknowledged for innovation, ethical procurement practices and transformation of the health supply chain. HPV's strategy is aligned with the Federal Government's National eHealth Strategy which is being implemented by the National eHealth Transition Authority (NEHTA).

CHALLENGES

Every year HPA is required to consult with public hospitals and health services to develop its Confirmed Annual Tender

Program. HPV then publishes Requests for Tenders to establish best-rate prices per products and/or pricing benchmarking. To assist with tender development and visibility assessment, hospitals and health services are requested to supply data and information to HPV. HPV then uses this data to form valid judgments concerning pricing

viability of tenders and to perform evaluation of tender outcomes.

However, without single source of item master data, errors were found, including wrong supplier code, full text used rather than a code value, and field left blank. The poor quality data creates additional workload for data matching and validation, which makes the tender process inefficient.

SOLUTIONS

In consultation with the Australian states and territories, as well as the federal government, NEHTA initiated the National Product Catalogue (NPC) as the 'single source' of item master data for health institutions seeking to purchase medicines, medical devices and other necessary healthcare items.

The NPC, which has been endorsed by all state, territory and federal health departments in Australia, is a single repository of product, pricing and healthcare data for all health industry product categories for the purpose of data synchronization. These categories include pharmaceuticals and medical devices (such as orthopedics, implants, dental products, etc.).

The NPC is hosted by GS1 Australia on GS1net, a GDSN-certified data pool used in Australia and New Zealand by more than 1,400 companies across a number of industry sectors. This platform enables the secure sharing of item master information such as product identifiers and descriptions, units of measure, package contents, product classification, pricing and related healthcare information.

For suppliers in the Australian healthcare sector to become 'NPC Ready', all of their product and price data must be loaded to the NPC, the data validated, and published to the NPC data recipients (i.e., health jurisdictions and private healthcare organizations). Some organizations take a phased approach and achieve NPC Populated status as they load segments of their product range. The validation step in the process, performed by GS1 Australia, is crucial as it ensures the quality of the data provided which will assist all jurisdictions such as Victoria to overcome difficulties in validating tender outcomes.

BENEFITS

For HPV access to accurate and validated data from the NPC made tender analysis and evaluation significantly easier when submissions were from NPC Ready/NPC Populated companies. More companies becoming NPC Ready will further streamline the tender process. HPV also intends to utilize the NPC for ongoing contract management as a single source for validating, communicating and promulgating data updates. This eliminates the use of multiple spreadsheets and manual data communication and manipulation, and the attendant opportunity for error.

Given these benefits, HPV intends to implement a plan to roll out a similar process for future tenders in other categories of product, e.g., medical devices, consumables.



背景

Health Purchasing Victoria (HPV) 於2001年由維多利亞州政府成立，讓公立醫院及其他醫護服務機構能以物有所值的價錢購買用品和服務。目前，為維多利亞州超過五百萬名居民提供醫護服務的76家公立醫院及醫護服務機構可以獲得HPV的合約。HPV透過創新意念的實務、建立具協作性的合作夥伴關係，以及與公共醫護服務機構、消費者、投資者、監管機構及供應商建立緊密的連繫，成功發展出具效益的集體採購模式。

該組織致力透過積極創新、實踐符合道德操守的採購實務，並通過努力改造醫護供應鏈，矢志成為澳洲醫護採購業的翹楚。HPV的政策方向與聯邦政府所推行，並由National eHealth Transition Authority (NEHTA) 負責執行的國家電子醫療政策目標一致。



挑戰

HPV每年就訂定年度招標計劃徵詢公立醫院及醫護服務機構的意見。在執行諮詢工作後HPV便會進行招標，投標的機構必須為每種貨品訂出最優惠的價格及/或訂定價格基準。為了提高招標過程及投標書透明度評估的效率，HPV會要求醫院及醫護服務機構提供有關的資料。收集了這些數據後，HPV便可就投標者的價格可行性及招標書作出評估。

然而，在執行上述流程時若未能以唯一的主檔數據作為根據，例如供應商代碼出現錯誤、使用全文而非代碼值、空白欄目等情況，都會導致錯誤。當資料質素欠佳時，核對及驗證資料便需要更多時間，因而大大降低招標過程的效率。

方案

NEHTA在諮詢過澳洲各州、地區以及聯邦政府之後，建立了國家產品目錄作為業內唯一一個主檔數據，讓醫護服務機構獲得購買藥品、醫療設備和其他必要醫療產品的資料。

國家產品目錄已獲澳洲各州、地區及聯邦政府轄下的醫療部門認可，是一個為醫護產品目錄數據同步化而設，並集合產品目錄、價格及醫療數據的唯一一個數據儲存庫。涵蓋的產品類別包括藥品和醫療設備（如骨科、植入物，牙科產品等）。



國家產品目錄同步於超過1,400家澳洲及新西蘭公司使用，由全球數據同步網絡認證並由GS1澳洲分會管理的GS1net數據池。該平台可提供主檔數據的資料共享服務，當中包括產品標識、產品內容、量度單位、包裝內容、產品分類、價格及相關的醫療護理資料。

澳洲的醫療護理產品供應商若要加入國家產品目錄，必須將旗下所有產品的資料和價格數據上傳到該目錄，資料經核對無誤後，便會發送到國家產品目錄的數據收件人（即醫療規管機構和私營醫護服務機構）。有些機構選擇分階段方式上傳產品數據，此舉亦同樣符合加入國家產品目錄的資格。GS1澳洲分會負責核對所有數據，以保證數據的質素及有助規管機構如維多利亞州解決在審核招標結果時遇到的困難。

效益

只要投標的公司是國家產品目錄的成員，HPV便能利用該目錄所提供準確及經核對的數據，大幅提升在分析及評估招標書時的效率。隨著更多公司加入國家產品目錄，上述流程的效率將會更為提升。此外，HPV計劃透過國家產品目錄為日後的合約管理進行數據核對、傳遞及發佈更新的唯一基礎，藉此避免因使用多個電子表格及以人手方式傳遞數據的出錯機會。由於此方案帶來重大效益，HPV將計劃推出一個類近的項目，涵蓋其他產品類別如醫療設備及消費品，方便招標者進行投標。



"The deployment of an EPC/RFID-based warehouse management system is proving to be most helpful to our warehouse operation. By eliminating human error from our procedures, we have successfully achieved 100% accuracy in shipments," said Mr. Thomas Yau, IT Specialist, Earnward Warehouse Limited.

盈滙倉庫有限公司資訊科技項目的邱偉雄先生表示：「採用EPC/RFID技術為基礎的倉庫管理系統，可避免人為錯誤，令我們的倉庫運作更暢順，送貨準確度達到100%。」



Taking a quantum leap in efficiency with EPC/RFID-based warehouse management system

採用EPC/RFID技術為基礎的倉庫管理系統
大幅提升運作效率

EARNWARD WAREHOUSE LIMITED 盈滙倉庫有限公司



GS1 STANDARDS USED
應用的GS1標準

- **SGTIN (Serialized Global Trade Item Number)**
國際貨品編碼序號
- **GLN (Global Location Number)**
國際位置編碼
- **EPC (Electronic Product Code)**
產品電子代碼
- **EPCIS (Electronic Product Code Information Services)**
產品電子代碼訊息服務



SOLUTION APPLIED
推行方案

- **EPC/RFID-based Mattress Warehouse Management System (WMS), based on ezTRACK™¹**
以EPC/RFID技術為基礎並連繫至蹤橫網™平台的床墊倉庫管理系統 (WMS)



BUSINESS BENEFIT
商業效益

- **Enabling traceability to achieve 100% warehouse operation accuracy**
大幅提升追溯能力
保證倉存運作達到百分之百準確



ULTIMATE GOAL 最終目標

Increase supply chain visibility
增加供應鏈透明度

Remarks:

¹ ezTRACK™: EPCIS-standard traceability network enabling real-time visibility of goods and information flow from point of manufacturing to point of destination.

蹤橫網™: 以 EPCIS 為標準的追溯網絡, 能提供由生產點至目的點的實時透明度及資訊流。

BACKGROUND

Earnward Warehouse Limited (EWL) was founded in Hong Kong in 1991, with 10,000 square feet in warehouse space. Since then, the company has grown rapidly and is now a logistics service provider with a 180,000-square-foot warehouse facility in Kwai Chung, Hong Kong. Through expanding its operations in Mainland China, the company also operates a warehouse with 200,000 square feet in Guangdong, Mainland China.



CHALLENGES

EWL provides warehouse facilities for a variety of manufacturers and suppliers to store a large number of goods with various delivery lead times. Its facility in the China Aviation Logistics Centre in Kwai Chung stores more than 1,000 mattresses for a leading bedding company. Similar to other logistics service providers, EWL was managing its warehouse and inventory operations manually. Without a holistic inventory tracking process, EWL had to manually record the exact location of

each mattress and locate the correct mattress during the stock-out process. This led to a high rate of human error when fulfilling orders, which resulted in costly shipment delays and an inability to meet delivery schedules.

SOLUTIONS

In order to enhance the efficiency of stock taking and accuracy of stock-out procedures for the mattresses, EWL decided to deploy an EPC/RFID-based warehouse management system (WMS) in January 2010 and chose GS1 Hong Kong's ezTRACK™ platform, which is compliant with the globally recognized EPC Standards.

All the mattresses were assigned EPC-compliant RFID tags embedded with product information. All operational procedures for managing the mattresses, including the stock-in and stock-take processes, were performed using RFID handheld readers. The information collected from the reader was then transmitted to the EPC/RFID-based WMS, which synchronizes with the ezTRACK™ platform to enable product tracking and tracing from any location at any time. To ensure the stock-out process was 100% accurate, warehouse personnel were required to verify each mattress using a RFID handheld reader.

BENEFITS

Stock-out procedure 100% accurate

The mattresses handled by EWL are high value items, not easy to manually identify,

and must be delivered according to strict schedules. The EPC/RFID-based warehouse management system has helped the company to handle these items more efficiently and to provide its client with more accurate delivery information, thus raising its standards of customer service. "The deployment of the EPC/RFID-based warehouse management system is proving to be most helpful to our warehouse operation. By eliminating human error from our procedures, we have successfully achieved 100% accuracy in shipments," said Mr. Thomas Yau, IT Specialist, EWL, adding that this has eliminated costly stock returns.

Significant reduction in stock-take time

With the use of RFID handheld readers, warehouse personnel can perform stock taking substantially faster. "With our previous warehouse management procedures, it took 48 hours to complete the stock-checking process. Now, using the EPC/RFID-based WMS on the ezTRACK™ platform, the same task can be accomplished in half a day. We only need two personnel to handle this task instead of four. As a result, we can allocate our staff resources more efficiently and effectively when compared with manually monitoring and identifying stock," said Mr. Yau.

Overall, EWL's EPC/RFID-based WMS resulted in significantly quicker, more accurate and more efficient handling of its client's shipments. Through the power of real-time traceability, EWL also has full visibility of inventory stored in its warehouse facility.

背景

盈滙倉庫有限公司（「盈滙」）成立於1991年，初期的倉庫面積僅為10,000平方呎。自此盈滙茁壯成長，今天已是業界翹楚。其位於香港葵涌區的倉庫設施，面積達180,000平方呎。此外，盈滙亦已著手拓展中國內地業務，其廣東省的倉庫面積，更有200,000平方呎。

挑戰

盈滙為不同的製造商及供應商提供倉庫設施，儲存大量送遞時間要求不一的貨物。其位於葵涌區的中國航空快遞物流中心，已為香港一家主要床上用品公司提供可儲存逾千張床墊的庫存空間。該公司與其同業都一樣以人手管理倉庫和庫存運作。由於缺乏全面的貨物追蹤程序，盈滙需要記錄每張床墊的實際存放位置，以及在安排出倉時準確地找出所需床墊。結果是執行提存指示時出現錯漏，繼而為補救送遞延誤致成本上升及無法準時交付貨物。

方案

為了更有效能地為客戶盤點床墊及改善出倉的準繩度，盈滙於2010年1月決定採用以EPC/RFID技術為基礎的倉庫管理系統，同時選擇以香港貨品編碼協會開發，並符合全球認可之EPC標準的縱橫網™平台作資訊同步。

首先，每張床墊都會貼上一張內存產品資料的EPC/RFID標籤。之後，不論是入倉、盤點，都由RFID手提讀寫器記錄下來。收集得來的資料會傳送至該系統，並與縱橫網™平台作資訊同步，讓盈滙可以隨時隨地追蹤及追溯貨物的流向。為確保出倉百份百準繩，每張床墊在出倉前都會先用RFID手提讀寫器來核實。

效益

保持百分百出倉準繩度

盈滙的床墊乃貴重貨物，又難於識別，且必須準時送貨。採用EPC/RFID技術為基礎的倉庫管理系統能更有效率地處理貨物，並為客

戶提供更準確的付運資料以提升客戶服務的水平。盈滙資訊科技項目的邱偉雄先生表示：「採用EPC/RFID技術為基礎的倉庫管理系統，令我們的倉庫運作更暢順。該系統可避免人為錯誤，令我們的送貨準繩度達到100%。」

大幅減省倉庫盤點時間

RFID手提讀寫器令盈滙的盤點工作成為不過彈指之間的事。邱先生說：「以往未有系統時，我們往往要花48小時來完成一次盤點工作。有了縱橫網™平台及此系統，只需半天便可完成。而人手方面，同樣的工作可以從以往的四名員工減至兩名。相對於以前利用人手監控及識別貨物，現在我們能更有效率地分配資源。」

總體而言，採用EPC/RFID技術為基礎的倉庫管理系統，為盈滙帶來了又快又準確的高效能處理客戶付運。透過實時的追溯能力，盈滙已可對倉品數量完全掌握。

PROCESS OF EPC/RFID-BASED MATTRESS WAREHOUSE MANAGEMENT SYSTEM (WMS)

EPC/RFID 基礎的床墊倉庫管理系統 (WMS) 流程





“With the use of the EPC/RFID-based warehouse management system on GS1 Hong Kong’s ezTRACK™ platform, we have enhanced the flexibility and efficiency of our warehouse management process. More importantly, we now have an accurate and efficient delivery process that allows us to raise customer satisfaction,” said Mr. Kwok Fai, Founder, Sun Rise Management Limited.

旭景管理有限公司的創辦人郭輝先生表示：「使用了EPC/RFID為基礎的倉庫管理系統並連繫至香港貨品編碼協會的縱橫網™平台之後，我們大大提高了倉庫管理過程的彈性和效率。更重要的是，旭景現在有一個既準確又具效率的送遞程序，我們的客戶對此十分滿意。」



Eliminating returns and facilitating customized single item-level stock-out with EPC/RFID technology

利用EPC/RFID技術避免退貨及達致單件層面出貨

SUN RISE MANAGEMENT LIMITED 旭景管理有限公司



GS1 STANDARDS USED 應用的GS1標準

- **SGTIN (Serialized Global Trade Item Number)**
國際貨品編碼序號
- **GLN (Global Location Number)**
國際位置編碼
- **SSCC (Serial Shipping Container Code)**
貨運容器序號
- **EPC (Electronic Product Code)**
產品電子代碼
- **EPCIS (Electronic Product Code Information Services)**
產品電子代碼訊息服務



SOLUTION APPLIED 推行方案

- **EPC/RFID-based Plastic Particle and Backpack Warehouse Management System (WMS), based on ezTRACK™¹**
以EPC/RFID技術為基礎並連繫至蹤橫網™平台的膠粒及背包倉庫管理系統 (WMS)



BUSINESS BENEFIT 商業效益

- **Enhancing flexibility to monitor inventory in customized item-level**
提升單一貨件層面上倉存監控的彈性



ULTIMATE GOAL 最終目標

Increase supply chain visibility
增加供應鏈透明度

Remarks:

¹ ezTRACK™: EPCIS-standard traceability network enabling real-time visibility of goods and information flow from point of manufacturing to point of destination.

蹤橫網™：以EPCIS為標準的追溯網絡，能提供由生產點至目的點的實時透明度及資訊流。

BACKGROUND

Sun Rise Management Limited (Sun Rise) is a logistics service provider established in 1999. The company provides warehouse, cargo transportation and haulage services to enterprises in the apparel, food, home appliance and raw materials industries around the world. The company operates a warehouse with 30,000 square feet in Yuen Long, New Territories.

CHALLENGES

With customers spread out around the world, Sun Rise's clients require the company to manage stock-in, stock-take and stock-out procedures of plastic particles and backpacks based not only on product codes, but also specific batch numbers according to their individual preferences. In addition, some clients require the company to manage inventory down to the item level. Using manual procedures, Sun Rise's warehouse operations were prone to human error and did not have the flexibility to cope with each client's individual preferences. "Our main objective was to enhance warehouse efficiency by minimizing human error. We wanted to achieve this by deploying the latest information technology solutions," said Mr. Kwok Fai, Founder of Sun Rise.

SOLUTIONS

Sun Rise decided to implement an EPC/RFID-based warehouse management system (WMS) based on the ezTRACK™ platform. The system was designed according to the company's logistics workflow and operations which includes stock-in and stock-out procedures customized for each client's individual needs. The data collected during stock-in and stock-out using RFID handheld readers was synchronized from the EPC/RFID-based WMS to ezTRACK™ platform to capture accurate, real-time inventory data. With the system in place, Sun Rise was able to manage inventory by manufacturer batch numbers and perform stock-out at both the case and item levels.

BENEFITS

Facilitating case and item-level stock-out

With the EPC/RFID-based WMS on ezTRACK™, Sun Rise can effectively locate and identify inventory, not only on the case level but also on the item-level, and manage it based on the individual logistics requirements of each client. For one customer, which manufactures backpacks, the company can provide item-level tracking for individual backpacks during the stock-out procedure whereas in the past it could only track cases of, for instance, 10 backpacks.

Enabling proof-of-delivery and eliminating returns

"With the use of the EPC/RFID-based WMS on GS1 Hong Kong's ezTRACK™ platform, we have enhanced the flexibility and efficiency of our warehouse management process. More importantly, we have an accurate and efficient delivery process that allows us to raise customer satisfaction," said Mr. Kwok. The company is also able to provide real-time proof-of-delivery, which in turn will reduce or eliminate costly returns.

"As a logistics service provider, we believe it is vital to fulfill each of our client's individual requirements for stock management to remain competitive. With the flexibility of the EPC/RFID-based WMS, we are now fully equipped to do so," he added.



背景

旭景管理有限公司（「旭景」）是成立於1999年的物流服務供應商。該公司為成衣、食品、家電和原材料業的全球客戶，提供倉庫、貨物運輸和拖運等服務。旭景在新界元朗的倉庫，面積達30,000平方呎。

挑戰

旭景的客戶遍佈全球，他們不但要求該公司以產品編號，更要根據特定的貨物批號來執行膠粒及背包入倉、盤點和出倉的程序。部份客戶更會要求旭景以獨立貨件為單位管理倉存。旭景一直以人手執行上述工序，難以避免出錯之餘亦欠缺運作彈性，無法有效處理個別客戶的要求。旭景的創辦人郭輝先生表示：「我們的宗旨是，盡量減少人為錯誤，從而提升倉庫的效能。因此我們採用最新的資訊科技方案來達到這個目標。」

方案

旭景決定利用以EPC/RFID為基礎並連繫至縱橫網™平台的膠粒及背包倉庫管理系統來解決以上的問題。該系統針對旭景的物流運作而設計，旨在滿足個別客戶就管理入倉和出倉提出的不同要求。

根據此解決方案，在入倉及出倉期間由RFID手提讀寫器收集得來的資料，會傳到此系統並同步於縱橫網™平台，藉以記錄準確及實時的倉存數據。有了這套系統，旭景既可以用貨物批號來管理倉存，又可以用箱和件為單位來處理出倉的程序。

效益

改善箱、件層面的出倉流程

透過此系統，旭景不單可在箱、件之層面上有效識別及確定倉存的位置，更可根據客戶的個別要求執行倉庫管理。舉例，該公司以

往只能在貨箱的層面上為客戶確定10個背包為一箱的貨物位置，但現在已可在出倉時為該客戶提供單件層面服務以確定每個背包的位置。

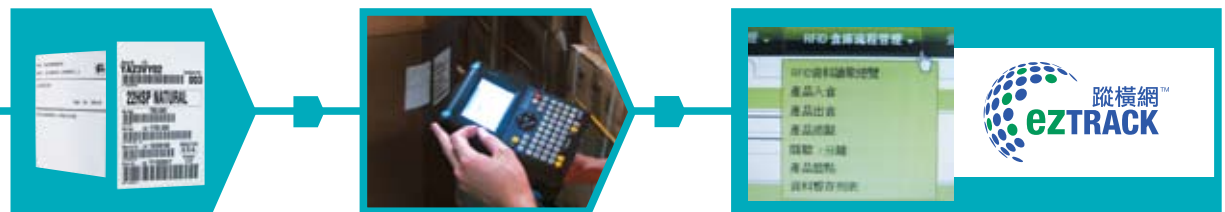
提供貨物送達證明並避免退貨

郭先生說：「使用了EPC/RFID為基礎的倉庫管理系統並連繫至香港貨品編碼協會的縱橫網™平台之後，我們大大提高了倉庫管理過程的彈性和效率。更重要的是，旭景現在有一個既準確又具效率的送遞程序，客戶對此十分滿意。」旭景現已能為客戶提供實時的貨物送達證明，冀能減少因誤送而造成的退貨，省卻無謂成本。

郭先生補充表示：「作為物流服務供應商，我們必須滿足每個客戶在倉存管理上的個別要求，以維持市場競爭力。以EPC/RFID為基礎的倉庫管理系統為我們提供了業務運作的彈性，以滿足不同客戶的需求。」



PROCESS OF EPC/RFID-BASED PLASTIC PARTICLE AND BACKPACK WAREHOUSE MANAGEMENT SYSTEM (WMS) EPC/RFID 基礎的膠粒及背包倉庫管理系統 (WMS) 流程



- 1 Assign an EPC/RFID tag with manufacture batch number on plastic particle or backpack when stock-in
膠粒或背包於入倉時被貼上一張用貨物批號 EPC/RFID 標籤

- 2 Collect stock-take and stock-out data by RFID handheld readers
透過 RFID 手提讀寫器收集盤點及出倉數據

- 3 WMS to collect data and synchronize to ezTRACK™ platform for accessing real-time track-and-trace information, and performing stock-out at both the case and item levels
WMS 收集數據並於縱橫網™平台作資訊同步以擷取實時的追蹤及追溯資訊作箱和件為單位來處理出倉的程序



“With the EPC Standards in place, information from tagged shipments can be read, sent and queried in a standardized way and provide meaningful business information for companies to make timely and precise management decisions.”

「採納了產品電子代碼標準後，可透過閱讀貼在貨物上的標籤，便能根據全球認可的標準傳遞及查閱相關的運作資訊，協助企業作出快捷及準確的管理決策。」



Livestock traceability from farm to store
through ezTRACK™

以縱橫網™追溯牲畜由農場運送到
銷售點的流向

GS1 NEW ZEALAND WITH ANZCO FOODS AND REZARE SYSTEMS GS1 新西蘭分會、ANZCO FOODS及REZARE SYSTEMS



GS1 STANDARDS USED
應用的GS1標準

- **SGTIN (Serialized Global Trade Item Number)**
國際貨品編碼序號
- **GLN (Global Location Number)**
國際位置編碼
- **SSCC (Serial Shipping Container Code)**
貨運容器序號
- **EPC (Electronic Product Code)**
產品電子代碼
- **EPCIS (Electronic Product Code Information Services)**
產品電子代碼訊息服務



SOLUTION APPLIED
推行方案

- **ezTRACK™¹**
縱橫網™



BUSINESS BENEFIT
商業效益

- **Facilitating more efficient logistics management and faster response to market needs**
提升物流管理效率
加快回應市場需求



ULTIMATE GOAL 最終目標

Increase supply chain visibility
增加供應鏈透明度

Remarks:

¹ ezTRACK™: EPCIS-standard traceability network enabling real-time visibility of goods and information flow from point of manufacturing to point of destination.

縱橫網™：以EPCIS為標準的追溯網絡，能提供由生產點至目的點的實時透明度及資訊流。

BACKGROUND

GS1 New Zealand established a trial identification and traceability project in April 2010 to track 10 cows from the feedlot to the meat wholesaler, using EPC/RFID-based solutions and the EPCIS network. The project, which was implemented in collaboration with the New Zealand meat procurement and processing company ANZCO Foods, follows on from two prior successful trials of UHF EPC Gen 2 technology for the tracking of animals run by the RFID Pathfinder Group and Rezare Systems.

CHALLENGES

The ability to track and trace products holds the key to efficient management of today's logistics supply chain in the food industry. Manufacturers, processors, logistics providers and retailers are facing a multitude of new challenges including more stringent expectations for food quality and safety from consumers and increased demand from regulators to respond quickly to any

food safety issues. Adopting open, globally standardized supply chain systems to enable efficient and accurate traceability of shipment has, therefore, become an increasingly important issue for the livestock industry.

SOLUTIONS

GS1 Hong Kong's ezTRACK™ is an EPC/RFID-based track-and-trace platform designed to help trading partners share product supply chain data and information using RFID tags. The data, gathered at different RFID read points in the supply chain, can be used to help trading partners track-and-trace physical goods movements and information. Consequently, the platform enables companies to manage their supply chains more effectively, respond quickly to market needs, and meet safety and regulatory requirements from international export markets.

In the livestock traceability trial project, initiated by GS1 New Zealand, UHF RFID tags with unique EPC identifiers were attached

to ears of 10 cows sourced from a farm in Ashburton, New Zealand. The animals were then transferred to a meat-processing plant. Both facilities are owned by ANZCO Foods. The ear tags were encoded with a Serialized Global Trade Item Number (SGTIN). After the cows were slaughtered, RFID tags were attached to the carcasses and encoded with a Serial Shipping Container Code (SSCC). Next the meat was processed and carton tags were attached to the finished product and assigned an SGTIN.

The tags were read at total of nine separate stages along the supply chain from the farm to the retailer. Each tag read location was also assigned a Global Location Number (GLN).

The trial used UHF RFID Gen 2 tags to track the cattle and carcasses, and to track the cartons from different tag vendors. A number of different tags and readers were used in the trial to demonstrate that EPC Standards allowed any off-the-shelf technology to be used. "We are vendor agnostic and wanted to show that different tags and readers were interoperable," said Mr. Gary Hartley, General Manager, GS1 New Zealand.

All tag data were successfully captured and recorded at each read point and transmitted in XML format to GS1 Hong Kong's ezTRACK™ platform to provide traceability.

BENEFITS

The trial demonstrated the potential benefits of using UHF EPC/RFID tags, along with an EPC/RFID-based track-and-trace platform, to increase supply chain visibility and traceability of livestock and processed meat.

The need for traceability in the food industry is gaining momentum, and web-based track-and-trace solutions, like ezTRACK™, can provide end-to-end supply chain visibility in order to facilitate more efficient logistics management and faster response to market needs. With the EPC Standards in place, information from tagged shipments can be read, sent and queried in a standardized way and provide meaningful business information for companies to make timely and precise management decisions.

ANZCO Foods sells its meat products in Europe, North American and Asia. The company's IT manager, Mr. Mark Rance, agrees the time is coming when companies like his, with a global footprint, must examine the business benefits of RFID and track-and-trace solutions.



背景

RFID Pathfinder Group 及 Rezare Systems 於早前合作研發並成功推出了兩個以第二代超高頻無線射頻識別 (UHF EPC Gen 2) 技術追蹤動物流向的試驗項目。以此成功經驗為藍本，GS1 新西蘭分會與新西蘭牛肉採購及加工商 ANZCO Foods 於2010年4月聯手推出了一個產品追溯及識別試驗項目，冀透過以產品電子代碼/無線射頻識別 (EPC/RFID) 技術為基礎的解決方案及EPCIS網絡追蹤10頭由飼養場運送至牛肉批發商的牛隻。

挑戰

今天，要成功管理食品物流供應鏈，必須依賴有效的產品追蹤及追溯技術。製造商、加工廠、物流供應商及零售商同樣面對著一連串的新挑戰，首先，消費者愈來愈重視食物的質量及安全度，同時，監管機構亦要求業界加快回應食品安全事故。故此，牲畜業必須採用開放及標準化的全球供應鏈系統，方可透過高效及準確的方法追溯貨物的流向。

方案

香港貨品編碼協會的縱橫網™是一個以EPC/RFID為基礎的追蹤及追溯平台，協助業界透過RFID標籤與貿易夥伴就產品供應鏈資訊進行溝通與交流。於供應鏈上不同RFID閱讀點讀取的數據，可讓合作夥伴有效追蹤及追溯貨品流及資訊流。企業可透過該平台更有效地管理供應鏈，及更迅速地回應市場的需求，同時可藉此滿足國際出口市場的安全標準和規範要求。

在GS1新西蘭分會推出的牲畜追溯試點項目中，來自新西蘭阿什伯頓一個屬於ANZCO Foods農場的10頭公牛，耳朵上都附有載著產品電子代碼的超高頻RFID標籤。工作人員將國際貨品編碼序號寫入每個耳朵標籤內，其後這群牲畜被運送到ANZCO Foods旗下的一家肉類加工廠。牛隻經屠宰後，貼在牛隻屍體上的RFID標籤便會被寫入貨物容器序號。稍後，牛肉會經過加工並在完成後裝箱，工作人員便將國際貨品編碼序號寫入貼在紙箱的RFID標籤內。

上述標籤會於供應鏈的農場至零售點9個不同的位置被讀取。每個標籤的讀取位置也會被寫入一個國際位置編碼 (GLN)。

試驗項目使用了由不同供應商所提供的UHF RFID Gen 2標籤來追蹤牛隻和其屍體，以及包裝紙箱。使用不同供應商的標籤及讀寫器是欲證明產品電子代碼標準能與現成的技術共融。GS1新西蘭分會總經理Mr. Gary Hartley表示：「我們要證明

不同供應商所提供的各種標籤及讀寫器能在運作上皆有互通性。」

試驗項目中的所有數據均被成功讀取，並以XML格式傳送到香港貨品編碼協會的縱橫網™平台上，以便客戶可以追溯貨物的流向。

效益

上述的試驗項目，成功展示使用UHF EPC/RFID標籤及以EPC/RFID為基礎的追蹤及追溯平台的潛在效益，能有效提升供應鏈透明度，同時增加追溯供應鏈上牲畜與加工肉類的能力。

產品追溯能力對食品工業愈來愈重要，像縱橫網™一樣以互聯網為基礎之產品追蹤及追溯解決方案，能透過提升點對點的供應鏈透明度來促進有效的物流管理，及加快回應市場需求。採納了產品電子代碼標準後，可透過閱讀貼在貨物上的標籤，便能根據全球認可的標準傳遞及查閱相關的運作資訊，協助企業作出快捷及準確的管理決策。

ANZCO Foods的食品銷售網遍佈歐洲，北美洲及亞洲。該公司資訊科技經理Mr. Mark Rance指出，就如ANZCO Foods一樣，所有足跡遍及全球的企業，在此時此刻都必須努力發掘RFID與產品追蹤及追溯解決方案的商業效益。



WHAT IS GS1 STANDARDS

GS1 標準是甚麼?

The GS1 System of Standards is a set of global standards that enable the unique identification of all trade items, processes, services, assets, companies and locations at any point in the supply chain. As a global language for efficient business, GS1 Standards enable companies of all sizes to identify, capture, and share information throughout the global value chain.

GS1 標準是一套全球性標準，可用作識別供應鏈上的所有貨品、流程、服務、資產、企業及任何位置。作為一套能提高業務運作效率之全球性商業語言，GS1 標準可有效協助不同規模的企業識別、擷取及分享在全球價值鏈上的資料。

GS1 IDENTIFICATION KEYS

GS1 識別碼

Global Trade Item Number (GTIN): is used to uniquely identify trade items, which are products and services that are priced, ordered, or invoiced at any point in the supply chain, whether at the checkout, in a warehouse, in an electronic catalogue.

國際貨品編碼：用作識別於供應鏈上經過標價，被訂購及被記錄在發票上的貿易貨品及服務，而該貿易單可位處於收銀處、倉庫、或是電子目錄內。

e.g. 例：**4 891668 326698**

Global Location Number (GLN): is used to identify any locations and legal entities such as a company in the world in a unique way.

國際位置編碼：用作識別一個實體位置或法定的單位，例如是世界上最家公司的位置。

e.g. 例：**(410) 4891668000008**

Serial Shipping Container Code (SSCC): is used to identify individual logistic units such as cartons, pallets, or air cargo containers of trade items.

貨運容器序號：用作識別物流單元，例如是貨箱、貨板或運載貿易單位的空運貨櫃箱。

e.g. 例：**(00) 048916680000000015**

Global Returnable Asset Identifier (GRAI): is used to identify a reusable package or transport equipment of a certain value such as a gas cylinder, pallet or a crate.

全球可回收資產識別碼：用作識別循環再用的包裝或具一定價值的交通器材，例如是氣瓶、貨板或條板箱。

Global Individual Asset Identifier (GIAI): is used to uniquely identify fixed assets of any value within a company such as office equipments, computers, vehicles and equipments.

全球個體資產識別碼：全球個體資產識別碼乃用作識別企業內具任何價值的不動產，例如是辦公室設備、電腦、交通工具及器材。

Global Service Relation Number (GSRN): is used to identify a service relationship between a business and a client, such as club membership, loyalty programs and hospital admissions.

全球服務關係識別碼：用作識別企業及客戶的服務關係，例如是會所會籍、忠誠計劃及入住醫院服務。

Global Document Type Identifier (GDTI): is used to identify a document by type, such as proof of ownership, invoice and graduate certificate.

全球文件類別識別碼：用作識別文件類別，例如是擁有權證明書、發票及畢業證書。

Global Shipment Identification Number (GSIN): is used to identify a grouping of logistics units that comprise a shipment referencing a dispatch advice and/or Bill of Lading (BOL).

全球貨運識別碼：用作識別一組物流單元，該物流單元附有待運通知及/或提單。

Global Identification Number for Consignment (GINC): is used to identify a logical grouping of logistics units that are assembled to be transported together under one transport document.

全球托運識別碼：用作識別一組具邏輯性的物流單元，該組單元經組合並根據一張運送單據付運。

GS1 DATA CARRIERS GS1資料載體

The GS1 System of Standards has an entire portfolio of Data Carriers, with different kinds of media that can hold GS1 ID Keys and attribute data. GS1 Data Carriers include:

GS1標準包含一個完整的資料載體組合，當中有不同的媒體可以載附GS1識別碼及相關的資料。GS1資料載體包括：

EAN/UPC BarCode: is a barcode on a trade item scanned at any retail point-of-sale (POS) anywhere in the world for which is longest-established and most widely used.

EAN/UPC 條碼： EAN/UPC 條碼是一種印於貨品上的條碼，可於世界上任何一個地方的零售點被掃描，亦是歷史最長及最被廣泛使用的條碼。

e.g. 例：

GS1-128 BarCode: is the gold standard for logistics as it can carry all GS1 ID Keys, and variable information like serial numbers, expiration dates and measures.

GS1-128條碼： 是物流業的最高標準，能載附所有GS1識別碼以及序號、到期日與量度單位等可變資訊。

e.g. 例：

GS1 DataBar™: its symbol can carry more information and identify smaller items than the current GS1 BarCode Symbol which can also be scanned at retail point-of-sale.

GS1 DataBar™ 條碼： 比起現行的GS1條碼，此條碼能載附更多數據、識別更細小的物件，同時亦可於零售點被掃描。

e.g. 例：

GS1 DataMatrix: is a 2-D (two-dimensional) barcode that allows a wealth of information to be encoded in a very compact space as compared with conventional barcodes.

GS1 DataMatrix： 是一種二維條碼，相對於傳統的條碼，它能以極小的空間儲存大量的數據。

e.g. 例：

GS1 EPC/RFID tags: use Radio Frequency Identification (RFID) technology to encode GS1 ID Keys in the GS1 Electronic Product Code (EPC).

GS1產品電子代碼/無線射頻識別標籤： GS1產品電子代碼/無線射頻識別標籤運用無線射頻識別技術將GS1識別碼編碼於產品電子代碼內。

The Electronic Product Code (EPC): is an emerging way to globally identify physical objects, loads, locations, assets, and other entities whose use is to be tracked with Radio Frequency Identification (RFID) tags or barcodes via the EPC Network.

產品電子代碼： 透過無線射頻識別標籤，或經產品電子代碼網絡以條碼來識別在全球範圍內的實物、貨件、位置、資產及其他單位。

GS1 COMMUNICATION STANDARDS GS1傳遞訊息標準

GS1 Global Data Synchronization Network (GDSN): is an internet-based, interconnected network of interoperable data pools and the GS1 Global Registry® that enable companies around the globe to access and exchange standardized and synchronized supply chain data with their trading partners securely in real-time.

GS1全球數據同步網絡： 是一個以互聯網為基礎，與互通數據池及GS1全球註冊資料庫聯繫著的網絡，讓世界各地的企業可以實時並安全地互相交換標準化及同步化的供應鏈資料。

GS1 eCom: provides two complementary standards, GS1 EANCOM® and GS1 XML, to enable the electronic transaction exchanges to be smoothly compatible, between companies and also across borders and across industries.

GS1電子商貿： 為顧客提供兩個息息相關的標準，包括GS1 EANCOM®及GS1 XML，可讓公司與公司之間進行暢順無阻的電子交易，此流程甚至能以跨境與跨行業的方式進行。

Electronic Product Code Information Services (EPCIS): is an interface standard for exchanging event-related information to track progress of objects as they move through the supply chain.

產品電子代碼訊息服務： 是一個電腦介面的標準，可讓企業交換與物件狀態有關的資訊，從而追蹤物件在供應鏈上的位置。

GS1 HONG KONG SOLUTIONS 香港貨品編碼協會解決方案



THE GLOBAL LANGUAGE OF BUSINESS

Enhancing Efficiency, Visibility and Quality

GS1 SYSTEM OF STANDARDS

FUNCTIONS

GS1 HONG KONG SOLUTIONS



Global Standards for Identification and Data Capture

- GS1 BarCode numbers registration and administration Supporting local businesses with the implementation of GS1 BarCode System and the Barcode quality assurance



Global Standards for Electronic Business Messaging



- An industry-wide B2B platform facilitating electronic transaction messaging via EDI and Web to support electronic ordering, invoicing and shipment notices



Global Network for Data Synchronization



- A certified product information synchronization platform that interoperates with the GS1 Global Registry enabling exchange of synchronized, accurate and up-to-date product information between buyers and suppliers



Global Standards for RFID-based Identification



- EPCIS-standard traceability network enabling real-time visibility of goods and information flow from point of manufacturing to point of destination



- A product authentication solution powered by the EPCIS network enabling supply chain e-pedigree visibility

SUPPLY CHAIN MANAGEMENT PRACTICES

Industry-wide Diagnostic Tool for Supply Chain Improvement



- The world's proven KPI-driven management model helping businesses uplift their competencies for supply chain optimization



▪ A product and location information portal allowing businesses to access and share quality data using GS1 Keys like GTIN and GLN via the Internet, mobile devices and smart kiosk

▪ **Global Electronic Party Information Registry (GEPIR)**
GEPIR is a global online directory of suppliers, with information of over 1 million companies worldwide, creating boundless business opportunities

BENEFITS

- Enabling sharing of quality data
- Optimizing operational efficiency

- Accelerating B2B communication

▪ **Cold Chain Management Solution**

A solution powered by EPCIS network that captures real-time data including temperature, humidity, time, location of products in transit such as food and pharmaceuticals



▪ An industry-wide platform to create the awareness, nurture the development and drive the adoption of RFID industry solutions

- Achieving supply chain visibility
- Enhancing anti-counterfeiting for brand integrity
- Assuring product quality with speedy product recall

- Facilitating continuous improvement in supply chain performance

If you are a member of GS1 Hong Kong and would like your success story with the use of GS1 Standards being showcased, please contact us at **(852) 2861 2819** or email to **info@gs1hk.org**.

若閣下是香港貨品編碼協會的會員
並欲分享貴公司運用GS1標準的成功實務個案，
請致電 **(852) 2861 2819** 或
電郵至 **info@gs1hk.org** 與我們聯絡。



Scan this 2-D barcode to download the casebook.

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