GS1 Hong Kong

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EFFICIENCY

VISIBILITY

QUALITY

Building Stronger Business & Consumer Ties with Global Standards

SAFETY

BUSINESS CASEBOOK

2011

Building Stronger Business and Consumer Ties with Global Standards

全球化標準鞏固企業競爭優勢 建立緊密客户關係

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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 and dedicated 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 BarCodes, B2B e-Commerce services, Global Data Synchronization (GDS) and Electronic Product Code™/Radio Frequency Identification (EPC/RFID). The organization organizes and imparts distinctive industry awards to recognize achievements of corporations in various sectors; and 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 150 countries and more than 20 industries including FMCG, food, healthcare, retail, logistics and transportation worldwide for more than three decades.

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、GS1全球數據同步、以及產品電子代碼／無線射頻識別。香港貨品編碼協會一直積極透過不同的獎項，以表揚在各行各業表現卓越的企業；並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組織成立至今逾30年，現時已擁有逾100萬個企業會員，遍佈全球超過150個國家，覆蓋20多個行業，包括快速流轉消費品、食品、醫療護理、零售、物流及運輸等行業。

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

In the past two decades, GS1 Hong Kong has provided more than 6,000 local enterprises from a wide range of industry sectors including retail, food and produce, healthcare and logistics and transportation with our standard-based solutions. From 2010 to 2011, GS1 Hong Kong successfully forged excellent collaboration and projects with foreign and local governments, overseas vineyard, as well as homegrown small-and-medium enterprises. Through these partnerships, we have recorded 7 successful business stories which have compiled in this casebook with a theme 'Building stronger business and consumer ties with global standards'. These case studies will provide you insights on how to effectively optimize operational efficiency and increase supply chain visibility in today's modern supply chain.

Anna Lin 林潔貽

Chief Executive,
GS1 Hong Kong
香港貨品編碼協會總裁

In fostering better supply chain management capability, GS1 Hong Kong continues to evolve to meet the requirements and expectations of industries and consumers by constantly developing and adding enhanced features and practical applications to our standard-based solutions. As companies are empowered with our new technology, they are able to overcome business challenges, as well as effectively establish stronger relationship consumers.

'Building stronger business and consumer ties with global standards' presents the significant benefits to consumers with our standard-based solutions by uplifting their safety, and also assuring them of getting only the best quality products and services in the market. Since our establishment, GS1 Hong Kong have been striving to develop and offer world-class and highly reliable supply chain solutions based on global standards that enable businesses to maximize their business potential in the highly competitive global market as well as offer a better living environment for the community.

在過去二十年，香港貨品編碼協會為逾6,000家本地企業提供以標準為基礎的解決方案，這些企業涵蓋各行各業，包括零售、食品及農產品、醫療護理、物流與運輸業。於2010至2011年，本會更成功與海外及本地的政府、海外的酒莊園，以及本地的中小企業共同協作及發展多個項目，成績斐然。本會從上述的合作計劃中選出7個成功案例，輯錄在這本「全球化標準鞏固企業競爭優勢　建立緊密客戶關係」的特刊中。透過這些成功案例，讓各界了解如何在現今的供應鏈上更有效地優化業務運作效率及增加供應鏈透明度。

香港貨品編碼協會為提高業界在供應鏈管理上的知識與技術水平，將繼續加強本會的職能，積極開發以標準為基礎的解決方案，並且加入提升了的功能和實務應用，以回應業界與消費者的期望與需求。本會為業界提供的技術支援，將有助它們解決商業上的難題，成功與客戶建立更緊密的連繫。

本特刊「全球化標準鞏固企業競爭優勢　建立緊密客戶關係」同時讓消費者了解可透過本會的解決方案提升安全度及確保他們能夠享有市場上最優質的產品與服務的效益。香港貨品編碼協會自成立以來，一直積極開發並為業界提供以全球標準為基礎、具國際水平、高度可靠的供應鏈解決方案，矢志協助業界在全球競爭的市場上發揮最高的潛能，並為社會大眾提供更優質的生活環境。

Centre for Food Safety, Hong Kong Food Council & Major Supermarket Chains

食物安全中心、香港食品委員會及各大連鎖超級市場

"Hong Kong, as a free trade zone, allows products from various places worldwide to hit the local market. As such, there is a need to promote food safety and maintain public health protection. A safety alert system initiated by GS1 Hong Kong can help foster the trade and position Hong Kong as 'safe and excellent' city to live," said Mr. Simon Wong, J.P., Chairman of Hong Kong Food Council.

香港食品委員會理事長黃家和太平紳士表示：「香港作為一個自由貿易區，產品均來自世界各地，故確保食品的安全及公眾健康尤為重要。香港貨品編碼協會提供的安全警報系統方案，有助推動香港整體貿易，成為一個安全及優質的都市。」

GS1 BarCodes Help Protect Consumer Safety by Preventing the Sale of Unsafe Products

透過GS1條碼阻截出售不安全產品以保障消費者安全

BUSINESS BENEFIT 商業效益

Streamlining alert channel and reducing the time in stopping unsafe products from hitting the local market
簡化警報傳達渠道　加快阻截有問題產品流入本地市場

✓ **Optimize Operational Efficiency 優化運作效率**

CONSUMER BENEFIT 消費者效益

Safeguarding consumers by ensuring they only buy safe product
保障消費者只購入安全產品

✓ **Uplift Consumer Safety 提升消費者安全度**

SOLUTIONS APPLIED 推行方案

Unsafe Products Prevention Program (UPPP)
防預不安全產品項目

Food Safety Alert System via BarcodePlus[1]
BarcodePlus[1]支援的安全食品警報系統

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

[1] BarcodePlus: A product and location information portal allowing users to access and share quality data using GS1 Keys like GTIN and GLN via the internet and smart kiosk.
BarcodePlus: 透過GS1識別碼如國際貨品編碼及國際位置編碼，能使不同用戶經由互聯網及智能資訊站擷取並分享產品及位置資料的資訊平台。

Centre for Food Safety, Hong Kong Food Council & Major Supermarket Chains

BACKGROUND

Hong Kong has more than 500 supermarket chain stores, providing the public with over 10,000 product choices sourced from various international markets. These stores amply supply the daily needs of the consumers including staple products such as dairy goods, imported and local beverages, and fresh & frozen food items. With such variety of products available in small and large supermarkets in Hong Kong, there is an urgent need to implement strict food safety control measures to ensure only food products that meet international and local quality and testing measures are sold in the market.

Established in May 2006 under the Food and Environmental Hygiene Department, the Centre for Food Safety (CFS) is the foremost food authority responsible in building stakeholders' confidence in protecting the population's health safety. Its mission is to ensure that only safe food products fit for consumption are sold in Hong Kong. To achieve this aim, CFS collaborates with the HKSAR Government, food trade industry and the consumers. Part of CFS's role is to constantly monitor food safety incidents that occur in different places in the world and assess their possible public health implications in case it reaches the local community. Once an outbreak occurs, CFS quickly distributes relevant information to the industry and the public in order to take precautionary actions to impede the spread of the contamination.

The Hong Kong Food Council, established since 1984, is an independent and not-for-profit organization that proactively and constantly works to promote food hygiene and securing public's health, as well as protects the business interests of the local food industry.

CHALLENGES

Responding to increasing community concerns about food safety, CFS introduced the Rapid Alert System (RAS) in 2008. This system enables CFS to send a RAS form via email or fax that lists the names and brands of contaminated products, the reasons why they are being recalled, and alert concerned organizations in the food sector of the findings. As soon as the food industry receives the notice, they quickly distribute notification alert that includes immediate and appropriate course of action to their outlets and franchise stores in order to prevent impending public health implications. Possible actions include a quick halt in selling identified infected products or a recall of said food products.

However, food sources come from different places worldwide which pose a challenge in immediately responding to the alert without a common identification. Also, the success in implementing quick actions to stop selling the products or immediately recalling them from store shelves still heavily relies on people intervention. Due to risk-prone manual recall process, it is possible that consumers might have already purchased or picked the unsafe products from stores even before the alert notice is disseminated.

SOLUTIONS

With an aim of further safeguarding public's safety and supporting traders in proactively stopping the sale of or recalling any unsafe food products, GS1 Hong Kong initiated the Unsafe Product Prevention Program (UPPP). The program is supported by CFS, Hong Kong Food Council and major supermarkets including A.S. Watson Group (Hong Kong) Limited, AEON Stores (Hong Kong) Co., Limited, China Resources Vanguard (Hong Kong) Co., Limited, City Super Limited, Dairy Farm International Holdings Limited, Dah Chong Hong Holdings Limited, Kampery Group, Nuance-Watson (HK) Limited.

With the support from CFS, the unique Global Trade Item Number (GTIN) is appended in the RAS form for unsafe product identification. GS1 Hong Kong maps GTIN via BarcodePlus to generate relative internal inventory codes used by different supermarket chains. The GS1 Hong Kong Food Safety Alert System then generates a standard GS1 electronic alert message using the GTINs with internal inventory code and unsafe product information that is communicated to retailers via email and SMS. This solution helps the retailers to respond to the alert and activate the block-of-sale at POS quickly.

BENEFITS

BarCode standard brings efficient and effective solution for industry

GS1 Hong Kong, CFS and major supermarket chains launched the UPPP in May 2011. The program complements existing rapid alert and enables efficient registration of product BarCode for quick retrieval of unsafe product information. It also enables quick and simultaneous dissemination of this information among supermarket chains. Besides providing effective communication channel to various partners to minimize human errors in selling unsafe goods, it also further reinforces consumer protection. This means consumers need not worry about purchasing contaminated food products from supermarkets that use the system.

Besides the alert provided via BarcodePlus, the GTIN also acts as a gatekeeper to avoid defective or unsafe products from hitting the local market for public consumption. It works when the EAN/UPC BarCode of a unsafe product is scanned at stores, the POS monitor will immediately display a message to warn that the item is on hold, thus preventing the product from being purchased by the consumer at the checkout counter.

Protect public safety as well as good image of Hong Kong

"Hong Kong, as a free trade zone, allows products from various places worldwide to hit the local market. As such, there is a need to promote food safety and maintain public health protection. A safety alert system initiated by GS1 Hong Kong can help foster the welfare of the food trade and position Hong Kong as a 'safe and excellent' city to live," said Mr. Simon Wong, J.P., Chairman of Hong Kong Food Council.

食物安全中心、香港食品委員會及各大連鎖超級市場

背景

香港現有超過500家連鎖超級市場，為大眾提供來自世界各地逾10,000種產品。為滿足消費者每日生活所需，各超市均會出售如奶類製品、進口或本地飲料、新鮮及冷藏食品等。由於產品種類繁多，因此一套嚴謹的食物安全監管機制能有效確保於本港出售的食品符合國際和本地的品質及測試標準。

食物安全中心（食安中心）於2006年5月成立，由食物環境衛生署管理。該中心致力成為各方信賴的食物監管領導機構，保障市民健康。食安中心一直積極透過與香港特區政府、食品行業及消費者三方的協作，確保在香港出售的食品之安全。此外，食安中心亦會密切關注各地發生的食品安全事故，以防有關事故對香港造成影響。若發現食品安全問題，該中心會盡快向業界及市民發放有關資訊，以便及早採取適當應變以防止問題蔓延。

香港食品委員會於1984年成立，是一個獨立的非牟利組織。該委員會一直積極推動食品安全及公共衛生之重要，並竭力保障香港食品行業的利益。

挑戰

公眾對食品安全愈來愈重視，為回應這方面的需求，食安中心於2008年推出快速警報系統(RAS)。通過這個系統，食安中心會表列出不安全產品之名稱、回收原因及對業界的建議，透過電郵或傳真方式發送到有關之食品公司及各零售機構。業界收到通知後，便可以馬上向其銷售點及特許經營商店發出警報，即時採取適當的行動，包括即時停售及回收有關食品，以避免有關食品對市民健康造成影響。

由於眾多食品均來自世界各國不同的生產地，若缺乏一套有效的產品識別系統，要迅速對預警作出回應實非易事。此外，要快速阻截產品在市場出售，或馬上從商店貨架回收有關產品，仍需依賴人手執行。故此，在此情況下，員工可能於通報後因未能即時將產品下架，而令市民有機會從貨架中取得有關不安全的產品。

方案

為進一步保障公眾安全及協助業界主動阻截出售或回收不安全產品，香港貨品編碼協會推出「防預不安全產品項目」。該項目獲香港政府部門與業界的支持，包括食物安全中心、香港食品委員會、各主要的超級市場包括屈臣氏集團（香港）有限公司、永旺（香港）百貨有限公司、華潤萬家（香港）有限公司、City Super有限公司、牛奶公司集團、大昌行集團有限公司、金百加集團及 Nuance-Watson (HK) Limited。

透過食安中心的支持，將獨一無二的國際貨品編碼加進快速警報系統表格內，令香港貨品編碼協會可經由BarcodePlus網頁，為不同連鎖超級市場搜尋相關的內部倉存編碼。安全食品警報系統繼而會透過國際貨品編碼建立一個標準化的GS1電子預警訊息、連同內部產品編碼及不安全產品資訊，經由電郵與短訊發送予零售商，以協助對方迅速啟動設於銷售點系統內的阻截銷售功能。

效益

透過條碼標準為業界提供快捷有效的解決方案

香港貨品編碼協會與食安中心及各主要的超級市場於2011年5月合作推出了「防預不安全產品項目」。該項目為現行的快速警報系統提供更有效的支援，讓業界可以透過掃瞄產品條碼快速地擷取不安全產品的資料，使連鎖超級市場之間的訊息傳遞變得更快捷及即時化。此外，業界夥伴通過更有效率的訊息互通，成功減低了人為錯誤的機會，令阻截出售不安全產品達到成效，及加強對消費者的安全保障。這樣，消費者便毋須擔心會在配備了這套系統的超級市場買到不安全產品。

除了透過BarcodePlus而建立的警報外，國際貨品編碼更可就防止有問題或不安全產品流入市場提供一道防線。每當發出食物安全警報，員工於付款櫃位掃瞄產品的EAN/UPC條碼時，若發現為不安全產品，屏幕便會顯示出暫停出售的字句，以阻截消費者購買有關產品。

保障市民安全　提升香港優良形象

香港食品委員會理事長黃家和太平紳士表示：「香港作為一個自由貿易區，產品均來自世界各地，故確保食品的安全及公眾健康尤為重要。香港貨品編碼協會提供的安全警報系統方案，有助推動香港整體貿易，成為一個安全及優質的都市。」

Max Choice Corporation Limited
大棧有限公司

"We successfully differentiated our brand image with the competitors by using GS1 Hong Kong solutions. In fact, our staffs are able to learn the latest retail trend which helps the company in keeping pace with market competition, and offers them valuable knowledge for their own advancement," said Mr. Sam Ng, Managing Director, Max Choice Corporation Limited.

大棧有限公司董事總經理吳鴻森先生表示：「香港貨品編碼協會為我們提供的方案，有助公司於競爭激烈的市場中成功提升和突出品牌形象。事實上，我們的員工從而亦了解到零售業最新的市場趨勢，不但為個人增值，更令公司保持競爭優勢。」

Building Corporate Image and Raising Shopping Experience with Standard-based Product Authentication and Extended Product Information

透過以標準為基礎的產品驗證方案與延伸性產品資訊建立企業形象及提升購物樂趣

BUSINESS BENEFIT 商業效益

Facilitate 'first-in, first-out' inventory management and protect brand integrity
維護先入先出的倉存管理原則　以保護品牌信譽

✓ **Increase Supply Chain Visibility 增加供應鏈透明度**

CONSUMER BENEFIT 消費者效益

Increasing purchasing confident of luxury food products with extended product information
透過延伸性產品資訊　增強消費者購買高級食品的信心

✓ **Assuring Product Quality 確保產品質素**

SOLUTIONS APPLIED 推行方案

BarcodePlus[1]
Genuine Product Authentication[2] 「正貨」驗證[2]

GS1 STANDARDS USED 應用的GS1標準

SGTIN (Serialized Global Trade Item Number)　國際貨品編碼序號

1 BarcodePlus: A product and location information portal allowing users to access and share quality data using GS1 Keys like GTIN and GLN via the internet and smart kiosk.
BarcodePlus: 透過GS1識別碼如國際貨品編碼及國際位置編碼，能使不同用戶經由互聯網及智能資訊站擷取並分享產品及位置資料的資訊平台。

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。

Max Choice Corporation Limited

BACKGROUND

Max Choice Corporation Limited (Max Choice), a new-branded retailer has opened 3 outlets in Causeway Bay, Tsuen Wan and Tuen Mum in September 2011. It offers international fine wine and health food products including edible bird's nest, cordyceps, ginseng, dried abalone, and frozen seafood.

CHALLENGES

As part of its aim of providing consumers with the best quality products and value-added service, Max Choice sources fine health food and beverage products from local and international suppliers. Although some of the sourced products are labeled with GS1 BarCodes, majority of them have no barcode as well as GS1 identification keys attached, thus posing inventory management issue for Max Choice. In addition to that, consumers are now becoming more concerned about the authenticity of high-value health food and wine products. With today's ubiquitous mobile technology, consumers can easily retrieve extended information including complimentary dish for specific wine or related health products beyond the limited packaging can provide. It is important that only authenticated products are offered to consumers to gain their trust.

"We regularly faced several challenges, thus we had to find a standard-based inventory management solution to help our employees easily identify every products during stock-in, stock-out, stock-take and check-out from warehouse to different outlets. Second, we would like to have a solution with full visibility and enable 'first-in, first-out' inventory management as part our corporate aim of providing consumers the best quality products; third, to offer value-added service , the solution must allow consumers to retrieve extended information from packaging; and lastly the capability to authenticate products to gain consumers' confidence and build customer loyalty in our future marketing campaigns," said Ms. Yinness Lee, Operations Director, Max Choice.

SOLUTIONS

To address the above challenges, Max Choice decided to apply GS1 Serialized Global Trade Item Number (SGTIN) and Genuine Product Authentication Solution on every high-value products. Instead of using the widely used linear barcode for retail, a 2-D barcode is used to store the SGTIN with extended product information on the packaging. Besides, a specially designed 2-D barcode product smart label on the surface, a unique verification code is added under the surface's layer that consumers can see when they peel it off for authentication purpose.

When the products are received at the warehouse, the staff assigns a SGTIN with stock-in time on each product and then updates the inventory record accordingly. During the stock-out process, the staff can refer to the SGTIN sequence and identify which specific item had to be transported to stores for consumer purchase, thus maintaining the product freshness.

At the store level, consumers are able to retrieve unique product features by scanning either the GTIN or SGTIN-embedded 2-D barcode using barcode-scanner-enabled mobile device or in-store smart kiosks. To authenticate the product, the consumer can peel-off the product's smart label surface layer and register the unique verification code online via BarcodePlus to validate the product, and as gain loyalty points to join Max Choice's promotional campaigns.

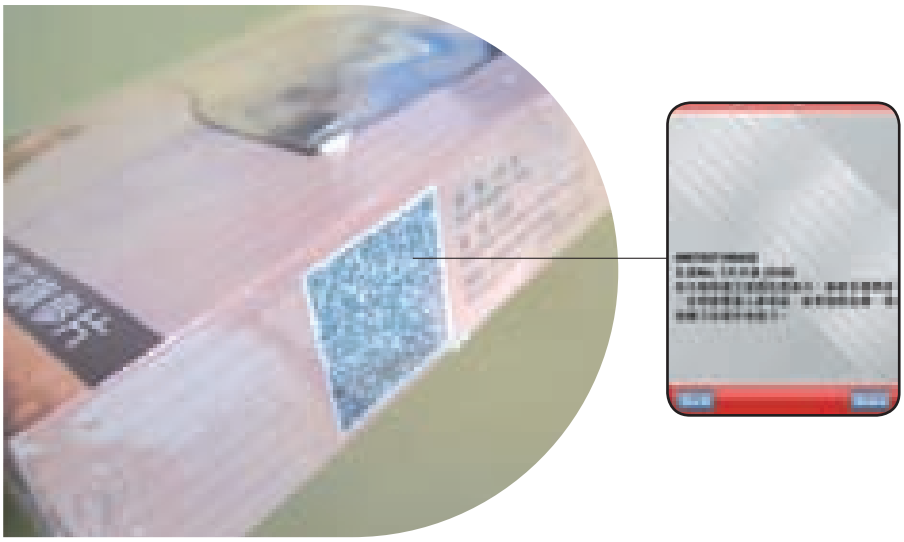
BENEFITS

Enhancing consumers' buying experience: guaranteeing product quality and self-service shopping

By applying SGTIN and stored with additional product information in 2-D barcode for products, Max Choice enables 'first-in, first-out' inventory management, allowing consumers to learn more about product features by scanning the barcode. "We have increased visibility and flexibility in managing our inventory, hence ensuring that consumers only enjoy fresh products all the time. Furthermore, with our self-service shopping features, consumers can enjoy conveniently retrieve extended product information via their mobile device or in-store smart kiosk," said Ms. Lee. "In addition, Genuine Product Authentication Solution protects our customers and allows us to gain their trusts by understanding their consumption traits to build up loyalty through different marketing campaigns."

Learn new initiatives to elevate corporate image and excel in industry

The deployment of the solution is a new strategy compared with other traditional Chinese food luxury outlets. However, the company is satisfied with the results and acknowledged its impact to employees and overall industry through new initiatives. "We successfully differentiated our brand image with the competitors by using GS1 Hong Kong solutions. In fact, our staff are able to learn the latest retail trend which helps the company to keep pace with market competition, and offers them valuable knowledge for their own advancement," said Mr. Sam Ng, Managing Director, Max Choice.



背景

品牌零售商大棧有限公司（大棧）於2011年9月開業，分別於銅鑼灣、荃灣及屯門開設了三家分店，為客戶提供來自世界各地的名酒佳釀、健康食品，當中包括燕窩、冬蟲夏草、人參、乾鮑及急凍食品。

挑戰

大棧一直致力為消費者提供優質產品及創優增值的服務。為此，公司積極從本地及海外採購高品質的健康食品與飲料。雖然公司購入的部份產品已附有GS1條碼，但當中亦有大部份連GS1識別碼也沒有貼上，因而構成了倉存管理上的問題。此外，由於消費者對高級健康食品與高價洋酒的真偽愈來愈關注，亦因現今流動電話科技日益發達，消費者可以輕易地擷取產品包裝上無法提供的延伸性資訊，如與某款洋酒或健康食品相配的菜餚。因此，大棧相信只有正貨產品才能進一步贏取顧客的信任。

大棧營運總監李燕翔女士表示：「公司在業務運作上經常面對不同的挑戰，故此我們必須找到一套以標準為基礎的解決方案，以便員工在執行入貨、出貨、盤點、及出倉流程時能輕易地識別個別產品。此外，我們亦期望這套方案能夠為公司提供百分百的供應鏈透明度，有助我們執行先入先出的倉存管理流程，以達成公司的企業目標，為顧客提供最優質的產品。另外，這套方案能向消費者提供創優增值的服務，讓他們可經由產品包裝檢索延伸性產品資訊。公司同時期望該方案可以提供產品驗證的功能，從而大大提高消費者對有關產品的信心。日後，公司將透過有效的市場推廣計劃配合產品驗證服務，以提高消費者的品牌忠誠度。」

方案

為應對上述的挑戰，大棧有限公司決定為每件高級產品申請GS1國際貨品編碼序號，並採納「正貨」驗證方案。零售業界在產品包裝上一向沿用一維條碼，大棧則改為使用二維條碼，以儲存產品延伸性資訊及國際貨品編碼序號。此外，該公司亦特製了兩層的二維條碼智能產品標籤，消費者若要辨識產品的真偽，只須撕去基本二維條碼標籤的表層，便可發現一個獨一無二的驗證碼，以便確認產品為正貨。

當產品送抵倉庫後，該公司的員工便會為每件產品編配一個國際貨品編碼序號並加上入貨時間，繼而把相關的倉存紀錄更新到系統內。在執行出貨的流程時，員工可以根據國際貨品編碼序號的次序，識別出必須付運到零售商店的指定貨品，以便顧客可以買到最新鮮的產品。

在商店內，消費者可以利用配備了條碼掃瞄功能的流動電話設備，或在商店內的智能資訊站，透過掃瞄國際貨品編碼，或儲存了國際貨品編碼序號的二維條碼，檢索獨一無二的產品資料。消費者若要辨識產品的真偽，只須撕去智能產品標籤的表層，找出驗證碼，再在BarcodePlus網頁上輸入驗證碼，便可確認產品為正貨，消費者更可藉此賺取分數，參與大棧為顧客而設的推廣計劃。

效益

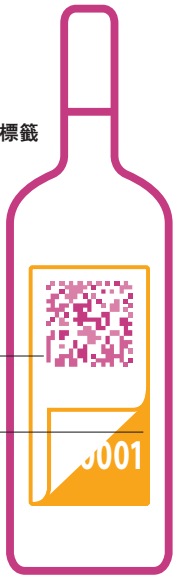
提升購物樂趣　確保產品質素 以便顧客進行自助購物

大棧有限公司透過使用國際貨品編碼序號，及利用貼在產品上的二維條碼儲存額外的產品資訊，有效執行「先入先出」的倉存管理流程，讓消費者可以透過掃瞄條碼獲取更多產品資訊。李女士表示：「我們成功地提高了倉存管理的透明度與彈性，讓消費者可以隨時買到新鮮的食品。此外，公司為顧客提供了自助購物的方便，讓他們隨時利用流動電話或店內的智能資訊站檢索延伸性產品資訊。我們更為顧客提供了「正貨」驗證服務，這項服務既能保障消費者的安全，亦能讓我們加深了解消費者的購物習慣。日後，公司將透過不同的市場推廣計劃配合產品驗證服務，以提高消費者的品牌忠誠度。」

透過嶄新的方案　提升公司的企業形象及在業界的地位

與其他傳統的高級中國食品零售店相比，大棧採納上述的方案實在是一個嶄新的商業策略。事實上，公司對其成果感到相當滿意，並肯定員工及整體業務的影響與貢獻。大棧有限公司董事總經理吳鴻森先生表示：「香港貨品編碼協會為我們提供的方案，有助公司於競爭激烈的市場中成功提升和突出品牌形象。事實上，我們的員工亦了解到零售業最新的市場趨勢，不但為個人增值，更使公司保持競爭優勢。」

Max Choice Product Smart Label
大棧有限公司智能產品標籤



Label Surface 標籤表層
2-D barcode with SGTIN and Extended Product Information
儲存了國際貨品編碼序號與延伸性產品資訊的二維條碼

Label Bottom 標籤底層
Product Authentication Verification Code
產品驗證碼

Benefits
效益

Max Choice 大棧有限公司
Facilitates 'first-in, first-out' inventory management flexibility
方便執行富操作彈性之「先入先出」倉存管理流程

Consumers 消費者
Retrieves extended product information by scanning the barcode through mobile or smart kiosk
經由流動電話或智能資訊站掃瞄條碼 藉以檢索延伸性產品資訊

Max Choice 大棧有限公司
Captures product information from BarcodePlus with consumer information for loyalty campaigns analysis
消費者經由BarcodePlus網站擷取產品資訊時會向網站提供相關資訊，以便公司進行品牌忠誠度推廣計劃之數據分析

Consumers 消費者
Protect and gain confidence, and earn promotion offers by inputting product authentication verification code via BarcodePlus
經由BarcodePlus網站輸入產品驗證碼，獲取購物優惠並增強購物信心

Azienda Agricola Le Macchiole

Le Macchiole酒莊園

“By implementing GS1’s international traceability pilot, the Italy wineries enhance the relationship with foreign buyers by facilitating global real-time product shipment visibility. In addition, they are also managed to meet customers’ satisfaction by assuring the shipment will arrive on time.”

「透過GS1全力支援的國際產品追溯試點計劃，義大利葡萄園及釀酒廠成功地實施全球性的實時產品付運狀況的透明度，藉此改善了公司與海外採購商的連繫。透過這個方案，公司更可向客戶確保貨物送抵目的地的時間。」

Achieving Global Wine Supply Chain Visibility from Italy's Vineyard to Local Storage via Cross-border EPCIS Networks

透過跨境產品電子代碼資訊服務網絡達至由義大利酒莊園至本地倉庫的全球酒類產品供應鏈之透明度

BUSINESS BENEFIT 商業效益

Improving supply chain collaboration and real-time tracking of wine products with EPC/RFID item-level tagging
使用產品電子代碼／無線射頻識別單件貨品標籤促進供應鏈協作與實踐實時酒類產品追蹤流程

Enhance Supply Chain Visibility 增加供應鏈透明度

CONSUMER BENEFIT 消費者效益

Ensuring 100% product delivery commitment and guaranteeing quality customer service
貨品付運承諾保證百分百兑現　確保客戶服務質素

Assure Service Quality 確保服務質素

SOLUTIONS APPLIED 推行方案

GS1 Italy's EPCIS network and GS1 Hong Kong's ezTRACK™ [1]
GS1義大利分會的產品電子代碼資訊服務網絡及香港貨品編碼協會的蹤橫網™ [1]

GS1 STANDARDS USED 應用的GS1標準

SGTIN (Serialized Global Trade Item Number)　國際貨品編碼序號
SSCC (Serial Shipping Container Code)　貨品容器序號
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

[1] ezTRACK™: Cloud based EPCIS-standard traceability network enabling real-time visibility of goods, information flow, and thermo-humidity status from point of source to point of destination.
蹤橫網™：以雲端科技為基礎，並以產品電子代碼資訊服務為標準的追溯網絡，能提供由來源地至目的地之實時貨物流及資訊流，以及產品溫度與濕度的資訊透明度。

Azienda Agricola Le Macchiole

BACKGROUND

Initiated by GS1 Hong Kong and GS1 Italy, a series of wine traceability project was kick-started in the 2nd quarter of 2011. The project was aimed at tracking the wine while in transit from Italy's famous vineyard and wine producer, including Azienda Agricola Le Macchiole (Le Macchiole), to Hong Kong leading wine cellar.

CHALLENGES

The logistics supply chain is becoming more advanced everyday. This leads to increasing global demand for fine wine, including in Hong Kong where wine lovers are now based. As a leading wine distributor, Le Macchiole has to ensure meeting market demand to keep pace with competition hence the company directly ships vintage wine from winery to global market. However, Le Macchiole is faced with the huge challenge of dealing with different overseas buyers and wine retailers, thus ensuring visibility across the global supply chain to meet shipment schedules and effectively manage inventory is a top concern.

Depending on the wine's vintage year, a bottle of wine can peg from a hundred to thousand Hong Kong dollar. This is the reason why GS1 Italy and GS1 Hong Kong piloted a cross-border solution to track-and-trace the whole shipment and delivery route of wine products from the time they left Italy until they reached local wine storage facilities in Hong Kong.

SOLUTIONS

By using the interoperable GS1 Standards, GS1 Italy's EPCIS network and GS1 Hong Kong's ezTRACK™ were able to track-and-trace the wine products globally. Under the pilot test, as soon as the wine was bottled at the winery, Le Macchiole attached an EPC-enabled RFID tag that was associated with Serialized Global Trade Number (SGTIN) per bottle. Then, the wine bottles were placed in boxes and packed on pallets with an EPC/RFID tag that associated with Serial Shipping Container Code (SSCC). This process enabled the accurate capture of stock-out inventory and wine movement information from the vineyard using EPC/RFID readers. The data were then uploaded on GS1 Italy's EPCIS network, indicating that the pallets of wine were ready for packing in container vans and transport to Italy port for shipment overseas. Upon arrival of the container vans carrying the wine products in Hong Kong port, the local wine cellar's staff used RFID readers to check the supply chain data generated by EPC/RFID tags and the wine products were certified shipment if inventory was accurate. The container was then transported to the warehouse for stock-in and storage, and then transferred to retail outlets ready for consumer purchase or pick-up. All these events in Hong Kong were uploaded on GS1 Hong Kong's ezTRACK™. The product information of the wine during the entire supply chain including data related to stock-out, ship-out, ship-in, and stock-in is captured by the EPC/RFID tags, uploaded to relevant EPCIS networks, allowing worldwide wine retailers to achieve full visibility of the whole movement of the wine products from Italy's vineyard to their storage destination.

BENEFITS

The first half of this pilot project was completed in August 2011. By implementing GS1's international traceability pilot, the Italy wineries enhance the relationship with foreign buyers by facilitating global real-time product shipment visibility. They were also able to meet customers' satisfaction by assuring the shipment will arrive on time. Based on theses practical results, GS1 Italy and GS1 Hong Kong will continue to work with other Italy vineyards and Hong Kong wine retailers to deploy the thermo-humidity solution in near future.

背景

由香港貨品編碼協會及GS1義大利分會推動一系列的酒類產品追溯計劃，於2011年第二季正式啟動。該計劃的目標是追蹤由義大利著名葡萄園及釀酒廠如Le Macchiole酒莊園（Le Macchiole）運送至香港知名酒窖的酒類產品。

挑戰

隨著現今物流供應鏈的進步，世界各地對於洋酒的需求日益增加，而香港更是世界洋酒愛好者集中地之一。作為領先的洋酒分銷商，Le Macchiole積極回應市場的需求，直接從葡萄園出口洋酒佳釀，供應國際市場所需。不過，公司同時面對極大的挑戰，須與海外眾多不同的買家及酒類零售商合作，而為確保準時付運和有效執行倉存管理，在供應鏈上獲得全球性的資訊透明度極為重要。

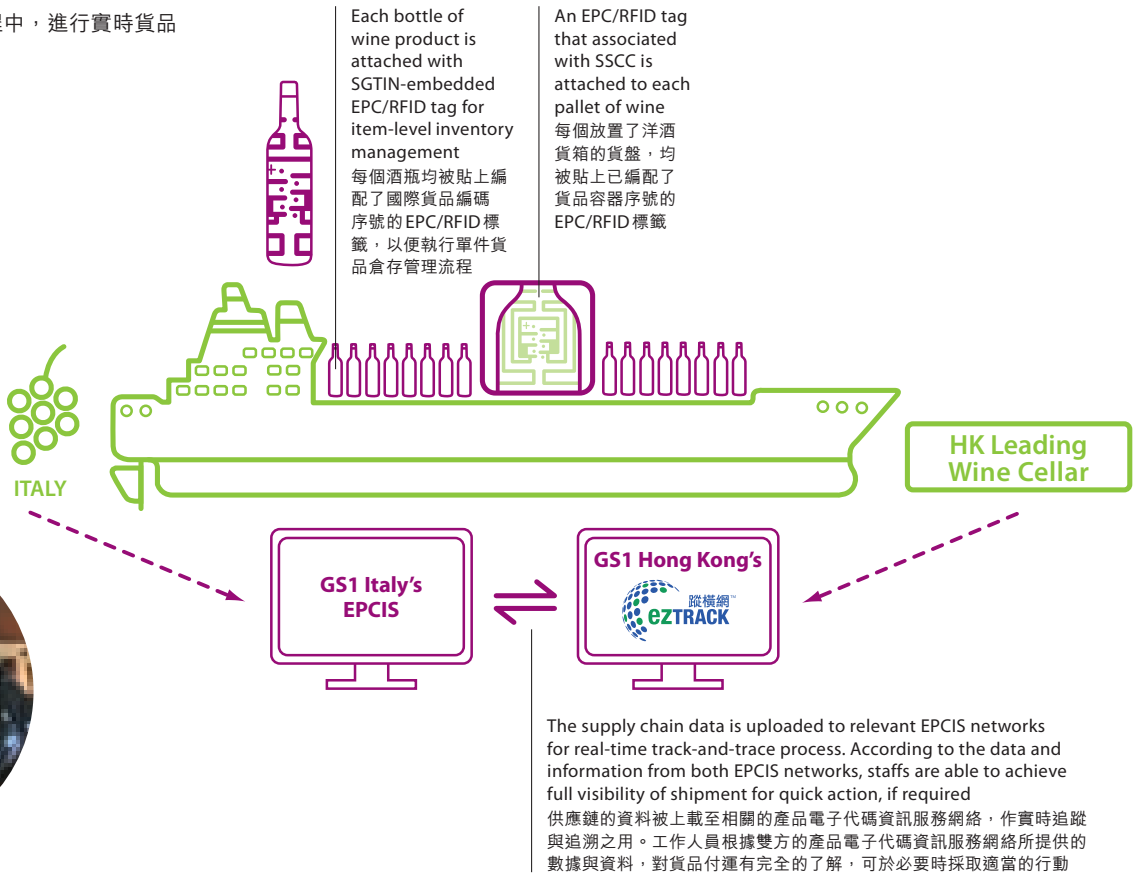
每瓶洋酒的價格，會按其出產年份有所分別，低至數百或高至數千元不等，故此，香港貨品編碼協會及GS1義大利分會推出了一個跨境產品付運路線追蹤與追溯方案試點計劃，讓產品可從義大利葡萄園開始至香港洋酒貯存庫整個運送過程中，進行實時貨品追蹤。

方案

在GS1具互運性標準的支援下，Le Macchiole可透過GS1義大利分會的產品電子代碼資訊服務網絡以及香港貨品編碼協會的蹤橫網™，就酒類產品的資料作全球性的追蹤及追溯。按照試點計劃的流程，酒廠工作人員把洋酒入樽後，便會在每瓶洋酒上貼上編配了國際貨品編碼序號的產品電子代碼／無線射頻識別標籤，然後，洋酒便會裝箱，繼而被放上貼有已編配了貨品容器序號的產品電子代碼／無線射頻識別標籤之貨盤上，這樣便可確保工作人員能利用產品電子代碼／無線射頻識別讀寫器，在葡萄園內準確讀取出貨倉存紀錄及有關產品運送狀況的資料。有關的數據隨即會被上載到GS1義大利分會的產品電子代碼資訊服務網絡上，以確認貨品可隨時裝櫃，安排付運到義大利港口，再轉運到其他海外目的地。貨櫃在送抵香港港口後，當地的酒窖工作人員便會利用產品電子代碼／無線射頻識別讀寫器，讀取產品電子代碼／無線射頻識別標籤內的供應鏈資料，同時檢查有關貨品數量若資料正確無誤，該批洋酒便運送到貨倉作入貨及貯存，再轉送到零售點以供消費者購買及提貨。上述在香港進行的事件數據隨即會被上載到香港貨品編碼協會的蹤橫網™上。有關產品出貨、運出、收貨與入貨等整體供應鏈的資料均由產品電子代碼／無線射頻識別標籤擷取，上載到相關的產品電子代碼資訊服務網絡上。透過以上的方式，世界各地的洋酒零售商便可有效地控制由義大利葡萄園至貯存庫的酒類產品付運流程，藉此掌握百分百的供應鏈透明度。

效益

上半部份的試點計劃已於2011年8月完成。透過GS1全力支援的國際產品追溯試點計劃，義大利葡萄園及釀酒廠成功地實施了全球性的實時產品付運狀況全面監控流程，藉此改善了公司與海外採購商的連繫。透過這個方案，公司更可為客戶提供貨物送抵目的地的時間準確性。在上述成果的基礎下，GS1義大利分會與香港貨品編碼協將在日後繼續與其他義大利葡萄園及香港的洋酒零售商合作，推動產品溫度和濕度的監控方案。



Hawaii Department of Agriculture

夏威夷農業部

“Cold Chain Management Solution via ezTRACK™ enables Hawaii Department of Agriculture to effectively monitor food produce’s temperature in real-time thereby improving cross-border traceability from farms to retail outlets. This prevents fresh produce from getting rotten along the supply chain, thus ensuring that customers only get quality food products safe for consumption.”

由蹤橫網™支援的冷凍鏈管理方案，成功協助夏威夷農業部透過實時監控食品及農產品的溫度，加強由農場至零售點的跨境追溯能力。此方案亦有助防止新鮮農產品在供應鏈運送過程中腐壞，以確保消費者安全地享用優質的食品。

Protecting Hawaiian's Public Safety by Effectively Monitoring Fresh Produce's Temperature and Movement Using GS1 Hong Kong Solution

使用香港貨品編碼協會的解決方案　有效監控新鮮農產品的溫度及貨物流　確保夏威夷公眾的安全

BUSINESS BENEFIT 商業效益

Enabling cross-island real-time temperature monitoring and traceability
有助實施實時的跨島溫度監控與追溯流程

✓ **Increase Supply Chain Visibility 增加供應鏈透明度**

CONSUMER BENEFIT 消費者效益

Protecting the consumption of fresh and good-quality food
確保公眾可享用新鮮及優質的食品

✓ **Uplift Consumer Safety 提升消費者安全度**

SOLUTIONS APPLIED 推行方案

Cross-Border Cold Chain Management Solution[1] via ezTRACK™ [2]
由蹤橫網™ [2] 支援的跨境冷凍鏈管理方案[1]

GS1 STANDARDS USED 應用的GS1標準

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

1 Cold Chain Management Solution: A solution to capture and share real-time data of temperature, humidity, time, and location via EPCIS network.
冷凍鏈管理方案：透過產品電子代碼資訊服務網絡，能擷取及分享產品溫度、濕度、時間及位置等實時數據之解決方案。

2 ezTRACK™: Cloud based EPCIS-standard traceability network enabling real-time visibility of goods, information flow, and thermo-humidity status from point of source to point of destination.
蹤橫網™：以雲端科技為基礎，並以產品電子代碼資訊服務為標準的追溯網絡，能提供由來源地至目的地之實時貨物流及資訊流，以及產品溫度與濕度的資訊透明度。

Hawaii Department of Agriculture

BACKGROUND

The Hawaii Department of Agriculture (HDOA) is the leading organization supporting and promoting the growth of the State of Hawaii's agriculture and aquaculture industries. The HDOA's Quality Assurance division is responsible for facilitating the efficient transport of products manufactured by food makers from farms in Hawaii to the market and consumers. It upholds the consumers' interests by carefully inspecting and evaluating commodities targeted for wholesale and retail establishments. It assists the marketing of quality agricultural commodities and promoting fair trade and best business practices.

CHALLENGES

Up to 90% of food penetrating Hawaii originates from various places and transported using various modes including by air or sea. HDOA ensures that these food products are of high quality and meet international safety standards.

In 2007, HDOA pilot tested RFID to trace the movement of fresh produce across the whole supply chain from local Hawaiian farms until they reached retail stores for consumers' consumption. Three Hawaiian farms participated in the pilot project where cartons of their food products were attached with EPC/RFID tags. In spite of the effective solution, the cost of the software, tags and readers was too expensive for many small farms. In addition, the solution has some limitation since data can only be viewed via specific website. Another issue is that since fresh produce tends to have shorter shelf life, it becomes urgent for HDOA to deploy a system that can monitor fresh food temperature to prevent food from getting rotten.

SOLUTIONS

To address supply chain visibility and cost issues, GS1 Hong Kong provided HDOA a more effective and affordable ezTRACK™ Cold Chain Management Solution. The platform uses thermo-sensor EPC/RFID tags attached on pallets and a data "cloud" solution that enables members of the fresh produce supply chain to monitor the condition of products as they are shipped from one Hawaiian island to another.

Using a RFID handheld reader, the temperature reading from the pallets' EPC/RFID tags and product information including product type, farm name and pick-up date are collected and synchronized via the ezTRACK™. These data are then uploaded to trace the movement of the products from point to point, including when the products are loaded on trucks and planes, up to its final destination. During the whole transport route, when the temperature exceeded the required threshold indicating that the fresh product's temperature is beyond the prescribed reading, an alert will be sent to responsible third party's email or mobile phone so they can take immediate action.

Once implementation of the solution is completed, HDOA plans to prepare a documented cold chain control model that could be deployed between Hawaii and Asia, Mexico and the U.S. mainland in the near future.

BENEFITS

By capturing accurate temperature data as well as product information and uploading them to ezTRACK™, the distributor is able to exactly track what product is loaded on every pallet, allowing them to retrieve temperature data with historical information, such as its origin and pick-up time in real-time. Cold Chain Management Solution via ezTRACK™ enables HDOA to effectively monitor food produce's temperature real-time thereby improving cross-border traceability from farms to retail outlets. This prevents fresh produce from getting rotten along the supply chain, thus ensuring customers only get quality food safe for consumption.

背景

夏威夷農業部是以支援及促進夏威夷農業與水產養殖業發展為目標的主要組織。其轄下的產品品質保證部專責協助食品製造商以更迅速有效的方法把貨品由當地的農場運送到市場出售。為確保消費者的食用安全，部門亦會就批發與零售的食品執行仔細的檢測與評估，更會協助業界推廣優質的農業產品，藉以推動公平貿易及最佳商業實務。

挑戰

夏威夷的食品中逾百分之九十由外地入口，並透過不同的方式如空運或航運送達。夏威夷農業部有責任確保這些食品保持高品質及符合國際安全標準。

夏威夷農業部於2007年透過一個採用無線射頻識別技術的試點計劃，追溯新鮮農產品由夏威夷農場運送至零售點整條供應鏈的貨物流。該試點計劃獲3家夏威夷農場的參與及支持。按照計劃，每個裝載食用產品的貨箱均被貼上產品電子代碼／無線射頻識別標籤。這個解決方案雖有成效，但對於眾多規模較小的農場來說，相關的軟件、標籤以及閱讀器均十分昂貴。此外，這個解決方案也有一定的限制，相關的資料只能透過特定的網頁才可閱覽。再者，新鮮農產品的貨架壽命亦較短，夏威夷農業部必須盡快找到一套能有效監控新鮮農產品溫度的方案以避免食品腐壞。

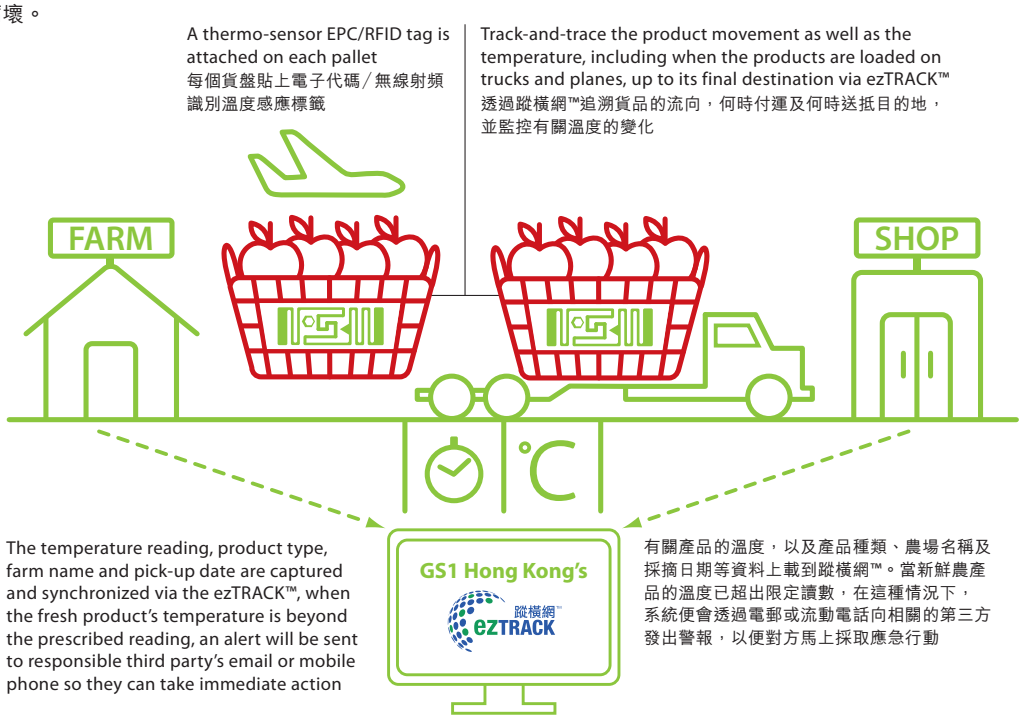
方案

為解決上述有關成本的問題，及協助提高供應鏈透明度，香港貨品編碼協會向夏威夷農業部提供了一套既經濟同時更具效率，由蹤橫網™支援的冷凍鏈管理方案。透過這個解決方案，用戶可把產品電子代碼／無線射頻識別溫度感應標籤貼在貨盤上，而作為新鮮農產品供應鏈的持份者，用戶更可利用以雲端科技為本的解決方案，監控產品由夏威夷島嶼間的運送狀況。用戶可利用手提無線射頻識別讀寫器，讀取貼在貨盤上之產品電子代碼／無線射頻識別標籤內的溫度資料，以及儲存於標籤內有關產品種類、農場名稱及選貨日期等資料，並把資料同步上載到蹤橫網™，藉此透過點對點的方式追溯貨品的流向，以了解貨品何時被運上貨車及飛機，及何時送抵目的地等情況。在付運過程中，用戶若發現溫度超過指定的標準，即表示新鮮農產品的溫度已超出限定讀數，在這種情況下，系統便會透過電郵或流動電話向相關的第三方發出警報，以便對方馬上採取應急行動。

在上述的方案實施完成後，夏威夷農業部便會著手開發一個冷凍鏈控制系統，並期望能於不久的將來運用於夏威夷與亞洲、墨西哥、美國等地區之間的物流運作上。

效益

分銷商透過擷取準確的溫度資料及產品資料，再把這些資料上載到蹤橫網™，便可有效地追蹤貨品的流向，確切地知道貨品於何時運上貨盤，此方案更有助他們以實時的方式擷取溫度資料及貨物的歷史數據，例如是原產地及選貨時間等。由蹤橫網™支援的冷凍鏈管理方案，成功協助夏威夷農業部透過實時監控食品及農產品的溫度，加強由農場至零售點的跨境追溯能力。此方案亦有助防止新鮮農產品在供應鏈運送過程中腐壞，以確保消費者安全地享用優質的食品。



Guangdong RFID Technology Service Center

廣東省 RFID 公共技術支持中心

“In cooperation with GS1 Hong Kong, we used ezTRACK™ and Southern Modern Logistics Public Information Platform to implement an effective and efficient cross-border Halal food traceability pilot scheme from Malaysia to Guangdong. This ensures that the food originates from an authorized food supplier is handled by qualified shipper, and employs hygienic method while in transport, thus facilitating consistent long-term traceability and effective management of food safety control and authentication in China,” said Dr. Li Ying, Director, Guangdong RFID Technology Service Center.

廣東省 RFID 公共技術支持中心主任李鷹博士表示：「透過與香港貨品編碼協會合作，以蹤橫網™及南方現代物流公共信息平台有效地聯合實施由馬來西亞至廣東省之清真食品跨境追溯流程。有了這個試點計劃，我們便可確保上述食品是由認可的食品供應商所提供、並由合資格的付運商負責運送，而在運送過程中亦採用了安全及衛生的食品處理方法。這方案促進了中國在食物安全監控及長遠的產品認證追溯管理之發展。」

Building Consumer Trust by Tracing Food Information from Malaysian Manufacturer

向馬來西亞生產商追溯食物資訊　加強消費者信心

BUSINESS BENEFIT 商業效益

Enabling cross-border traceability
有助實施跨境追溯流程

✓ **Increase Supply Chain Visibility 增加供應鏈透明度**

CONSUMER BENEFIT 消費者效益

Prevent consumption of uncertified Halal food
避免食用未經認證的清真食品

✓ **Assure Product Quality 確保產品質素**

SOLUTIONS APPLIED 推行方案

ezTRACK™ [1]
蹤橫網™ [1]

GS1 STANDARDS USED 應用的GS1標準

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

[1] ezTRACK™: Cloud based EPCIS-standard traceability network enabling real-time visibility of goods, information flow, and thermo-humidity status from point of source to point of destination.
蹤橫網™：以雲端科技為基礎，並以產品電子代碼資訊服務為標準的追溯網絡，能提供由來源地至目的地之實時貨物流及資訊流，以及產品溫度與濕度的資訊透明度。

Guangdong RFID Technology Service Center

BACKGROUND

An increasing number of international events are being held in the region such as the 16th Asian Game. China is fast becoming the preferred site for high profile competitions to host athletes and sports officials with different cultural background from around the world.

CHALLENGES

To accommodate the varying dietary needs of large number of visitors in China all year round, it is crucial to ensure that all foods entering the country are within international standards and meet their cultural and religious background. The food that Muslims eat must be Halal and meet specific and strict Muslim food preparation requirements. This includes from the time the food is cooked, processed and transported from Malaysia to the event venues.

Before 2010, Guangdong had never implemented any procedure to trace and retrieve accurate data about the origin and quality of Halal food, as well as monitoring shipment of food from its original source until it reaches China. This prompted the Economic & Information Commission of Guangdong Province, the Bureau of Science, Technology and Information of Guangzhou Municipality, Department of Islamic Development Malaysia, Malaysian Communications and Multimedia Commission to adopt a reliable track-and-trace system to prevent the consumption of uncertified Halal food in the region especially during large international events. It was aimed at building people's trust and assuring them that relevant data can be traced and shared between them and Malaysian food manufacturers.

SOLUTIONS

In proactively addressing the issue, Guangdong piloted the first EPC/RFID-based traceability system integrated with EPCIS via GS1 Hong Kong's ezTRACK™ platform in November 2010. It allowed Guangdong Province to have full and visible track-and-trace capability to effectively control the transport of Halal food from Malaysia to Guangdong. This project was implemented by the above organizations and Guangdong RFID Technology Service Center.

Every food carton for shipment is attached with an EPC/RFID tag. In using the GS1 Hong Kong platform, when Halal foods are ready for transport from the food manufacturer's warehouse in Malaysia, the exact origin where the food was prepared, condition and status are collected from an RFID handheld reader and transmitted and synchronized via the ezTRACK™. This procedure is performed again when the food cartons arrive in Hong Kong's container terminal and Guangdong's warehouse. Assigned inspectors in each checkpoint check whether the containers are in good condition. They use the RFID reader to verify the shipment and confirm arrival with the information and status uploaded on ezTRACK™ and Southern Modern Logistic Public Information Platform.

BENEFITS

The Halal food's origin is recorded, while logistics information of the whole shipping process is collected and shared via GS1 Hong Kong's ezTRACK™. "In cooperation with GS1 Hong Kong, we used ezTRACK™ and Southern Modern Logistic Public Information Platform to implement an effective and efficient cross-border Halal food traceability pilot scheme from Malaysia to Guangdong. This ensures that the food originates from an authorized food supplier is handled by qualified shipper, and employs hygienic method in transport, facilitating consistent long-term traceability and effective management of food safety control and authentication in China," said Dr. Li Ying, Director, Guangdong RFID Technology Service Center.

背景

近年，愈來愈多國際性活動在中國舉行，第16屆亞洲運動會便是其中之一。現時中國已成為許多國際矚目賽事的熱門選址，接待來自世界各地不同文化背景的運動員及裁判員。

挑戰

為了應付每年大批到訪中國的海外人士之膳食需要，有關當局必須確保所有進口中國的食物均符合國際標準，並能滿足不同文化與宗教背景人士的膳食要求。當中需確保回教徒能夠在中國所享用的清真食品，無論在處理及烹調上均符合伊斯蘭教訂出的標準。

在2010年以前，廣東省從未推出過任何措施，以追溯及檢索清真食品的來源地及品質，及監控食品由來源地運送至中國的付運流程。因此，廣東省經濟和信息化委員會與廣州市科技和信息化局、馬來西亞伊斯蘭教發展局及馬來西亞通訊與多媒體委員會合作，採納了一套可靠的追蹤與追溯系統，特別於舉辦大型的國際活動期間，防預在中國國內的消費者食用未經認證的清真食品。透過從馬來西亞食品生產商運送到中國時所分享的食物追溯資訊，加強內地消費者信心。

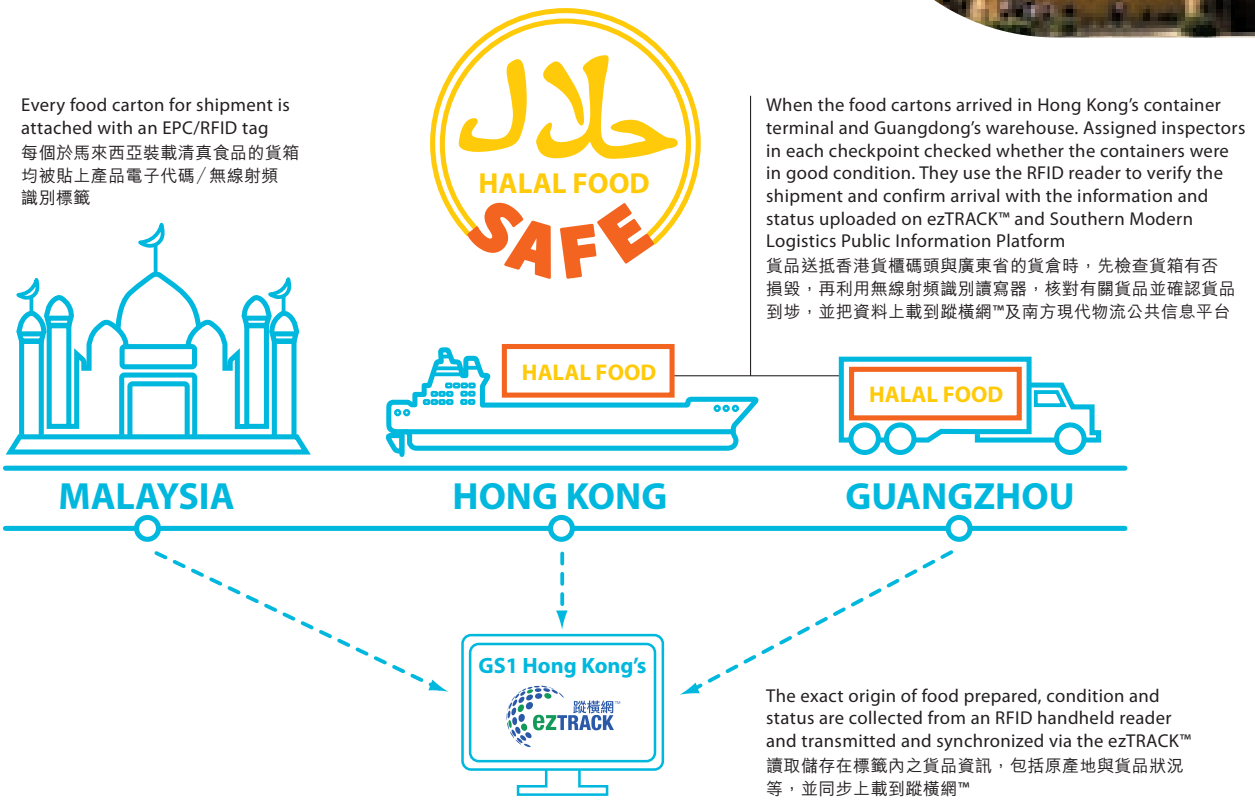
方案

面對上述的挑戰，廣東省作出了積極的回應，順利地推行了一個試點計劃，首次採用以產品電子代碼／無線射頻識別為基礎的追溯系統，該系統更透過香港貨品編碼協會所建立的蹤橫網™與產品電子代碼訊息服務進行了整合。該計劃成功協助廣東省藉著全面而具透明度的產品追蹤與追溯流程，有效監控由馬來西亞運送至廣東省的清真食品付運過程。上述機構及組織與廣東省RFID公共技術支持中心共同合作推行這個計劃。

按照這個試點計劃，每個於馬來西亞裝載清真食品的貨箱均被貼上產品電子代碼／無線射頻識別標籤。當該批貨物準備付運時，工作人員便利用無線射頻識別手提讀寫器，讀取儲存在標籤內之貨品資訊，包括原產地與貨品狀況等。接著，把資料同步上載到香港貨品編碼協會的蹤橫網™上，當該批貨品送抵香港貨櫃碼頭與廣東省的貨倉時，當地的工作人員會首先檢查貨箱有否損毀，確保完整後，再利用無線射頻識別讀寫器，核對有關貨品並確認貨品到埗，並把資料上載到蹤橫網™及南方現代物流公共信息平台。

效益

透過香港貨品編碼協會建立的蹤橫網™不但可以記錄清真食品的來源，更能收集及與供應鏈的夥伴分享整個付運過程的物流資料。廣東省RFID公共技術支持中心主任李鷹博士表示：「透過與香港貨品編碼協會合作，以蹤橫網™及南方現代物流公共信息平台有效地聯合實施由馬來西亞至廣東省之清真食品跨境追溯流程。有了這個試點計劃，我們便可確保上述食品是由認可的食品供應商所提供、並由合資格的付運商負責運送，而在運送過程中亦採用了安全及衛生的食品處理方法。這方案促進了中國在食物安全監控及長遠的產品認證追溯管理之發展。」



Collezione Wine Cellars Limited
佳釀珍藏酒窖

“We have eliminated the problem of misplacing wine bottles. As a result, our customers are fully satisfied with our efficient service and gain exceptional customer wine buying experience and their trust to use our wine storage services,” said Mr. Dick Chan, Assistant Marketing Manager, Collezione Wine Cellars Limited.

佳釀珍藏酒窖市場部副經理 Dick Chan 表示：「公司已成功解決了洋酒錯置的問題，顧客對我們所作的服務效率均感到十分滿意。此外，他們亦享受到與別不同的購物樂趣，並樂於使用我們的存酒庫。」

Bringing Consumer Satisfaction to a Higher Level through EPC/RFID-based Item-Level Wine Storage Management

透過產品電子代碼／無線射頻識別單件洋酒貯存管理方案進一步滿足消費者要求

BUSINESS BENEFIT 商業效益

Enhancing wine inventory management and storage security
改善洋酒倉存管理效率　提高存酒庫安全度

Optimize Operational Efficiency 優化運作效率

CONSUMER BENEFIT 消費者效益

Gaining satisfaction and exceptional experience with traceable storage environment
透過可追溯的貯存管理環境　提升客戶滿意度與消費樂趣

Assure Service Quality 確保服務質素

SOLUTIONS APPLIED 推行方案

EPC/RFID-based Wine Storage Management Solution
以產品電子代碼／無線射頻識別為基礎的洋酒貯存管理方案

GS1 STANDARDS USED 應用的GS1標準

GLN (Global Location Number)
國際位置編碼

GRAI (Global Returnable Asset Identifier)
全球可回收資產識別碼

EPC (Electronic Product Code)
產品電子代碼

Collezione Wine Cellars Limited

BACKGROUND

Collezione Wine Cellars Limited (Collezione), a subsidiary of Hanison Construction Holding Limited, is a local wine storage and retail company. Located in a 10,000 square feet facility in Shatin, it has a fully furnished dining and lounge areas targeted for prominent business individuals and organizations in Hong Kong and China.

CHALLENGES

Collezione's two wine storage facilities in Shatin are capable of storing up to 80,000 bottles or 60,000 litres of fine wine. The price tag of each bottle ranges from thousand to ten thousand dollars depending on its vintage year, thus the wine cellar company is faced with the tough challenge of carefully managing and securing their wine stock.

The company manually manages a large volume of inventory in-and-out, hence it was prone to human error, including frequent incidents of wine bottles ending in the wrong rack. It also takes about 30 minutes for a staff to locate, identify and distinguish a certain wine in the 150 square feet facility to meet customer's stock request, hence there is high probability that the company can lose profit due to mishandling of the wine products. Such scenario prompted Collezione to search for a solution that can effectively address operational issues including having full storage visibility of its inventory management and efficiently handle security issues to prevent wine from getting misplaced, and more importantly, enhance operational efficiency to satisfy customer service expectations.

SOLUTIONS

After consulting with GS1 Hong Kong and PCCW Solutions – a leading business and technology solution provider in Hong Kong, Collezione decided to implement EPC/RFID-based Wine Storage Management Solution in June 2010 to address recurring operational issues. With the solution, Collezione eliminated manual stock-in process by attaching each bottle or box of wine with EPC/RFID tag in item-level and assigned with GS1 Global Returnable Asset Identifier (GRAI). This allows the company to associate the stock-in time with individual customer information in the system. While the wine boxes are in the receiving section of Collezione, a RFID reader captures the information associated in the EPC/RFID tag, and updates the inventory system for management and security procedures. Once registration process is done, the staff moves the wine into storage area and places the wine on designated shelf which has a corresponding GS1 Global Location Number (GLN).

With the GS1 Hong Kong solution in placed, Collezione staff can quickly and easily locate specific wine based on the assigned GLN and GRAI when a customer requests for a specific wine, by scanning the EPC/RFID tags with the RFID handheld reader in the storage. The reader makes a loud sound when the staff comes nearer to the wine being requested, thus the time in locating the wine is shorter and more efficient. The staff then detaches the wine's EPC/RFID tag, and updates the inventory system to complete the stock-out process. Likewise, the security alarm triggers if an unauthorized EPC/RFID tag passes through the EPC/RFID-enabled door.

BENEFITS

Operational process is 30 times faster and enable security feature

A huge improvement in quickly searching wine bottles at Collezione's 150 square feet storage facility was noted by the company. Instead of locating the wine for about 30 minutes, it now only takes a minute for a staff to find the product using the RFID reader. "We are very impressed with the EPC/RFID-based wine warehouse management solution which not only boosts our operational process by up to 30 times, but also enabling us to have a highly secured environment," said Mr. Dick Chan, Assistant Marketing Manager, Collezione Wine Cellars Limited.

Meet customer's satisfaction and exceptional wine purchasing experience

Collezione customers greatly benefited from the wine cellars' decision to deploy GS1 Hong Kong EPC/RFID-based Wine Storage Management solution. "We have eliminated the frequent problem of misplacing wine bottles. As a result, our customers are fully satisfied with our efficient operation and gain exceptional customer service, hence gaining their trust to use our wine storage services," Mr. Chan added.

背景

佳釀珍藏酒窖是「興勝創建控股有限公司」的子公司，在本地從事存酒及洋酒買賣業務。該酒窖設於香港沙田並佔地10,000平方呎，設備包括完善的宴客廳及品酒區，以款待來自香港及中國內地的富商巨賈及各大機構的行政人員。

挑戰

佳釀珍藏酒窖設於沙田的兩間存酒庫可貯存多達80,000瓶或60,000公升洋酒。每瓶洋酒的價格由數千至數萬不等，視出產年份而定。因此，經營酒窖的公司都必須妥善管理洋酒庫存及確保貨品安全。該公司以往採用人手方式管理出倉入倉等大量的洋酒倉存資料，難免容易發生人為錯失，例如經常混淆了洋酒的正確擺放位置。工作人員要耗費三十分鐘，才能夠成功協助顧客在150平方呎的存酒庫內搜尋、確認及分辨某一瓶指定的洋酒，這樣，公司極可能因為洋酒錯置問題而蒙受利潤損失。為避免這種情況，該公司必須要有一套有效的方案全面掌握倉存管理的資料，同時能提供保安及解決洋酒錯置的問題，以確保產品妥善貯存，更重要是能提高運作效率，藉以提升客戶服務水平。

方案

佳釀珍藏酒窖參考香港貨品編碼協會，以及本地商業及技術解決方案供應商電訊盈科的意見之後，於2010年6月決定使用以產品電子代碼／無線射頻識別為基礎的洋酒貯存管理方案以應對現存的業務運作問題。透過這個方案，該公司取締了人手的入倉記錄流程，改為每瓶或每箱洋酒作個別單位，於不同的洋酒單位編配一個全球可回收資產識別碼，並連同個別客戶資料及存倉時間儲存於產品電子代碼／無線射頻識別單件貨品標籤內。透過無線射頻識別讀寫器，擷取產品電子代碼／無線射頻識別標籤內的資料，並把有關資料更新到倉存系統上，以便執行管理與保安流程。完成記錄程序後，工作人員便會把洋酒運入存酒庫，並依照每瓶洋酒所編配的國際位置編碼把洋酒逐一放到指定的保存架上。

使用了上述的解決方案，佳釀珍藏酒窖的工作人員便可根據個別洋酒單位的國際位置編碼與全球可回收資產識別碼，在存酒庫內以無線射頻識別讀寫器擷取產品電子代碼／無線射頻識別標籤內的有關資料，為顧客找尋指定的洋酒單位，過程方便快捷。工作人員在搜尋過程中，越接近指定的洋酒位置，手上的無線射頻識別讀寫器便會發出較大的聲響，如此可大大減省整段搜尋的時間。工作人員繼而便可於出倉時除去該洋酒單位上的產品電子代碼／無線射頻識別標籤，並在系統上更新倉存資料，出倉程序就此完成。依照同樣的運作機制，若有人把未經出倉確認的洋酒經由產品電子代碼／無線射頻識別通道出入，保安警報便會啟動。

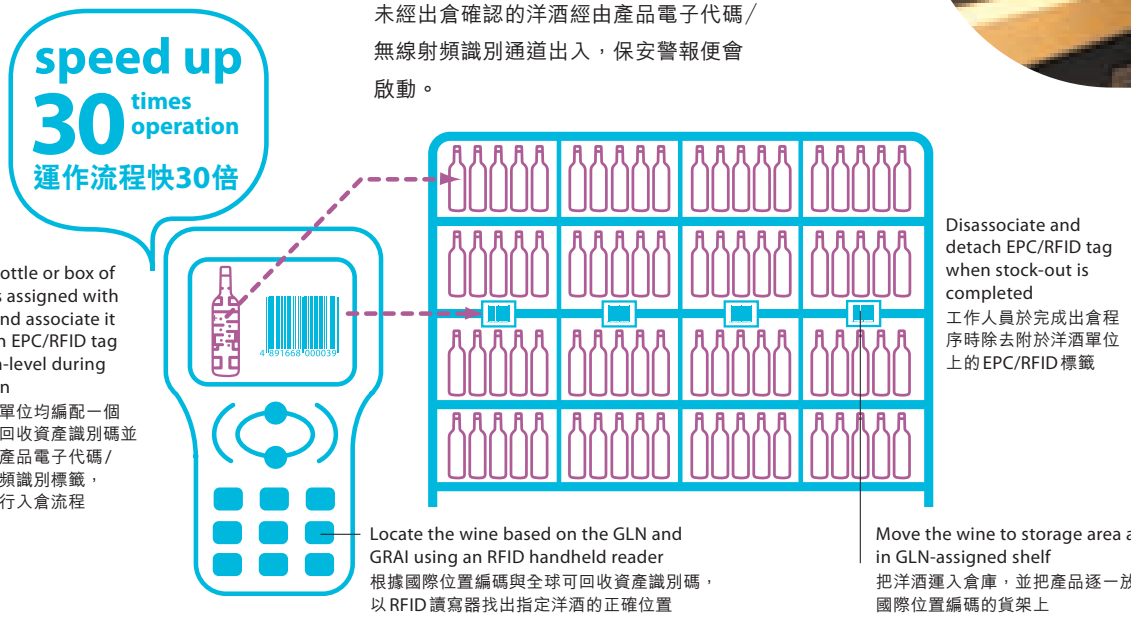
效益

運作流程加快三十倍　兼具安全效能

在上述解決方案的支援下，佳釀珍藏酒窖的工作人員能在很短的時間內找到顧客指定的產品。以往他們要用上大約三十分鐘，才可在150平方呎的存酒庫內成功找出某瓶指定的洋酒。現在，工作人員使用了無線射頻識別讀寫器，只需一分鐘便能完成上述流程。市場部副經理Dick Chan說：「公司對這個以產品電子代碼／無線射頻識別為基礎的洋酒貯存管理方案很滿意，它不但把上述工作流程加快了三十倍，更為公司提供了一個十分安全的存酒環境。」

滿足顧客要求　提供與別不同的購物樂趣

佳釀珍藏酒窖的顧客，大大受惠於香港貨品編碼協會為該酒窖提供以產品電子代碼／無線射頻識別為基礎的洋酒貯存管理方案。Dick Chan補充說：「公司已成功解決了洋酒錯置的問題，顧客對我們所作的改善與營業效率均感到十分滿意。此外，他們亦享受到與別不同的購物樂趣，並樂於使用我們的存酒庫。」



Hospital Authority Hong Kong
香港醫院管理局

"By creating standard format of product identity for all pharmaceutical products using GS1 Standards and Solutions and for the delivery locations, product track-and-trace from pharmaceutical suppliers to our stores becomes possible. We therefore managed to optimize the efficiency in our management of the supply chain process, hence reducing time and overhead cost for our procurement process," said Ms. S. C. Chiang, Senior Pharmacist, Chief Pharmacist's Office, Hospital Authority Hong Kong.

香港醫院管理局總藥劑師辦事處高級藥劑師蔣秀珠女士表示：「使用GS1標準及解決方案後，所有藥物產品的身份識別及交付地點都建立了標準化的格式，我們就能有效追蹤及追溯產品由藥物供應商至醫管局的貨物流與資訊流，藉此提高供應鏈流程的管理效率，成功減省採購流程的時間及成本。」

Optimizing Efficiency and Accuracy in Managing the Supply Chain of Pharmaceutical Products

優化藥物產品供應鏈管理的效率與準確度

BUSINESS BENEFIT 商業效益

Improve delivery checking procedures and eliminate costly product returns
優化檢查交付貨物的程序　避免退貨帶來成本增加的機會

Optimize Operational Efficiency 優化運作效率

PATIENT BENEFIT 病人效益

Assurance of receiving the right products of the right source on-time
確保病人適時收到來自正確來源的正確藥物

Uplift Medication Safety 提升藥物安全度

SOLUTIONS APPLIED 推行方案

ezTRADE[1]
通商易[1]

Global Location Number Registry via BarcodePlus[2]
於BarcodePlus[2]內的國際位置編碼資料庫

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

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。

2 BarcodePlus: A product and location information portal allowing users to access and share quality data using GS1 Keys like GTIN and GLN via the internet and smart kiosk.
BarcodePlus: 透過GS1識別碼如國際貨品編碼及國際位置編碼，能使不同用戶經由互聯網及智能資訊站擷取並分享產品及位置資料的資訊平台。

HOSPITAL AUTHORITY HONG KONG

BACKGROUND

The Hospital Authority Hong Kong (HA) is the statutory body responsible in managing Hong Kong's public healthcare system since 1991. Under its auspices are 41 public hospitals and institutions, 48 specialist out-patient clinics and 74 general out-patient clinics. It has 26,900 beds and has served over 19.2 million patients in 2010 to 2011. To provide the best patient service and meet the healthcare demands of the society, the organization continues to work with a large network of vendors, including pharmaceutical companies, medical consumables suppliers, and third-party equipment maintenance service providers to ensure all its 160 hospitals and clinics are fully functional with the right level of medical supplies.

CHALLENGES

Since 1996, the HA has been using GS1 Hong Kong's ezTRADE to automate product identification and communicate with their suppliers along the supply chain. The HA places order to its medical suppliers via ezTRADE by providing essential procurement data, including specific information about the drugs per item, description, quantity, delivery date, purchase amount, and delivery location for each item in purchase order (PO) form. This information is needed by the suppliers in order to deliver the items as soon as the Advanced Shipping Notices (ASNs) are acknowledged by the HA. However, only Global Trade Item Number (GTIN) and Global Location Number (GLN) were written in suppliers' PO due to the HA concerned about the operational cost in using EDI to procure items since the amount they need to pay per purchase largely depend on the length of data in each PO. It took longer time for the suppliers to decipher the delivery information and would lead to delay in the delivery of the products possibly occur. The HA wants to reduce the overhead cost, enhance supply chain efficiency and ensure patient safety, hence the HA is considering to streamline procurement process with their pharmaceutical suppliers.

SOLUTIONS

To optimize the operational efficiency by using GS1 Standards, GS1 Hong Kong leverages the quality source of product and location information from BarcodePlus portal that is linked with ezTRADE. This solution enables the HA to automate their procurement process and lowering overhead cost. Instead of entering specific item description and delivery address, the HA only has to quote pharmaceutical items delivery locations on the PO form. The system translates product data and delivery location into much shorter forms of GTIN and GLN. As soon as the PO is received by the suppliers via ezTRADE, essential product data including full drug item descriptions and delivery locations are automatically provided based on the GTIN and GLN related information in BarcodePlus. As such, the suppliers receive accurate item descriptions and delivery addresses in standard format for shipping arrangement. The interlink enhancement is targeted for completion in early 2012.

BENEFITS

With the product and location information interlink between ezTRADE and BarcodePlus, the HA has improved overall procurement cost and time by streamlining ordering process. "By creating standard format of product identity for all pharmaceutical products using GS1 Standards and Solutions and for the delivery locations, product track-and-trace from pharmaceutical suppliers to our stores becomes possible. We therefore managed to optimize the efficiency in our management of the supply chain process, hence reducing the time and overhead cost for our procurement process," said Ms. S. C. Chiang, Senior Pharmacist, Chief Pharmacist's Office, Hospital Authority Hong Kong.

背景

香港醫院管理局（醫管局）是一個法定機構，自1991年起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。於2010至2011年間，醫管局合共提供26,900張病床，向超過1,920萬個病人提供有關服務。為回應社會對醫療服務的需求，並提供最佳的醫護服務，醫管局一直與眾多供應商保持緊密合作，包括製藥公司、醫療耗材供應商及第三方設備維修服務供應商，從而確保轄下160家醫院及診所能正常運作，在藥物及各種醫療設備上得到充足的供應。

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作為向供應商採購時自動識別的工具，及為整體供應鏈作資訊傳遞之用。醫管局透過通商易向醫療設備及藥物供應商發送出採購訂單時，必須提供關鍵的採購數據，包括每種藥物的特定資料、詳細內容、數量、交付日期、購買總額以及採購訂單上每項貨件的交付位置等。供應商在收到醫管局已確認的預先發貨通知單後，便須依賴上述的資料以執行交付流程。不過，由於醫管局考慮到透過電子數據聯通進行電子採購時，所牽涉的運作成本與採購訂單上的數據之長度成正比，故此，供應商所收到的採購訂單上，只列出一系列的國際貨品編碼及國際位置編碼，供應商需要較長的時間才能順利就交付數據進行解碼，因而可能阻延了交付的程序。為此，醫管局期望設法減低有關的成本、提高供應鏈效率以及加強對病人安全的保障，故此計劃透過與供應商加強合作以優化其採購流程。

方案

為透過GS1標準提高業界的運作效率，香港貨品編碼協會利用與通商易連繫的產品及位置資訊網站BarcodePlus，為醫管局採購流程的自動化提供有力支援，並藉此協助該局減低有關的成本。醫管局毋須把指定的貨件內容及交付地點輸入檔案，只須在採購訂單上輸入藥物貨件的交付地點便可。系統會將產品數據及交付地點轉換成為較短的國際貨品編碼及國際位置編碼。供應商只要收到醫管局透過通商易發出的採購訂單，關鍵資料包括藥物的詳細內容及交付地點，便會根據儲存在BarcodePlus內相關的國際貨品編碼及國際位置編碼之數據，自動提供予供應商。通過以上的方式，供應商便能獲取準確及格式標準化的貨件內容及交付地點資訊，以便為付運貨物作好安排。上述的互聯運作安排預算於2012年上旬完成。

效益

透過通商易及BarcodePlus在產品及位置資訊上的互聯運作，醫管局就其整體採購流程成功進行優化，有效減省所需的成本與時間。醫管局總藥劑師辦事處高級藥劑師蔣秀珠女士表示：「使用GS1標準及解決方案後，所有藥物產品的身份識別及交付地點都建立了標準化的格式，我們就能有效追蹤及追溯產品由藥物供應商至醫管局的貨物流與資訊流，藉此提高供應鏈流程的管理效率，成功減省採購流程的時間及成本。」

What is GS1 Standards?
GS1標準是甚麼？

IDENTIFY 識別

GS1 Identification Keys
GS1 識別碼

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。

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，例如是世界上某家公司的位置。

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。

CAPTURE 擷取

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.

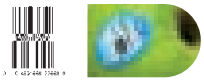
GS1-128條碼：是物流業的最高標準，能載附所有GS1識別碼以及序號、到期日與量度單位等可變資訊。

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。

SHARE 分享

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事態有關的資訊，從而追蹤物件在供應鏈上的位置。

The Global Language of Business
環球貿易的共通語言

Enhancing Visibility, Efficiency, Safety and Quality

GS1 System of Standards
GS1標準系統

Functions
功能

GS1 Hong Kong Solutions
香港貨品編碼協會解決方案

GS1 BarCodes

Global Standards for Identification and Data Capture
應用於自動識別及的全球標準

GS1 BarCode numbers registration and administration
GS1條碼編號之登記及管理

Supporting local businesses with the implementation of GS1 BarCode System and the BarCode quality assurance
為本地企業提供GS1條碼系統及條碼質素保證的支援

BarcodePlus

A product and location information portal allowing users to access and share quality data using GS1 Keys like GTIN and GLN via the internet and smart kiosk
透過GS1識別碼如國際貨品編碼及國際位置編碼，讓不同用戶經由互聯網及智能資訊站擷取並分享產品及位置資料的資訊平台

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

A global online directory of suppliers, with information of over 1 million companies worldwide, creating boundless business opportunities
一個儲存了世界各地逾一百萬個供應商資料的全球性網上資料庫，為業界帶來無界限的商機

GS1 eCom

Global Standards for Electronic Business Messaging
應用於電子商業訊息傳遞的全球標準

ezTRADE
通商易

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

GS1 GDSN

Global Network for Data Synchronization
應用於全球數據同步的網絡

GS1 HK DataPool

GS1 HK Datapool
GS1 HK 數據池

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
連接GS1全球註冊資料庫並獲國際認可的資訊平台，讓買家及賣家可適時互換準確無誤及最新的產品資料

Benefits
效益

- **Enabling sharing of quality data**
  協助合作夥伴分享有用的數據
- **Optimizing operational efficiency**
  優化業務運作效率

- **Performing Orders to Cash effectively and globally**
  有效地在全球執行由訂單至匯款之商貿流程

- **Accelerating B2B communication**
  加快商業對商業的通訊速度

提升透明度、效率、安全度與品質

EPCglobal

Global Standards for RFID-based Identification and Traceability
利用全球標準以無線射頻識別為基礎的產品識別及追溯技術

蹤橫網™ ezTRACK

ezTRACK™
蹤橫網™

Cloud-based EPCIS-standard traceability network enabling real-time visibility of goods and information flow from point of manufacturing to point of destination
以雲端科技為基礎，並以產品電子代碼資訊服務為標準的追溯網絡，能提供由來源地至目的地之實時貨物流及資訊流，以及產品溫度與濕度資訊的透明度

GENUINE **Genuine Product Authentication Solution**
「正貨」驗證

A product authentication solution enabling supply chain e-pedigree visibility
一個產品驗證的解決方案，提供供應鏈電子系譜透明度

Cold Chain Management Solution
冷凍鏈管理方案

Traceability network enabling visibility of goods (such as food and pharmaceuticals), information flow, and thermo-humidity status from point of source to point of destination
能提供能擷取及分享如食品及藥物的有關產品溫度、濕度、時間及位置的實時數據之解決方案

Warehouse Management System
倉庫管理系統

Inventory management network to capturing in-stock, out-stock, and stock take information
用作擷取入倉、出倉及盤點紀錄的倉存管理網絡

Item Level Tracking Solution
單件貨品追蹤方案

Providing manufacturer-to-store supply chain visibility by item-level EPC/RFID tagging
為業界提供由生產商至零售店舖的單件貨品供應鏈透明度

Internet of Things (IoT) RFID Centre
物聯網／無線射頻識別技術演示中心

A centre to facilitate the development of IoT and extensive adoption of RFID technology
一個促進物聯網發展及推動業界採納以標準為基礎的RFID技術中心

- **Achieving supply chain visibility and efficiency** 提升供應鏈透明度與效率
- **Enhancing anti-counterfeiting for brand integrity** 協助業界打擊偽冒產品 保護品牌信譽
- **Assuring product quality with real-time monitoring control** 透過實時監控確保產品質素

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 on your mobile

可使用手機或平板電腦掃描以下的二維條碼以下載本個案書刊。

Hong Kong

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