BUSINESS CASEBOOK 2012
Champion Business Success Through Value Creation
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GS1 Standards

GS1 Hong Kong Solutions
香港貨品編碼協會解決方案
Founded by the Hong Kong General Chamber of Commerce in 1989, GS1 Hong Kong is the local chapter of GS1®, a not-for-profit, global supply chain standards organization headquartered in Brussels, Belgium, with over 110 national chapters in 150 countries.

GS1 Hong Kong's mission is to enable Hong Kong enterprises to have more efficient, visible and safer supply chains through the provision of global standards and a full spectrum of standards-based solutions and services, thus making possible business optimization and value creation. The GS1 System of Standards is the world's most widely used supply chain standards, allowing the efficient and secure movement of products, services, and information between companies and facilitating the interoperability between different business systems.

GS1 Hong Kong is the authorized registration organization for GS1 BarCodes and Electronic Product Code System. It also offers platforms for trusted product information, BarcodePlus; e-ordering and replenishment, ezTRADE; a global traceability system, ezTRACK™; and a B2C mobile application, Consumer Connect. The organization also offers training and consulting in supply chain management technologies and best practices, as well as membership and partnership programs to facilitate business matching and global trade collaboration.

GS1 Hong Kong currently has more than 6,000 corporate members covering close to 20 industries including retail consumer goods, food, wine, healthcare, apparel, consumer electronics and logistics.

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

香港貨品編碼協會於1989年由香港總商會成立，是GS1社群的成員組織之一，也是一間積極開發和實施全球供應鏈標準的非牟利機構。GS1總部位於比利時的首都布魯塞爾，擁有超過110個成員組織，遍及全球150個國家。

香港貨品編碼協會憑藉全球供應鏈標準和以標準為本的解決方案及服務，讓香港企業享有更有效率、更高透明度和更安全的供應鏈，以優化業務及創值增效。GS1的標準系統是全球最廣泛採用的供應鏈標準，能促進和保障企業之間的貨物、服務及資訊流通，提升不同商業系統之間的互通性。

香港貨品編碼協會是唯一在香港獲授權註冊GS1條碼和產品電子代碼系統的機構。協會為業界提供多個平臺，如搜尋可信產品資訊的BarcodePlus，供業界進行電子採購的「通商易」、全球追溯平台「跨棧網」及企業對個人推廣的流動通訊平台「物密權」。協會亦提供關於供應鏈管理技術及最佳實務的培訓和顧問服務，並且籍會員及夥伴計劃推動商業配搭及環球貿易協作。

香港貨品編碼協會目前有逾6,000名企業會員，涵蓋逾20種行業，包括零售消費品、食品、葡萄酒、醫療護理、成衣、消費電子產品及物流。

如欲進一步了解香港貨品編碼協會，請瀏覽www.gs1hk.org。
For over two decades now, GS1 Hong Kong has been providing a wide range of standard-based solutions and services to over 6,000 local enterprises in addressing business challenges and ensuring visibility along the entire supply chain.

We believe that through collaboration among trading partners, organizations and technology providers with the use of GS1 standards, we are able to optimize business efficiency, assure product quality and improve consumption safety to the benefit of the consuming public. Our Global Wine Supply Chain Traceability project, which tracks-and-traces wines from Italian vineyards to Hong Kong along with temperature monitoring, thereby improving inventory management and enhancing quality assurance, earned a prestigious Year 2012 QUID Innovation Italy Award is a clear proof to demonstrate that kind of win-win collaboration.

From 2011 to 2012, GS1 Hong Kong successfully forged major collaborations and implemented joint projects with foreign and local governments, international brands and home-grown small-and-medium enterprises. As such, we are putting together this 2012 Casebook with a theme of ‘Champion Business Success through Value Creation’, and where 10 successful business stories are featured to provide you insights in knowing how to win in today’s global market.

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. Our ultimate goal is to empower local enterprises with GS1 standard-based solutions because we believe that their success is Hong Kong’s success.

Anna Lin, JP
林潔貽太平紳士
Chief Executive, GS1 Hong Kong
香港貨品編碼協會總裁
“Consumer Connect envisions to help businesses, especially our SME members, to generate business opportunities, protect from counterfeits, and create brand, product/service awareness through the mobile marketing trend. This simple yet cutting edge mobile platform serves as Trusted Source of Data (TSD) and an ideal genuine product authentication and marketing tool that will result in win-win situation for businesses and consumers,” said Ms. Anna Lin, JP, Chief Executive, GS1 Hong Kong.

香港貨品編碼協會總裁林潔貞太平紳士表示：「我們乘著流動電話普及的趨勢推出「消費者連接」，目標是協助業界，特別是中小企，創造商機及阻截僞冒產品流入市場，以及提高品牌、產品及服務的知名度。這個簡單而先進的手機流動平台不但能為各界提供可信的產品資料來源，同時亦是產品驗證及市場推廣的理想工具，能為業界及消費者帶來双赢的效果。」
Elevating product / service value and creating new shopping experience with standard-based mobile application

透過以標準為基礎的手機流動推廣平台
提升產品 / 服務的價值 並為顧客提供嶄新的購物體驗

**GS1 STANDARDS USED 應用的GS1標準**

- Global Trade Item Number (GTIN) 國際貨品編碼
- Global Location Number (GLN) 國際位置編碼
- EAN/UPC BarCode EAN/UPC條碼
- GS1-128 BarCode GS1-128條碼
- GS1 DataBar™ GS1 DataBar™條碼
- QR Code QR碼
- GS1 DataMatrix GS1 DataMatrix

**SOLUTIONS APPLIED 推行方案**

- Consumer Connect
- BarcodePlus

**CONSUMER BENEFIT 消費者效益**

Increase purchasing confidence by having easy access to product information with Trusted Source of Data, and interactions with the brands

透過可信的產品資料來源及品牌互動聯繫 協助消費者輕易取得產品資訊 加強購物信心

**ULTIMATE GOAL 終極目標**

INCREASE VISIBILITY 增加透明度

UPLIFT SAFETY 提升安全度

ASSURE QUALITY 確保品質

OPTIMIZE EFFICIENCY 優化效率

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1 Consumer Connect: A direct mobile communications platform that helps brand owners and retailers to deliver their product, service and brand values by scanning GS1 BarCodes.

消费者連接：一個直接的流動通訊平台，讓品牌擁有者和零售商能夠透過掃描GS1條碼來傳遞其產品、服務和品牌價值。

2 BarcodePlus: A product and location information portal that allows users to access and share quality data using GS1 Keys like GTIN and GLN via the internet and smartphone.

BarcodePlus：依託GS1 鑰匙如國際貨品編碼及國際位置編碼，通過互聯網及手機應用程式分享產品及位置資料的資訊平台。
BACKGROUND
In the Fall of 2009, Global GS1 partnered with global brands and retailers such as Nestlé, Kraft, Johnson & Johnson, Wal-Mart, Metro and Carrefour in defining open standards that will allow businesses and consumers to interact via mobile phones. These companies were spearheading and driving efforts to connect businesses (including brand owners, distributors, and retailers) and consumers using mobile phones with local GS1 offices. GS1 Hong Kong was one of the supporting local offices.

CHALLENGES
In 2011, GS1 conducted a study on how consumers in seven countries including the US, Canada, UK and Australia are using Barcodes to retrieve product information using mobile applications. The survey showed that consumers give extra importance on the accuracy of product information they get from their mobile application. They may also defer buying a product if they cannot trust the product information when they scan a product BarCode.

Another report reveals that the industry must help consumers make “informed” buying decisions by providing them with “trustworthy” information (or Trusted Source of Data - TSD).

In today’s digital world, consumers have easy access to product information using mobile gadgets. As such, brand owners must provide consumers with digital product data and TSD of their products to make wise purchasing decision. “We believe consumers can more engage with the brands, distributors, and retailers by enhancing product/service values if we can offer a trusted information platform via mobile application,” said Ms. Anna Lin, JP, Chief Executive, GS1 Hong Kong.

SOLUTIONS
GS1, as a supply chain standards organization, aims to become the TSD that brand owners can rely on in order to provide consumers with accurate product/service information. Sharing the same vision, GS1 Hong Kong incorporates product and location information in BarcodePlus portal. It has also developed a Consumer Connect mobile app on Apple iOS and Google Android® platforms where consumers can easily retrieve product/service information free of charge.

With Consumer Connect, consumers only need to scan the GS1 BarCode found in product packaging or QR Code in a store to directly view product and service information via TSD source in BarcodePlus.

Besides showing basic content on product packaging such as ingredients and nutritional facts, it also displays additional data such as product uniqueness, benefits, and promotional video link, which consumers can bookmark if they find it useful, and share with friends via Facebook, Email, and SMS.

Consumer Connect also allows brand owners, distributors, and retailers from sizable to SME companies to promote their marketing campaigns by just scanning the GS1 BarCodes.

BENEFITS
Enhance product and brand image with consumers through product authentication service, digital coupon, and marketing and promotional campaigns.

Besides displaying the product/service information via Consumer Connect, the app is also a platform for businesses to combat counterfeits with its product authentication service features. It also promotes product/service value add for marketing campaigns such as digital discount coupons, multimedia contents, and lucky draw. Plans are in the pipeline for various well-known companies to use the promotion features on Consumer Connect in their future marketing campaigns. The joint campaign promotions will be launched in late 2012.

To download Consumer Connect, please visit www.consumerconnect.hk.
背景
2009年秋天，GS1總會與多個國際品牌及零售商如雀巢、卡夫、強生、沃爾瑪、麥德龍集團及家樂福合作，目標是尋求一套開放標準，以協助業界及消費者透過流動通訊設備進行互動。上述企業與GS1總會各個部門分別擴展努力，利用手機這個媒體加強企業(品牌商、分銷商及零售商)與消費者之間的連繫。作為GS1總會之一，香港貨品編碼協會亦就上述的項目提供了重要支援。

挑戰
2011年，GS1組織進行了一項調查，了解英國、加拿大、美國、澳洲等七個國家的消費者透過手機應用程式接收產品資訊的情況。調查結果顯示，消費者十分關注手機應用程式所提供的產品資料的真實性。若他們在掃描產品條碼或ご覧產品資訊不可靠，實際質疑或購買有關產品。

另一份報告的結論顯示，業界有責任為消費者提供可取的產品資料，以助他們作出明智的購物選擇。

在這個數碼年代，消費者可輕易地透過流動通訊設備獲取產品的資訊。品牌商有責任為消費者提供可靠的產品資料來源及相關的電子產品資訊，以助他們作出明智的購物選擇。香港貨品編碼協會總幹事林潔児太平紳士表示：「當我們能透過流動通訊應用程式為消費者提供可靠的產品資料平台，藉此提升產品及服務的價值，消費者便會和品牌、分銷商及零售商建立更緊密的連繫。」

方案
作為推展供應鏈標準的組織，GS1的目標是成為可信的資料來源，以支援品牌商為消費者提供正確無誤的產品／服務資料。香港貨品編碼協會亦銜著同樣的理念與目標，成功推廣BarcodePlus平合儲存了產品與其位置資訊，並開發了一個可於Apple iOS及Google Android操作平臺上運作，名為物密啓的流動應用程式，讓消費者輕易地查看免費的產品／服務資訊。

消費者只須透過物密啓搜尋印於產品包裝上的GS1條碼或零售點提供的QR碼，便可直接查看BarcodePlus平合提供的可信產品／服務資料。

透過物密啓，消費者不但能查看產品成份、營養標示等印於產品包裝上的基本資料，還可獲取更詳細的資料如產品的獨特性、效益及產品推廣資料等。假有需要的話，消費者可以把該產品加入書籤內，並透過Facebook、電郵及短訊與朋友分享。

物密啓更有助品牌商、分銷商、零售商以及不同規模的企業推行產品推廣計劃，消費者只須使用該應用程式掃描產品的GS1條碼，便可獲取相關的推廣資訊。

效益
透過產品推廣服務、數碼優惠券及市場推廣計劃提升產品及品牌形象

上述應用程式不但可讓消費者透過物密啓取得產品／服務資訊，更可透過產品推廣服務協助業界打擊假冒產品。此外，企業更可利用數碼優惠券、多媒體內容及幸運抽獎等方式，宣傳產品／服務的推廣計劃。業界更可透過物密啓進行市場推廣，有關的宣傳合作計劃將於2012年底推出。

有關下載物密啓詳情，請瀏覽以下網址：www.consumerconnect.hk。

* Google Android version will be ready in Google Play for free by late 2012.
“By adopting GS1 Hong Kong GENUINE Product Authentication Solution, we now have better control of our product price and sales channel, as well as improve our customer relation management,” said Mr. Gavin Luk, Executive VP – APAC, V-MODA.

V-MODA亞太區行政副總裁陸正則先生表示：「香港貨品編碼協會提供的『正貨』驗證方案，有助公司有效地管理產品的市場價格及銷售渠道，提升顧客對品牌的信心，進一步維護V-MODA在耳機市場上的品牌價值。」
Preventing counterfeits and enhancing product management by adopting standard-based product authentication solution

透過以標準為基礎的產品驗證方案
打擊偽造品 提升產品管理

GS1 STANDARDS USED 應用的GS1標準
Serialized Global Trade Item Number (SGTIN) 國際貨品編碼序號
Serial Shipping Container Code (SSCC) 貨運容器序號
Electronic Product Code Information Services (EPCIS) 產品電子代碼訊息服務
QR Code QR碼

SOLUTIONS APPLIED 推行方案
BarcodePlus BarcodePlus
GENUINE Product Authentication 正貨驗證
ezTRACK™ 證檯網

CONSUMER BENEFIT 消費者效益
Gaining higher purchasing confidence with quick and easy-to-access warranty registration service
增加顧客的購買信心，並提供快捷的保固登記服務

ULTIMATE GOAL 最終目標
INCREASE VISIBILITY 增加透明度
ASSURE QUALITY 確保品質
OPTIMIZE EFFICIENCY 優化效率
UPLIFT SAFETY 提升安全度
BACKGROUND
Hollywood, US-based V-MODA is a lifestyle headphone brand that has been providing all true music lovers with ultimate music experience since 2006. In producing iconic, museum-quality headphones, it collaborates with some of the world's popular producers, DJs and artists to ensure all listening needs of consumers and technical details are met. Also, with a solid commitment to maintain the best quality headphones in the industry, V-MODA only uses classic materials including steel, aircraft-grade aluminum, zinc and Kevlar to produce military-grade test standard headphones, thus receiving accolades from music lovers worldwide.

CHALLENGES
V-MODA realized that counterfeiting is a serious problem in Asia when it first entered the market where consumers can easily buy inferior items online. "It is sometimes difficult for consumers to differentiate a fake product with an original product because some counterfeit looks similar and functions the same as real one. However, it is in the quality of the item where the gap is clearly distinguished," said Mr. Gavin Luk, Executive VP – APAC, V-MODA. As a result, V-MODA received chunk of complaints both from authorized distributors and valuable customers thereby staining their relationship with channel distributors, as well as increasing the pressure of managing customer service due to high numbers of fake products being returned to them. Most importantly, it damages the brand image, company reputation, and loses the trust and loyalty of the buying public.

SOLUTIONS
In proactively addressing the challenge, V-MODA APAC team has initiated a project to tackle the problems. After the system design phase and final the system requirements, the project team then carefully selects partners, suppliers and technologies. Finally, a program was started with GS1 Hong Kong in April 2012 by adopting GS1 Serialized Global Trade Item Number (SGTIN) and GENUINE Product Authentication Solution on all its headphone products. Instead of using only linear barcode, a QR code is printed on two labels to serve different operational purposes. One of the labels is stuck on the packaging, which the QR code used to store the SGTIN with product e-pedigree. With this code, consumers can make inquiries about the product, starting from the point when the goods are labeled, packed, picked up for distribution and delivered to retail shop via V-MODA’s website, which connected to GS1’s BarcodePlus by simply scanning the QR code with their smartphone before purchase. After purchasing the headphone, consumers can use their smartphone to scan the QR code found in the user manual where a unique verification code is added for authentication and warranty registration purposes. Once the product is registered, consumers can directly access V-MODA’s Warranty Registration System, where the model number and serial number of the product is automatically inputted. Consumers just need to enter their contact information which is immediately submitted and stored in V-MODA server.

To enable the above function, V-MODA changed the whole data capture process at their manufacturing plant by labeling carton boxes carrying the company's headphone products with GS1 Serial Shipping Container Code (SSCC). Using a barcode reader, a V-MODA staff associates the SSCC barcodes with items inside the box, including the headphone's model, serial number, SGTIN and total quantity. This process enables the capture of accurate product data and its movement information including event time, location and business process, which is then uploaded to GS1 Hong Kong's ezTRACK™. This procedure is again done when the item is shipped out and stocked in every location, such as factory, logistic hubs, distributors’ warehouse and retail outlets.

BENEFITS
"By adopting GS1 Hong Kong GENUINE Product Authentication Solution, we now have better control of our product price and sales channel, as well as improve our customer relation management," said Mr. Gavin Luk, Executive VP – APAC, V-MODA.
背景
V-MODA成立於2006年，總部設於美國
荷李活，以高質素及時尚設計作定位的
耳機品牌，讓音樂愛好者的體驗優質的
音樂享受。V-MODA經常與國際知名的
音樂製作人、唱片製片和藝人等合作
研發耳機的每一個細部，以製造具標誌性
及高質素的耳機產品以迎合不同市場需要。
此外，V-MODA亦對顧客作出產品質量的
承諾，採用耐久性原料，如鍍銅、鋁
製造耳機用的銅和鋁管及高強度的
纖維來生產軍事級測試標準的耳機，
獲得世界各地的用家欣賞。

挑戰
當V-MODA開始進軍亞洲市場的業務時，
發現消費者可以輕易地在多個網上商店
購買其同名的仿製品，對它的業務
造成嚴重的影響。V-MODA亞太區行政
副總裁陸正則先生表示：「對消費者
而言，有時的理義是分辨真品的真偽。
這是因為品質和實用性在正常功能上
真偽已非常顯著，但它對兩者直接比較，
它們的品質確實有很的差距。由於
消費者在網上和實體店間購買了
低價的仿製品，在發現質量問題時向
公司作出投訴及投訴，大大加重了
公司及顧客服務部門的工作量。此外，
這問題亦影響了公司與授權分銷商的
業務關係，令分銷商對公司產品管理
信心大減；更重要的是，它最終損害了
品牌形象和失去消費者信心。」

方案
為確保應對上述的挑戰，V-MODA亞太
區團隊啟動了項目，先完成系統框架設計
和定義系統需求，再選擇合作伙伴、供
應商和應用技術。於2012年4月決定
與香港貨品編碼協會合作，推出一項名為
「正貨」驗證方案，利用GS1的國際貨品編碼
（EAN）標識每件耳機產品，打擊市場上的
仿製品。除沿用一維碼外，更將二維碼
印於兩款產品標籤上以及達到不同的運作
目的。其中一款產品追蹤標籤貼於產品
包裝盒上，消費者可於購買產品前，
以智能手機掃描載有該產品獨有的
國際貨品編碼（EAN）之QR碼，通過
V-MODA網頁連結至香港貨品編碼協會的
BarcodePlus平台查閱有關產品的詳細
資料，並可查詢到零售店鋪的供應鏈電子
資料，以了解產品可供銷售的狀況。
當購買產品後，消費者即可掃描於盒內
用戶手冊上的QR碼，利用其編碼的獨一
無二驗證碼請購產品的真偽和進行
保養登記。現在，消費者可以直接進入
V-MODA的保養登記系統，該系統會自動
輸入所購買的產品型號和序列號；消費
者只需輸入他們的聯絡資料，便可立即
提交到V-MODA客服部門進行登記。

為達到有關目的，V-MODA在產品開
始時，將每件產品外盒貼上防僞標籤，
然後將產品包裝，並貼上編製有GS1
貨品編碼序列號的標籤。工作人員先
將條碼閱讀器將貼於外盒上的貨品編碼
和箱內每個貨品編碼進行數位化，
以確保耳機的型號、序列號、國際貨品
編碼序列號和箱內貨品的數量完全一致。通過
這個流程，可準確收集產品和流通過程的
資料，包括時間、地點及供應鏈上的關鍵
步驟，然後上載至香港貨品編碼協會的
數據庫。往後在貨品出貨及預計再
進行上述步驟，當中的供應鏈關鍵點包括
廠房、物流中心、分銷商和零售商鋪。

效益
V-MODA亞太區行政副總裁陸正則先生表示：「香港貨品編碼協會提供的
『正貨』驗證方案，有助公司有效地管理產品的市場價格及銷售渠道，提
升顧客對品牌的信心，進一步維護V-MODA品牌價值。」

V-MODA Headphones in carton boxes are labelled with GS1 Serial Shipping Container Code (SSCC)
in the manufacturing plant.

V-MODA Headphones in carton boxes are labelled with GS1 Serial Shipping Container Code (SSCC) in the manufacturing plant.
“With GS1’s GTC programme, Lam Soon can further enhance its product track-and-trace capability to ensure consumers’ protection,” said Ms. Maria Ho, Group Product Safety & Compliance Manager, Lam Soon Hong Kong Group.

南順香港集團產品安全及合規經理何嫂女士表示：「透過GS1全球可追溯性準則，南順可進一步提升產品追蹤與追蹤能力，以提高對消費者的安全保障。」
Assessing track-and-trace capability via GS1 Global Traceability Conformance

透過GS1全球可追溯性準則
評估企業之產品追蹤與追溯能力

SOLUTIONS APPLIED 推行方案

Global Traceability Conformance (GTC)1 全球可追溯性準則
Global Traceability Standard (GTS)2 全球追溯標準

CONSUMER BENEFIT 消費者效益

Protecting consumer safety by ensuring product quality and risk reduction
保護產品質素 減低風險 以保障消費者安全

ULTIMATE GOAL 最終目標

1 Global Traceability Conformance (GTC): A methodology and set of tools to audit and assess existing traceability systems based on the processes described in the GS1 Global Traceability Standard and international standards such as ISO 19601, ISO 22005, HACCP, and other food safety standards.

2 Global Traceability Standard (GTS): A business process standard that enhances the ability to track forward the movement of products along stages of the supply chain, and to trace backward the history, application or location of products in compliance with the appropriate GS1 identifier.
BACKGROUND

AEON Stores (Hong Kong) Co. Ltd. (AEON) – Founded in Hong Kong in November 1987, AEON is well-known for providing a wide range of daily necessity merchandise at reasonable prices to customers. Currently it operates seven JUSCO, five independent Supermarkets, twenty-two independent JUSCO Living PLAZA, four Bento Express (Japanese take-away restaurant) and two AEON MaxValu Prime in Hong Kong.

SOLUTIONS

To address this changing market dynamics, AEON, General Mills and Lam Soon decided to enhance product safety and improve their track-and-trace capability. The companies appointed GS1 Hong Kong to access their existing traceability systems through GS1 Global Traceability Conformance (GTC) programme, in order to assess their readiness in introducing a GS1-based traceability system. It also allowed them to have their current system evaluated and audited to meet customers’ requirements and regulations that in line to best practices and global standards.

AION, General Mills and Lam Soon adopted the GTC at Jusco store, the ice-cream cake production plant, and flour/edible oil/detergent warehouse respectively. In all these sites, the operation procedures and capability to perform traceability were assessed and analyzed based on 105 control points of twelve GTC assessment areas in terms of:

- Identification: How traceable items are identified and coded
- Information: What data are received, used and provided
- Systems and Technologies: What traceability systems and technologies are in place
- Operations: How traceability works and crises are managed
- Procedures: How traceability is acknowledged and documented

GS1 Hong Kong also provided below recommendations to these companies:

- AEON – A traceability system is in place. To further ensure product freshness and to protect consumers safety, the company is recommended to embed GS1 DataBar™ at fresh produce sector, and incorporate SSCC (Serial Shipping Container Code) in product receipt areas to facilitate receiving process.
- General Mills – GS1 recommends the company to enhance its product traceability by implementing identification on its work-in-progress container using automatic capturing tool. In the meantime, with the trial of using GS1 standard-based barcode, the company targets to capture production batch and/or expiry lot information to control and ensure product freshness.
- Lam Soon – GS1 Hong Kong recommends the company to further enhance its product traceability by adopting GS1 GTIN (Global Trade Item Number) on raw materials and SSCC (Serial Shipping Container Code) on logistics units, such as carton boxes.

CHALLENGES

The increasing complexity of today’s business processes and supply chain prompted manufacturers, brand owners and retailers to find effective means of ensuring consumer safety. However, industry stakeholders must have identical data exchange formats for all parties along the global supply chain to guarantee the accuracy and speed of traceability system, and to maintain cost at manageable level. Stakeholders also need to ensure that their traceability system complies with international industry requirements such as ISO 9001, ISO 22005, HACCP, BRC, GLOBAL G.A.P., etc.

BENEFITS

With a clear picture of their current traceability practices, the companies have been advised to extend their track-and-trace practices with other trading partners, starting with ingredients inspection, manufacturing and distribution. This broadens their track-and-trace ability instead of just the basic ‘one up, one down’ principle. It also optimizes flow of goods, services and data linked along the whole supply chain, benefitting supplier pre-selection, production process improvement and product replenishment.
背景
永旺（香港）百貨有限公司（永旺百貨）成立於1987年11月，是香港著名的連鎖百貨店，提供物有所值及一應俱全的日常生活用品給顧客。現時在香港經營7間JUSCO、5間獨立超級市場、22間獨立JUSCO Living PLAZA、4間Bento Express（日本便當專門店）及2間AEON Maxvalu Prime。

General Mills Hong Kong Ltd. (General Mills)至今已有150年歷史，是國際知名的食品製造商。該公司以生產優質食品為宗旨，推出高級雪糕品牌「Haagen-Dazs」，以及知名中國點心品牌「康紙包」。

南順香港集團（南順）在香港成立超過五十年，以製造及分銷麵粉、食用油與清潔用品為主要業務，並成為香港及中國內地的市場領導者之一，為人所熟悉。

挑戰
現今的商業環境與供應鏈流程變得愈來愈繁複，製造商、品牌持有者與零售商都需要尋求更有效的方法來保護消費者及維護品牌的声誉。事實上，業界持有者都面對著相同的挑戰，他們必須共同協定及使用一個能適用於全球供應鏈參與方的數據交換標準，以保護追溯系統的準確性及追溯速度，同時能將成本維持在合理的水平。此外，業界持有者亦需要確保其追溯系統符合國際工商业業的資料要求，例如ISO9001、ISO22005、HACCP、BRC及GLOBAL G.A.P等。

方案
永旺百貨、General Mills與南順認為必須要提高產品的追溯與追溯能力，並提升產品安全，才可應對當前多變的市場狀況。三家公司分別推薦香港貨品編碼協會為其現行的產品追溯系統作出評估。協會通過「全球可追溯性標準」，評估各公司使用GS1為基礎的追溯系統的可行性。根據業界實務與全球標準，協會研究相關標準進行審計與評核，協助他們作出相應的改善，以達至消費者的優質及政府規則。

永旺百貨、General Mills和南順分別在各銷售市場，推廣使用加工廠和僱員／飲食業／清潔用品倉庫進行追溯系統評估。香港貨品編碼協會根據「全球可追溯性標準」的12個評估範圍，共105個監察點，進行分析與評估。當中涵蓋範圍包括：

識別：怎樣識別可追溯的物件及將其編碼
資訊：獲得、使用及分享所有資訊
系統與技術：使用了哪些類型的追溯系統和技術
運作模式：追溯流程如何運作、如何處理危機
程序：怎樣遵循及記錄追溯流程

香港貨品編碼協會並向三家項目提出有關建議。

永旺百貨—經實地考察後，該公司已具備一套可追溯性系統，為進一步保障食品的新鮮度及加強對消費者的保障，香港貨品編碼協會建議永旺百貨使用GS1 DataBar™，協會更建議該公司在收貨區的貨箱或貨板加入貨運容器序號，以改善收貨流程。

General Mills—香港貨品編碼協會在審議其追溯系統後，建議該公司使用自動化提取工具，獲取貨運過程中貨箱的數據，以保障食品的安全。此外，General Mills曾試行使用以GS1標準為基礎的條碼以識別生產批次及/或產品到期日的資料，以確保產品新鮮。

南順—香港貨品編碼協會建議在原材料上加入GS1國際貨品編碼，及在貨箱等物流單位上加入貨運容器序號，以便進一步提升公司的產品追溯能力。

效益
經過仔細的審計及評估，永旺百貨、General Mills與南順對現行的追溯系統得到清晰的了解，協會亦建議他們可進一步尋求與其他業界夥伴合作，加強及擴展產品追溯與追溯的範圍，以弱化失實之檢查，生產過程至分銷流程。這樣，企業除可加強保障產品安全，減低風險外，亦可優化整體供應鏈的運作，服務與資訊的流動，有助企業挑選合適的供應商，改善生產及精簡流程。

Las Soon is recommended to adopt GS1 GTIN and SSCC on raw materials and logistics units respectively, so to enhance the accuracy of traceability.

Product traceability can be enhanced with identical data exchange format among trading partners along supply chain.

Consumers are being protected by purchasing good quality products that are safe for consumption.
“The SSCR methodology is an ideal solution in maximizing profitability along the supply chain by achieving better inventory control and integrated cooperation within the organization,” said Mr. K.L. Chan, Deputy Head of Supply Chain, Operations Support Services, city’super Group.

city’super 集團區域零售營運副總監陳鑫鈴先生表示：「同步供應鏈補貨模式能有效優化庫存管理及公司內部各業務單元的合作，盈利倍增。」
Enhancing product replenishment efficiency with Synchronized Supply Chain Replenishment Solution

使用同步供應鏈補貨模式 加快產品補貨效率

SOLUTIONS APPLIED 推行方案
Synchronized Supply Chain Replenishment (SSCR) 同步供應鏈補貨模式

BUSINESS BENEFIT 商業效益
Maximize sales opportunity with higher rate of on-shelf-availability
增加貨架使用率 提升銷售商機

ULTIMATE GOAL 最終目標

1 SSCR: An inventory planning solution which incorporates Theory of Constraints, assisting companies to respond to market quickly by examining existing inventory status via simulation, and prioritizing product portfolio with different replenishment requests.
BACKGROUND

City Super Group is a 'Mega Lifestyle Specialty Store' that offers a true and unique 'one-stop-shopping' experience for today's busy urban professionals. By sourcing international high quality merchandise, City Super is committed to providing high quality products, ranging from the very best food items to trendy stationary and fashion accessories that all passed high quality control ensuring safe consumer consumption and environment-friendly.

CHALLENGES

Time and money are wasted every year due to inefficiencies along the supply chain. Retailers are faced with critical operational issues, including inaccurate inventory, out-of-stocks, increase administrative man-hours due to human error, hence affecting their market competitiveness.

With a dozen number of retail outlets in Hong Kong, City Super group trades and collaborates with multiple business partners worldwide. To address and meet the demand of ever-changing market requirements, the company must effectively manage inventory of a large pool of right products, and ensure that they are delivered at the right place and right time. According to Mr. Ivan Lam, Head of Information Technology, having an efficient replenishment strategy has significant impact on sales revenue and customer satisfaction.

A reliable replenishment solution is crucial for City Super to have a better inventory practice and effectively manage its daily huge transactions.

SOLUTIONS

To address these challenges, City Super started a trial project in April 2012 in partnership with GS1 to implement the Synchronized Supply Chain Replenishment (SSCR) solution aimed at helping the company simulate inventory replenishment. Under the pilot, 10 sample SKUs with daily transaction data in Year 2011 were selected for simulation. GS1 first checked the data integrity and existing inventory status of the selected SKUs. Then, they were reviewed to determine their priority level of replenishment, enabling City Super to have a clear view which product is on top priority to meet actual market demand. The pilot also identified other products with balanced inventory, while those SKUs identified as slow-moving products will have less stock to free up warehouse space and allocate it to fast-selling items. The different SKUs were categorized based on their priority level or zone, while daily replenishment requests will thus be given to help the company keep an optimized inventory level.

With SSCR, City Super is able to categorize product portfolio, establish product ranking and effectively recommend and suggest which relevant products need urgent replenishment. Product lead-time, minimum quantity of replenishment, promotional factors and sales pattern were all considered in conducting the trial project.

BENEFITS

By adopting the SSCR solution, City Super will be able to improve inventory management using a responsive replenishment process, eliminating out-of-stock and optimizing on-shelf-availability rate. City Super aims to reduce inventory level by a minimum of 5-10% for the first year by implementing SSCR.
背景

city'super 集團是一家大型的生活專門店，致力為現今繁忙的都市專業人士提供一站式的生活購物及體驗。
city'super 不斷從世界各地搜羅各種優質的貨品，務求為顧客提供高質素的產品，包括頂級食品、潮流文具用品與服飾等。旗下所有貨品均符合高級產品檢定，既符合環保要求同時亦有效保障消費者的安全。

挑戰

每年，供應鏈效率欠佳而導致大量金錢與時間上的損失。當中，零售商所面對的挑戰，如庫存誤差、缺貨、及偽造所增加的行政工作等，這些問題都一一影響企業的競爭能力。

city'super 集團在香港旗下的十多家零售專門店，一直與世界各地的零售商進行貿易及合作。為迎合瞬息萬變的市場需求，該集團必須有一套完善的收貨管理庫存，並能適時把合適的產品推出至市場。city'super 香港零售管理部資訊經理林俊輝先生指出：「一套完善的補貨策略可直接影響企業的盈利及顧客的滿意度。對於 city'super 來說，要有效地執行庫存監控及管理每日龐大的交易額，必須找到一套可靠的補貨方案。」

方案

為面對上述的挑戰，city'super 於 2011 年 4 月與香港貨品編碼協會合作進行了一個試點計劃，透過同步供應鏈補貨模式 (SSCR) 方案，用該公司探索出一個有效的補貨策略。計劃以 2011 年底內對 10 件貨品為模擬目標。香港貨品編碼協會首先核對有關貨品每日的交易數量，其後，仔細研究現有的存貨狀況，並擬定優先補貨的排序次序，讓公司可以了解何種產品在市場上有最大的需求，任何產品存貨量處於合理水平，以及何種產品存貨量過高，必須減低存倉量以騰出空間擺放暢銷產品。之後再根據上述每件貨品的優先處理排序進行分類，然後擬定每日的補貨要求，以便該公司可以根據上述資料作出合適的補貨量。

city'super 成功通過 SSCR 方案為產品項目進行分類，擬定產品銷售排名，及制定產品優先補貨策略。在進行試點計劃時，方案亦考慮到產品補貨時間、補貨量、庫存與庫存庫等因素。

效益

city'super 通過 SSCR 方案，有效地改善庫存管理，並以快速補貨流程解決存貨不足的問題，提高貨架使用率。city'super 預期推行 SSCR 的一年內，可將庫存率降至最少百分之五至十的水平。

city'super sources thousands of products worldwide, increasing the complexity of warehouse management.

city'super uses thousands of products worldwide to manage inventory management.

city'super implemented GTIN's SSCR solution resulting in categorizing product portfolio, establishing product seeking and priority level of replenishment.

city'super uses the Hong Kong GS1 SSCR solution to improve product management by providing accurate inventory data and fast-moving products to the consumer.

This frees up warehouse space for slow-moving products to fast selling items.

It effectively optimizes on-shelf availability rate by delivering right products, right time, on right time.
“Quality & safety is a top priority for all the items sold at A.S. Watson’s retail outlets. The unsafe product prevention program is a unique business tool to quickly transmit unsafe product data into a retailer’s barcode scanning system, enabling us to instantly block erroneous products from being scanned at POS level. It enhances supply chain efficiency and visibility while providing consumers higher level of quality assurance, which is indeed good news for the consuming public and our business operations,” said Mr. Peter Johnson, General Manager, Quality, Food Safety & Regulatory Affairs, A.S. Watson Group.

屈臣氏集團品質、食品安全及規管市務總經理Mr. Peter Johnson指出：「屈臣氏集團旗下零售商店所銷售的產品均以品質及安全為先。『防預不安全產品項目』可協助零售商迅速地將不安全產品的資訊傳送到店內的銷售點系統，以即時啟動系統內的阻截銷售功能。這項目不單有助提高供應鏈的透明度與效率，同時亦對消費者提供了品質保證，實在對企業及顧客都帶來莫大的效益。」
Efficient and quick response to unsafe product alerts via GS1 BarCodes

使用GS1條碼
快速及有效地發放不安全產品預警訊息

GS1 STANDARDS USED 應用的GS1標準
Global Trade Item Number (GTIN) 國際貨品編碼
EAN / UPC BarCode EAN / UPC條碼

SOLUTIONS APPLIED 推行方案
Unsafe Products Prevention Program (UPPP) 防範不安全產品項目
Food Safety Alert System via BarcodePlusBarcodePlus'支援的安全食品警報系統

CONSUMER BENEFIT 消費者效益
Preventing from buying and consuming unsafe products
防止消費者購入及使用不安全產品

ULTIMATE GOAL 最終目標

1 BarcodePlus: A product and location information portal allowing users to access and share accurate data using GS1 Keys like GTIN and GLN via the Internet and smartphone. BarcodePlus透過GS1國際貨品編碼及國際位置編碼，讓使用者透過互聯網及智能手機即時分享產品及位置資訊的資訊平臺。
BACKGROUND

PARKnSHOP and Wellcome, Hong Kong’s two leading supermarket chains with a network of more than 200 stores, offer a wide variety of products to satisfy the daily needs of over ten million customers monthly.

PARKnSHOP is committed to provide the best value for money, the widest product choices that assures freshness & safe consumption, and tailored store services to meet the needs of varied customer segments.

Wellcome pledged to become the preferred supermarket chain by paying attention to customer’s unique needs, providing a one-stop shopping convenience to the people of Hong Kong, and consistently delivering value for money through friendly service and affordable products.

SOLUTIONS

To assist traders in identifying unsafe products in the market today via the Food Safety Alert System, GS1 Hong Kong initiated an automatic GS1 alert notification system in order to identify four key mapping results including “Barcode Not Hit”, “Barcode Hit”, “Invalid Barcode” and “Barcode Not Available”.

Once GS1 Hong Kong receives the RAS form, the appended GTIN is mapped out using BarcodePlus to generate related internal inventory codes used by different supermarket chains. A standard GS1 electronic alert message with its correspondent mapping result is then transmitted to PARKnSHOP and Wellcome via email and SMS to notify them if an unsafe product is identified among their existing product portfolio. If a “Barcode Hit” message appears on the message, PARKnSHOP and Wellcome can immediately block the product at POS level, thus eliminating tedious and error-prone manual search of matching it with internal record.

CHALLENGES

In 2010, GS1 Hong Kong, with the support of the Centre for Food Safety (CFS), Hong Kong Food Council and major supermarkets, launched the Unsafe Product Prevention Program (UPPP) aimed at protecting public’s safety and supporting traders in proactively putting a stop to the sale of or recalling any unsafe food products.

Recognizing the importance of Global Trade Item Number (GTIN), CFS added it in its Rapid Alert System (RAS) form to effectively identify unsafe products in the market. As of mid 2012, the adoption of GTIN increased from less than 5% to about 20%. In addition to enabling effective communication between the government and industry, GTIN implementation also promotes a more efficient food safety management for the protection of consumers from buying and consuming unsafe products. In swiftly addressing the issue and minimizing human errors, PARKnSHOP and Wellcome seek to enhance the Food Safety Alert System of UPPP.

BENEFITS

GS1’s e-alert notification solution further enhances the management of unsafe products process to ensure to the protection of consumers from purchasing or consuming any perilous products. With this solution, it aids in prioritizing and accurately streamlining the processing time of identifying unsafe products by at least 30%.
背景
百佳與惠康是香港兩大超級市場，分店超過200家，每月為超過一千萬個消費者提供各種類的產品，以滿足顧客日常生活的需要。
百佳超級市場致力為顧客提供最超值的貨品及多元化的購物選擇，並保障貨品安全新鮮；此：旗下開設不同種類的店鋪，以迎合不同顧客的需要。
惠康超級市場以心聆聽顧客的需要，力求成為消費者最喜愛的連鎖超市。
其服務宗旨是為顧客提供優質及超值的貨品，令香港市民能享有一站式的購物便利。

挑戰
香港貨品編碼協會於2010年推出“防範不安全產品項目”，獲得食品安全中心、香港食品委員會及各主要的超級市場支持，旨在保障公眾安全及支援業界積極阻截不安全產品出貨及回收有關產品。

為令零售商更有效及快捷地識別不安全產品，食品安全中心於項目推出後，將獨一無二的國際貨品編碼加入快速警報系統表格內。至2012年中旬，快速警報系統內的產品條碼資料由最初少於

方案
為回應上述挑戰，香港貨品編碼協會於現行的「防範不安全產品項目」上，推出一套自動化的GS1電子警報系統，並定出四個主要通報結果，包括「條碼不正確」、「條碼不準確」、「條碼不正確」及「未有條碼提供」。

當香港貨品編碼協會接獲貨物安全中心的快速警報系統表格後，其附載的國際貨品編碼資料會經由BarcodePlus資訊平台，為不同連鎖超級市場搜尋相關的內部貨品編碼。該系統繼而會建立一個標準化的GS1電子警報系統，連同上述其中一項通報結果即時以電郵及短訊方式發送予百佳及惠康。他們便可以立刻知道貨物是否存有不安全產品，及百佳及惠康發出的預警訊息內有「條碼不符」的訊息，便可即時啟動設計サポート系統內的阻截銷售功能，更可避免因人手進行內部對付可能導致的錯誤。

效益
GS1的電子警報系統進一步提升了不安全產品的管理流程，有效阻截消費者購入及使用有問題產品。這套方案協助業界更準確地查找不安全產品。據估計，查找速度可加快至百分百之三十以上。

The RAS system reports when an unsafe product is identified. The appended GTIN is mapped out using BarcodePlus to generate related internal inventory codes of different supermarkets.

Standard GS1 electronic alert message is transmitted to PARK's SHOPE and Welcome via email and SMS. If a "Barcode Hit" message appears, PARK's SHOPE and Welcome immediately blocks the product at POS level to prevent any unsafe product being sold to consumers.
“To continuously win customers’ loyalty and sustain competitive edge in the dynamic global marketplace, suppliers serving major international retailers and brands must start taking advantage of the current Item Level Tagging adoption trend.”

「供應商若要贏取世界各地主要零售商與知名品牌客戶的信任，並維持其在全球市場的競爭力，必須緊貼及掌握單品無線射頻識別（RFID）標籤化的發展及趨勢。」
Apparel RFID Item Level Tagging from source to store taking off
啟動由來源地至零售點成衣單品無線射頻識別標籤化

GS1 STANDARDS USED   應用的GS1標準
Electronic Product Code (EPC)  產品電子代碼
Electronic Product Code Information Services (EPCIS)  產品電子代碼訊息服務

SOLUTIONS APPLIED   推行方案
Item Level Tagging Enablement Program  單品標籤化啟動項目
ezTRACK™  蹤跡網™

BUSINESS BENEFIT   商業效益
ILT enables inventory tracking accuracy and efficiency, improved productivity which will contribute to increase in sales and streamline returns for the benefit of apparel supply chain stakeholders
單品無線射頻識別(RFID)標籤解決方案，為成衣供應鏈持份者帶來效益，不但能為其提供高效及準確的倉存追蹤資料，更有助提升生產量及銷售額及提高投資回報率

ULTIMATE GOAL   最終目標

1 ezTRACK™ Cloud-based EPCIS standard traceability network that facilitates real-time visibility of goods and information flow from point of source to point of destination.
蹤跡網™ 以電子標籤為基礎，以產品電子代碼資訊服務為標準的追蹤網絡，能提供源地至目的地之間貨物追蹤及資訊流的實時透明度。
BACKGROUND
EPC-enabled RFID Item Level Tagging (ILT) continues to gather momentum worldwide today with multiple roll out chain-wide of major fashion brand owners and retailers. Major retailers in the US have indicated plans to aggressively implement ILT soon. Hong Kong and Southern China provinces are now among the leading fashion garments, accessories and footwear sourcing and production hubs in the world. In order to continuously win customers’ loyalty and sustain competitive edge in the dynamic global marketplace, these suppliers serving major international retailers and brands must start taking advantage of the current ILT adoption trend.

Last year, GS1 Hong Kong teamed up with GS1 US to connect US retailers and brand owners with sourcing offices and garment manufacturers in Hong Kong and Southern China in the global supply chain. The collaboration was aimed at gearing up and providing stakeholders with the necessary knowledge, update on the latest ILT implementation trends, and market developments through knowledge sharing sessions, application showcases, formation of industry consortium and user groups, all to achieve the ultimate goal of enhancing apparel and garment industry’s ILT capabilities.

CHALLENGES
Since ILT was introduced two years ago in the US, the apparel and general merchandise industries started moving beyond the barcode toward global implementation of EPC-enabled RFID technology under the VICS Item Level RFID Initiative (VIRLI). The initiative established a course of action for the adoption of EPC-enabled RFID technology throughout the retail supply chain.

Industry leaders are now moving away from ‘Slap-and-Ship’ toward item-level tagging at the point of manufacture – known as “source-to-store tagging” in order to realize the real benefits of ILT for the entire value chain, including minimizing human errors, reducing overhead and labour costs, and preventing counterfeiting. Tagging has been moved upstream to the manufacturing side, making them ILT-enabled by assigning and managing EPC serialized numbers, as well as adding different tagging requirements and RFID label service bureaus to ensure the right information is encoded on the right product, deliver to the right place at the right time. This, however, creates a complex picture of multiple nodes of ILT information generation, capturing and sharing amongst the stakeholders – which today is a huge challenge to the apparel supply chain upstream and downstream.

SOLUTIONS
GS1 Hong Kong Item Level Tagging Enablement Program offers the following:

• Brand Owner Item Level Tagging Compliance Enablement Program
  Onsite training will be provided to enable vendors to be ILT compliance, from numbering assignment, tagging requirements to implementation measures etc.

• Item Level Tagging Serialization Management on ezTRACK™
  Serialized EPC numbers assignment and management via cloud based EPCIS Infrastructure - ezTRACK™ ensures ILT tag data integrity and is flexible to support brand owners and label providers managed IT-based centralized serialization management approaches to meet different implementation requirements.

• Supply Chain Electronic Proof of Delivery (ePOD) Subscription Service
  By subscribing to ePOD on ezTRACK™, stakeholders are able to obtain RFID label providers’ work status, ILT label delivery data, points of origins of finished goods, order fulfillment information, and goods receiving information at the final destinations.

BENEFITS
Contract manufacturers will be able to comply with buyers’ tagging requirements while order fulfillment and delivery information of product is made visible to trading partners hence lessen charge backs due to wrong deliveries, and minimize errors and returns. The electronic proof of delivery allows reconciliation of goods and final destinations thus, shorten the order-to-cash cycle between trading partners.

For RFID label service bureaus, the serialized EPC numbers are assigned and managed by ezTRACK™ ensuring that all EPC manager numbers are unique regardless which label providers the brands or retailers are working with from different locations and no duplication will be encoded.

For brand owners and retailers, the serial number management with different label providers and contract manufacturers is made easy regardless what management approaches they adopt. The availability of end-to-end ePOD information made possible by ILT allows them to address market needs timely and accurately.
背景

為應對今天，多家國際知名的服裝品牌及零售商，相繼在旗下的連鎖零售店使用RFID標籤，以提高生產效率，提升顧客滿意度。RFID標籤的應用已逐漸受業界認同。事實上，美國的主要零售商正積極積極地應用這個方案以提高業務效率。至香港與中南地區，現今發展成為世界上先進的時裝、服飾與鞋類採購及生產基地之一，供應商若要贏取世界各地主要零售商與知名品牌的訂單，必須要在全球市場上的競爭力，未來緊貼及掌握RFID標籤的發展及趨勢。

去年，香港貨品編碼協會與GSM美國分會合作，與在香港及中南地區設立採購中心及服裝生產線的美國零售商及品牌持有人緊密協作，計劃透過知識分享環節、應用方案展示，組織業界聯繫與用戶小組，為相關的供應鏈持份者提供有關RFID標籤標準化知識教育及市場發展資訊，並推動發展RFID標籤應用及標準化倡議，並推動發展RFID標籤應用及標準化倡議，未來緊貼及掌握RFID標籤的發展及趨勢。

挑戰

兩年前，單晶RFID標籤開始在美國盛行，成為各採購中心及零售商通過VICS單晶RFID標籤項目。由使用條碼速度至全球性採用以產品電子代碼為本的RFID技術。该项目包括一系列工作行動，目的是協助業界在零售業嚴重的供貨難題。現時「由來源地至零售點標籤化」是實務，即是指使用RFID為整體供應鏈帶來的真正效益，包括減少入貨延誤，減少人力資源及指出，以及防止僞造商品流入市場等。事實上，標籤化流程已流向下層供應層上游的生產線上。

方案

香港貨品編碼協會單晶標籤啟動項目包括：

- 品牌持有人及單晶標籤管理項目
  - 協助為供應商提供實地培訓課程，內容包括序號編碼、標籤化標準及實用課程等，協助供應商配合行業規範。

- 輔導單晶標籤管理標準
  - 透過香港貨品編碼協會的EPC信息服務平台，為EPC序號進行編碼，可確保EPC標籤數據準確無誤，並有助品牌持有人及標籤供應商使用以資訊科技為本的中央標準化管理方案，以配合不同的標準化規範。

- 供應鏈電子配送憑證訂購服務
  - 持份者可透過單晶標籤“訂購電子配送憑證”以獲取包括RFID標籤供應商工作狀況資訊、EPC標籤付運資料及成品來源資料，並可訂購電子付運憑證以實現；有助提高供應商之間的效率。

- 供應鏈電子配送憑證訂購服務
  - 持份者可透過單晶標籤“訂購電子配送憑證”以獲取包括RFID標籤供應商工作狀況資訊、EPC標籤付運資料及成品來源資料，並可訂購電子付運憑證以實現；有助提高供應商之間的效率。
“The Supply Chain Modernization (SCM) project has provided our pharmacy staff with an efficient means to track-and-trace the movement of the pharmaceuticals through our stores with new supply chain procurement and goods receipt processes supported by automation and modern technology,” 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：「醫療藥物供應鏈現代化計劃為我們的藥劑部員工提供一個有效追蹤及追溯藥物流向的方法，使用了這個現代科技支援的方案後，供應鏈採購與收貨流程的出錯機會明顯降低。」
Rolling out Pharmaceutical Supply Chain Modernization Project
推出醫療藥物供應鏈現代化計劃

GS1 STANDARDS USED 應用的GS1標準
Global Trade Item Number (GTIN) 國際貨品編碼
Global Location Number (GLN) 國際位置編碼
Serial Shipping Container Code (SSCC) 貨運容器序號
GS1-128 Barcode GS1-128條碼

SOLUTIONS APPLIED 推行方案
ezTRADE¹ 通商易¹
BarcodePlus² BarcodePlus²

BUSINESS BENEFIT 商業效益
Improving procurement, goods receipt and invoicing procedures by automating the manual processes, to assure that the right products of the right source are received on time
透過流程自動化改善採購、收貨及處理發票的流程，藉此確保藥房適時收到來自正確來源的正確藥物

ULTIMATE GOAL 最終目標

¹ ezTRADE: An industry-wide B2B platform that facilitates electronic transaction messaging via VAN and Web to support electronic ordering, invoicing and shipment notices.通商易：一個覆蓋B2B產業的電子交易平台，透過 VAN 及 Web 支援電子訂單、發票及出貨通知。
² BarcodePlus: A product and location information portal that allows users to access and share quality data using GS1 Keys like GTIN and GLN via the Internet and smartphone. BarcodePlus: GS1貨品編碼及國際位置編碼的產品及位置資訊平台，用戶可透過互聯網及智能手機訪問及共享品質資料。
BACKGROUND

The Hospital Authority Hong Kong (HA) is the statutory body responsible in managing Hong Kong’s public healthcare system. Under its auspices are 41 public hospitals and institutions, 49 specialist out-patient clinics and 74 general out-patient clinics. It has 27,000 beds and has served over 19.3 million patients from 2011 to 2012.

CHALLENGES

In the early 90s, HA considered automating its manual procurement process by adopting Electronic Data Interchange (EDI). In 1996, it started using GS1 Hong Kong’s ezTRADE to communicate with their suppliers. With ezTRADE, HA places order to medical suppliers by providing essential procurement data, including specific information about the drugs per item, description, quantity, delivery date, purchase amount, and delivery location in purchase order (PO) form. The suppliers then deliver the goods to HA with delivery notes that are acknowledged by the pharmacy staffs. However, the process is not fully automatic since it still requires manual checking of the goods lot number and expiration date, input the data on HA’s IT system, stock the goods in the right shelf, and validate and submit paper-based invoice to the finance department.

SOLUTIONS

For better management on the procurement process, HA implemented Supply Chain Modernization (SCM) by using GTIN to identify every pharmaceutical product, GLN to represent every delivery location and a comprehensive set of EDI messages, including Purchase Order (PO), Purchase Order Response (POR), Advanced Shipping Notices (ASN) and Invoice, with the suppliers. Using EDI POs, the suppliers now pack and label the ordered goods with SSCC on GS1-128 BarCodes. Prior to their delivery, the suppliers notify the HA with EDI ASN which contain SSCCs, GTIN, manufacturer name, country of origin, lot number and expiration date of the incoming goods. The GLN in the EDI represents the exact locations where the suppliers will deliver the items. The ASN are received by HA daily and the pharmacy staff would refer to these ASNs to determine which supplier is delivering the goods. Once the goods arrived HA, they are validated against the corresponding ASNs, and the delivery is confirmed by scanning the SSCC labels. Finally, the goods data are automatically integrated into the HA IT system without human intervention.

The manual process of checking paper-based invoices from the suppliers is eliminated using EDI invoices which are automatically integrated into the HA IT system for validation and sent to the finance department for payment processing.

BENEFITS and POST PILOT REVIEW

The pilot was completed in June 2012, with 13 hospitals from 2 of the 7 clusters officially rolling out the SCM at the same time. The HA sees the SCM to enhance efficiency of their operation and has reduced the time spent by their staff in the entire process. “The SCM project has provided our pharmacy staff with an efficient means to track-and-trace the movement of the pharmaceuticals through our stores with new supply chain procurement and goods receipt processes supported by automation and modern technology,” said Ms. S.C. Chiang, Senior Pharmacist, Chief Pharmacist’s Office, Hospital Authority Hong Kong.

There were key findings during the post pilot review. First, although ezTRADE enhanced the procurement cycle between HA and their suppliers, the seamless use of ezTRADE requires the consistent and quality data of the pharmaceutical products between both parties, especially since the products are now identified by GTINs in the EDI messages. To prevent incurring additional cost and extra work to rectify when an irrelevant data appears during the procurement cycle, GS1 Hong Kong is proposing to synchronize all supply descriptions through BarcodePlus. This standard-based information portal enables buyers and suppliers to exchange standardized and synchronized trade item data.

Second, some pharmaceutical manufacturers only indicate the year and month of expiration on the packaging of their supplies, without specifying the date information. There is a confusion about the interpretation of such expiration information, as some would recommend the end of month but some would argue that it should be the beginning of the month. In the absence of exact day of expiration, HA suppliers now include “00” as the expiration day within the GS1-128 BarCode and EDI ASN in order to meet GS1 Standards requirements.

In order to avoid confusion and for operational purpose, it is recommended that the use before date of all pharmaceuticals in HA, if indicated in the format of MM / YY, will be made reference as use before the first day of the month. This new reference will ensure that the product is used well before the month of expiry of which it is referred to.

“It is indeed important that an exact expiration day of pharmaceutical products is indicated on packaging and follow the GS1 Standards to provide clear information for the whole healthcare industry. This prevents misunderstanding and unnecessary arguments and errors. Pharmacists and patients worldwide will benefit by adding this simple information on packaging,” concluded Ms. Chiang.
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、49間專科門診診所及74間普通門診診所。於2011年至2012年間，醫管局合共有27,000張病床，向超過1,930萬個病人提供有關服務。

挑戰
九十年代初，醫管局開始考慮利用電子數據聯通（EDI）抓手採購流程進行自動化。1996年，醫管局正式使用香港貨品編碼協會的通易居供應及與供應商交流訊息。局方透過通易居向藥物供應商送出訂單，同時把關鍵的採購數據傳送給對方，這些數據包括每件藥物的特點資料、藥物名稱、數量、送貨日期、購買貨品及收貨地點等。而上述資料均會在採購訂單上清楚列明。供應商根據此份訂單把貨品送到醫管局後，局方的藥劑部職員便會在送貨單上作收貨確認。不過，上述流程並非完全自動化，因為部份工序仍須依賴人手執行，包括檢查貨物編號與有效期、把有關資料輸入醫管局電腦系統，為藥品入倉，核對發貨及把貨單發票遞交至財務部。

方案
醫管局為了更有效管理其採購流程，決定推行供應鏈現代化計劃，透過國際貨品編碼識別每件藥品，及利用國際貨品編碼為每個貨品地址編碼，並使用電子數據聯通提供之訊息網絡把有關訂單、採購訂單回覆、預先付運通知及電子發票與供應商溝通。供應商則使用電子數據聯通接收採購訂單，並會為包裝中的貨品貼上儲存於貨品容器的GS1-128編碼。而在付運之前，供應商會透過電子數據聯通向醫管局發送預先付運通知及一系列資料，包括相關的貨運承運商資料、國際貨品編碼、貨品名稱、貨物名稱、貨物至貨運至期日、傳遞的貨品亦包括國際貨品編碼，供應商會根據這個編碼所代表的位置把貨品送至指定的貨位。事實上，醫管局每日會收到由不同供應商發出的預先付運通知。藥劑部職員會根據這些電子訊息的資料，確認送往醫管局的藥品來自有關供應商。藥品運抵醫管局後，相關的職員亦會按照預先付運通知核對貨物來源，並透過對接資料容器序號標籤確認貨品。最後，貨品的資料會被整合到醫管局的資訊科技系統中，整個過程完全自動化。

醫管局使用了電子數據聯通的電子發票後，所有採購資料會自動整合到醫管局的資訊科技系統中作核對，及傳遞到財務部進行付款安排。事實上，以上流程已成功地減少手續及預金到貨款的時間，使到貨款的處理更有效率。

效益及試點完成報告
試點計劃最終於2012年6月完成，醫管局於個案聯網中連合共33家藥局於同一時間推行為的供應鏈現代化計劃。醫管局指出，該計劃有效提升運作效率及減少了的費用。香港醫院管理局總藥師辦事處和藥劑師於2012年3月27日向各個藥房發送一則簡訊，強調計劃的精髓及重要性。報告於4月4日發送給藥房，並於4月26日發送給藥房。報告指出，計劃的精華在於以下幾個方面：

- 提高運作效率：計劃的實踐令到貨處的運作效率大大提高。
- 降低費用：計劃的實踐令到貨處的運作成本大大降低。
- 保障質量：計劃的實踐保障了到貨處的質量。
- 維護病人安危：計劃的實踐維護了病人的安危。

以下為計劃完成後的分析結果：

- 提高運作效率：計劃的實踐令到貨處的運作效率大大提高。由於有關資料已經在電子數據聯通系統內的國際貨品編碼進行識別，故此，若要無需斷送通易居系統，確保運作效率的有效率方式進行，雙方必須保持及時詳細及準確的資料交流。
- 降低費用：計劃的實踐令到貨處的運作成本大大降低。由於有關資料已經在電子數據聯通系統內的國際貨品編碼進行識別，故此，若要無需斷送通易居系統，確保運作效率的有效率方式進行，雙方必須保持及時詳細及準確的資料交流。
- 保障質量：計劃的實踐保障了到貨處的質量。由於有關資料已經在電子數據聯通系統內的國際貨品編碼進行識別，故此，若要無需斷送通易居系統，確保運作效率的有效率方式進行，雙方必須保持及時詳細及準確的資料交流。
- 維護病人安危：計劃的實踐維護了病人的安危。由於有關資料已經在電子數據聯通系統內的國際貨品編碼進行識別，故此，若要無需斷送通易居系統，確保運作效率的有效率方式進行，雙方必須保持及時詳細及準確的資料交流。
“The traceability system significantly enhances surgical safety. IT cum BarCode technology enables accuracy and efficiency in data capture, saving time, space and environment. With advances in program development, through real-time data logging, senior management can closely monitor the performance of equipment (washers and sterilizers) used for decontamination, as well as staff productivity,” said Dr Raymond Chen, CEO of Hong Kong Baptist Hospital.

香港浸信會醫院行政總監陳崇一醫生指出：「這套追溯系統大大提高了手術的安全度。資訊科技結合條碼技術有效提升攜取數據的效率及準確程度，亦能節省時間和空間，並有助環境保護。藉著電腦程式，高級管理人員可透過掌握實時數據，嚴密監控清潔及消毒設備的運作狀況，亦可瞭解員工的工作效率。」
Enhancing patient safety through electronic surgical instruments tracking system

透過電子追蹤手術儀器系統 加強保障病人安全

SOLUTIONS APPLIED 推行方案

Surgical Instruments Traceability System build on BarCode Technology

以條碼科技建構的手術儀器追蹤系統

BUSINESS BENEFIT 商業效益

Ensure the provision of safe surgical instruments through efficient and effective tracking solution, by eliminating the need to discard an unknown but could be sizable lot of instruments when an untraceable few of which have been contaminated by some unremovable pathogens such as prions of CJD. As a result, this track-and-trace system has protected patient from risk of cross-infection as a result of surgical operation.

藉着一套高效益的手術儀器追蹤系統，排除了在小量儀器被難以消除的致病體(如引致瘋牛症之病原體)污染後，被棄置一堆未知但可能是大數量的手術儀器的需要，確保外科手術儀器的安全性。藉此追蹤與追蹤系統便能保護病人免受因手術引致的交叉感染

ULTIMATE GOAL 最終目標

INCREASE VISIBILITY 增加透明度

UPLIFT SAFETY 提升安全度

ASSURE QUALITY 確保品質

OPTIMIZE EFFICIENCY 優化效率
BACKGROUND
Hong Kong Baptist Hospital (HKBH), established in 1963, is a private hospital with 850 beds and around 2,000 employees and another 2,000 associate doctors. Hospital covers most of the specialties, such as surgical, medical, pediatric, maternity, gynecology, ophthalmic, skin, ENT, urology, endoscopy, minimally invasive surgery, nuclear medicine and radiation therapy & oncology.

The hospital is continuously striving for safe and high quality patient care of international standard. In 2010, HKBH got full accreditation in the Australian Council on Healthcare Standards (ACHS) scheme. This pilot scheme was organized by the HKSAR Government with an aim to improve the quality and safety of hospital service through works in four domains: patient focus, effective leadership, continuous improvement and evidence of outcomes.

CHALLENGES
Mad Cow Disease (CJD) is an incurable and fatal illness that affects human nervous system. It has triggered healthcare concerns globally because CJD can be transmitted if a surgical device contaminated with prions is used on another patient, as prions on surgical devices cannot be totally eradicated. Patients are in danger of being infected due to contaminated surgical devices in the absence of effective tracking record.

In an attempt to comply with local legislative requirements, HKBH has developed its own Standard Operating Procedure (SOP) in surgical instrument track-and-trace.

SOLUTIONS
HKBH has developed its own surgical instrument traceability system by scanning Patient Episode Number and Sterilization Batch Number in a 1-D BarCode; and the description of Surgical Instruments in a 2-D DataMatrix BarCode. This simple set up accords full traceability on what surgical device had been used on which patient; which washer / sterilizer had been used; and who packed the device.

A new off-site facility for reprocessing reusable surgical devices will be established in Fanling, New Territories in 2013. A more comprehensive and advanced system will be setup in collaboration with Getinge International (Asia) Ltd that adopted GS1 Standards for track-and-trace.

All the above data on instrument track-and-trace, as well as device usage and equipment data logging are stored in the database. The new system requires every staff who handles any surgical device to scan her personal 1-D BarCode to identify herself in every stage of production process.

BENEFITS
Measurable ROI: Patient safety, efficiency and sustainability
“This new surgical instrument traceability system will increase visibility of our supply chain. Senior management can export real-time report of the decontamination cycle and also analyse staff productivity,” said Dr Raymond Chen, CEO of HKBH.

Continue high quality patient care service
HKBH is considering how to optimize this system’s functionality when the new centre commences operation. “We’re exploring the possibility of deploying the system on each individual surgical device down to item-level with GS1 Standards to further enhance patient safety, and fulfil our goal of providing high quality patient care,” Dr Chen concluded.
背景
香港浸会醫院（浸會醫院）在1963年創立，是擁有850張病床的私家醫院，員工約2,000名，並有2,000多位聯繫醫生。該院提供多種專科醫療服務，包括外科、內科、兒科、婦產科、眼科、皮膚科、耳鼻喉科、泌尿科、內視鏡檢查、婦科外科、核子醫學、放射治療及腫瘤科。

浸會醫院致力為大眾提供安全、優質，及符合國際標準的醫療護理服務。該院於2010年通過「澳洲醫療服務標準委員會」的醫院認證計劃的考核並成功獲得認證。該先導計劃由香港特區政府主辦，透過以下四個範疇作考察醫療機構的表現，包括以病人為本的政策、領導層管理能力、醫療服務的持續改善，以及改善服務後的具體成效，藉此提高醫療服務的質量及其對病人安全的保障。

挑戰
腦瘤是組織變形影響人體神經系統的致命疾病，屬不治之症。腦瘤引起全球極大的關注，主要是因為常見額顱部的手術儀器，難以完全消毒；若在手術中使用該等儀器，相應的病人便會受到感染。護理若缺乏可靠的追踨紀錄，病人便要面對因接觸受感染的手術儀器而染上腦瘤的可能。為配合香港特區政府制定的衛生條例，浸會醫院推行了一套院方特定的標準操作程序，以追踨及懲罰手術儀器的使用流程。

方案
浸會醫院推行了一套院方特定的手術儀器追踨與追蹤系統，透過掃描病人的住院編號及消毒批次號的1-D條碼，以及儲存手術儀器資料的2-D DataMatrix條碼，便能詳細追踨手術儀器的去向，包括病人身上使用了那一根手術儀器，使用過哪一種清潔及消毒設備，以及執行包裝程序的員工的詳細資料。

浸會醫院將於2013年在新界粉嶺設立一座用作處理手術儀器的革新設施，並會使用GS1標準進行追踨及追溯程序的定製國際（亞洲）有限公司合作，建設更全面及先進的系統。

效益
透過診斷與追蹤手術儀器使用流程的所有資料，包括儀器使用紀錄及醫療設備資料記錄，均會被儲存在數據庫。在新系統的運作下，處理手術儀器的員工，必須於進行每個工序前透過系統掃描自己的1-D條碼以確認身份。

可量化的投資回報：病人安全、操作效率及可持續發展能力
浸會醫院行政總監陳思—a醫生指出：「這套新穎的手術儀器追踨系統將有助提升浸會醫院供應鏈的透明度，有了這套系統，高級管理人員更可以匯出實時的消毒周報告，及分析員工的工作效率。」

維持優質醫療護理服務
浸會醫院計劃在中心建成後進一步優化上述系統的功能。陳思—a醫生表示：「我們不斷優化服務的精神，正積極探究以GS1標準，將追踨目標指向單件手術儀器，以進一步保障病人安全。」

Before a surgical operation, the nurse puts device label with 1-D and 2-D BarCodes on Surgical Instrument Record Form that matches with Patient Episode Number.

After the procedure, the nurse scans the 1-D and 2-D BarCodes and prints the Post Operative Cleaning Report, which contains details on the device used for the surgery.

The nurse can then check the device conditions and packs it into new sets for sterilization.
“CASSANDRA supports businesses by sharing data among partners in the supply chain that it provides insight in supply chain performance and cost reduction can be reached by minimizing administrative and planning errors.”

「CASSANDRA為供應鏈夥伴成功建立分享數據的管道，協助企業提升供應鏈透明度，及推動企業改善供應鏈表現，藉減低行政及規劃錯誤以節省成本開支。」
### Common Assessment and Analysis of Risk in Global Supply Chains (CASSANDRA)

全球供應鏈風險評估與分析計劃

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### ULTIMATE GOAL | 最終目標

- **INCREASE VISIBILITY** 增加透明度
- **ASSURE QUALITY** 確保品質
- **OPTIMIZE EFFICIENCY** 優化效率
- **UPLIFT SAFETY** 提升安全度
BACKGROUND
The increasing flow of containerized cross-border trade prompted businesses and governments to find efficient and effective means to ensure full supply chain control and security. As part of the European Commission’s Seventh Framework programme for security, it created CASSANDRA in line with businesses and government organizations’ initiatives to develop supply chain security frameworks in improving resiliency and the development of security standards and procedures.

SOLUTIONS
CASSANDRA is addressing the interoperability issue by combining heterogeneous systems of all parties involved using state-of-the-art IT innovations. It creates a virtual information pipeline that enables data-sharing and crawling, and bridging the gap between existing supply chain solutions instead of developing a totally new platform. The pipeline consists of interoperable solutions, common set of exchange information, communicating in an open, flexible and standardized manner, the GS1 EPC Information Services (EPCIS) Infrastructure.

All trading partners provide their transaction-related data in the pipeline, which extracts both commercial and container tracking data and makes them visible to other partners and government agencies in the chain for use in evaluating operational and security risks.

CHALLENGES
There are potential supply chain risks unique for both business and government organizations. Businesses are more concern in addressing operational risks due to possible disruptions, while government agencies’ main aim is in protecting the public due to security risks involved of incoming trade.

Several documents are required for trade transaction including clearance with Customs and risks assessment. While different trading parties have a subset of the supply chain information, none of them has full end-to-end visibility and reliability of some data. With CASSANDRA, a data-sharing concept was developed that acts as a data pipeline and connects entities. It gathers and distributes data according to predefined conditions to provide supply chain partners and government authorities with accurate, reliable and timely data. However, the sheer number of parties involved with varied requirements and IT systems makes the concept complex and become a reality.

BENEFITS
CASSANDRA will improve efficiency and effectiveness for government agencies by developing a new approach for risk assessment, taking the AEO (Authorized Economic Operator) concept to a new level. The new Risk-Based auditing approach will help Customs to effectively assess business processes and procedures and ensure a secured supply chain. This helps Customs to focus more on high-risk flows for higher hit rate and greater effectiveness of security related government inspections.

CASSANDRA will also facilitate EU and global trade. The Risk-Based approach will enhance corporate social responsibility while the data-sharing concept will improve product and societal safety. It also brings possibilities to improve insights on CO2 footprints and fair trade, among others.

CASSANDRA supports businesses by sharing data among partners in the supply chain and thus reducing data entry. The improved visibility that it provides in supply chain performance and cost reduction can be reached by minimizing administrative and planning errors.
背景

企業使用貨櫃箱裝運進行跨境貿易的趨勢愈來愈普遍，有見及此，業界與各國政府協力尋求更有效的方法，以監控及保障整體供應鏈的安全

全球供應鏈風險評估與分析計劃（CASSANDRA）於歐盟第七期研發框架計劃的一部份，其理念與目標跟業界及政府的方向同步一致，旨在開發一個能有效監控供應鏈的保障架構，用以提升保安標準與風險的質素及彈性。

挑戰

業界與各國政府目前面對著不同的供應鏈風險。對業者來說，首要的考慮是如何面對供應鏈運作出現中斷狀況，至於各國政府關注的主要事項，則是對外貿易所引發的保安風險，及如何在出現狀況時保障公眾的利益。

各國在進行貿易時必須處理的事項，包括貨物清關及風險評估，當中自然牽涉到一些重要文件。不過，在任何交易當中，不同的貿易夥伴只會掌握整體供應鏈的部份資料，換言之，沒有一方會掌握百分百針對於供應鏈透明度及獲得所有可靠的資料。

CASSANDRA提供了一個數據分享的理念，可讓不同的參與方透過數據管道進行互動並建立聯繫。此管道能夠收集各種數據，並透過前進的原則向供應鏈夥伴及各政府部門發放準確、可靠及及時的資料。可是由於參與方數目太多，其對數據的需求及使用的電腦系統各有不同，要實踐上述的理念並不容易。

方案

CASSANDRA利用最先進及創新的技術，整合所有參與方的電腦系統以解決互操性及問題，最後設計出虛擬資訊管道，協助推進方下載資料及進行數據分享，並將有效地整合不同的供應鏈解決方案，省卻了重新開發資訊平台所需時間。這資訊管道包含了多個具互操性的方案及.i機通用的交換數據，透過開放及具彈性及標準化的格式，即GSI的產品電子報訊息服務架構進行數據轉換。

虛擬資訊管道收集了每個貿易夥伴所提供及其交易有關的數據後，便會自動篩選出風險及遭盜用的數據，以便各國的政府機構及供應鏈上的貿易夥伴有賴以評估供應鏈運作及保安上的風險。

效益

CASSANDRA為各國政府提供了一個虛擬氣候評估的創新方案，並把合作經濟通運商（AEs）的概提升至更高的層次，大大改善政府組織的辦事效率。海關部門透過以風險為本的審核方案，能更有效地評估貨物流程及保障供應鏈的安全，同時能更集中及準確地查找有問題的貨物，更有效地為政府執行與保安有關的檢查。

CASSANDRA促進了歐盟發展與全球貿易。以風險為本的審核方案，能有效加強社會的責任感，而數據分享理念則有助保障產品及社會的安寧，同時可以提高各界對論足跡與公平貿易的認可。

CASSANDRA為供應鏈夥伴成功建立分享數據的管道，有助推動業界的業務發展，企業亦可藉此減輕輸入數據的時間。CASSANDRA亦有助企業提升供應鏈透明度，及推動企業改善供應鏈表現，節減行政及規劃錯誤以節省成本開支。

Trading partners submit transaction related data into the GSI EPCIS infrastructure. Each trading partner shares transaction related data with other partners and governmental agencies through an open, flexible, and standards-based information exchange infrastructure.

Through GSI, trading partners and governmental agencies can exchange and share information in an open, flexible, and standards-based infrastructure in a secure and streamlined manner. This approach enables trading partners and governmental agencies to perform risk assessments and improve supply chain visibility.

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“The Supply Chain Visibility Platform offers goods flow visibility information enabling Hong Kong logistics industries to enhance the competitiveness by offering high value and quality services.”

「供應鏈透明化平台體現貨物流向資訊透明化，以完善其營運流程，有助香港的物流業透過更優質的服務提升競爭力。」
Cross border supply chain visibility across Guangdong, Hong Kong and Asia
廣東省與香港及亞洲之間的跨境供應鏈透明化項目

GS1 STANDARDS USED  應用的GS1標準
Electronic Product Code Information Services (EPCIS)  產品電子代碼訊息服務

SOLUTIONS APPLIED  推行情案
A feasibility study on the value propositions of an effective cross-border visibility platform
高效跨境透明化平台價值主張可行性研究

BUSINESS BENEFIT  商業效益
Cross-border supply chain visibility information enhances the competitive edge of Hong Kong logistics industry to offer quality and value added services
跨境供應鏈透明化有助香港物流業提升服務質素
成功為客戶創優增值 以提高市場競爭力

ULTIMATE GOAL  最終目標
INCREASE VISIBILITY 增加透明度
UPLIFT SAFETY 提升安全度
ASSURE QUALITY 確保品質
OPTIMIZE EFFICIENCY 優化效率
BACKGROUND

As a logistics hub in the region, Hong Kong enjoys its strategic geographical location and ties with Mainland China. As China enters into free trade agreements (FTA) with Association of Southeast Asian Nations (ASEAN) countries, a change in the current regional trading arena is imminent. As such, previous trade regulations require consigned products be transported directly between Mainland China and ASEAN countries for tariff waivers.

Under China's 12th 5-year plan, it re-assures Hong Kong to continue its role as a logistics hub as well as encourages it to pursue its aspiration to transform into a regional distribution center for high value cargo. In order to maintain its position as premier transshipment hub and gain the International trades' confidence that it has what it takes to meet the world's growing needs and concerns including providing efficient cross-border process, supply chain visibility and certificate of origin, it is vital for Hong Kong to continuously institute reforms to further improve its logistics capability.

CHALLENGES

Currently, Asian governments have realized the value of adopting the latest technology to achieve supply chain visibility. In 2010, APEC proposed a concerted Supply Chain Visibility initiative to facilitate trade and create values for supply chain stakeholders amongst APEC economies.

Nonetheless, the challenges of realizing Supply Chain Visibility are not only technical in nature but include economic and operational feasibility considerations. For any such endeavor to succeed, a viable business model with proper value proposition and revenue model is highly critical.

SOLUTIONS

While there are different ways to interpret supply chain visibility, the study defines cross-border supply chain visibility as "the capability to provide real-time information of cargo content, associated business data and movement from manufacturers to delivery destination over borders of administrative regions". The study investigated the importance, initiatives and current status of supply chain visibility and review how an effective cross-border supply chain visibility platform (SCV) can bring value to shippers, logistics companies and government agencies through pilot case studies.

Group discussions among industry stakeholders, government agencies and secondary data collection concerning the demands, infrastructure readiness and new supply chain initiatives with respect to Hong Kong, China and Asia were conducted. Four business models were suggested in the study based on

1. Customs Inspection Reduction;
2. Supply Chain Uncertainty Reduction;
3. Transshipment Certification and
4. Authorized Economic Operators (AEO)

Operational and technical feasibility studies were done to assess the SCV implementation hurdles in real-life business and operation environments from the levels of internal enterprise, enterprise to government, cross-border government to government. The technical feasibility study revealed the technical requirements for implementation, including the difficulties on the physical level in handling of goods movement, system integration and control. It also showed that data sharing for both the industry stakeholders and government agencies may need the adoption of e-seals and SCV information platforms.

Two pilot case studies are identified to further supplement the operational and technical feasibility of SCV with high goods export from a Southeast Asian country, to be transferred in Hong Kong to Guangdong, China. The case studies will reveal the impact supply chain visibility in logistics operations and how the business value can be realized through the right business model.

BENEFITS

To customs:
An SCV platform provides a supplementary information channel for customs to validate clearance information from shippers or logistic service providers. As a result, Customs is able to process and inspect cargoes accurately and efficiently.

To shippers / buyers:
Cross-border SCV is important to buyers/importers especially for those high value or time-sensitive products as it facilitates faster and more transparent customs clearance on short cross-border route such as China-HK-Taiwan route.

To logistics service providers:
With cross-border SCV, HK forwarding companies can have visibility on cargo movements as soon as they leave manufactories which can help to eliminate the weak links. As such track and trace information from SCV platform can enhance the competitive edge of the Hong Kong logistic industry to offer high quality/value services rather than competing on price. It can also foster tight security for high value goods handled by local carriers.
背景
香港一直與中國大陸保持緊密聯繫，並享有地理上的優勢，是內地的物流業樞紐。中國與東盟簽定自由貿易協定之後，對兩地的貿易造成很大影響。根據競爭的貿易法規，由內地入境香港的貨物必須須徵付關稅。

按照中國“十二五”規劃，香港會繼續維持其在區內的物流樞紐地位，國家亦會積極擴展香港轉口成為國內的高價值貨品分銷中心。事實上，香港若要保持其作為主要轉口中心的地位，必須持續推行有關政策，提升物流業的競爭力，向世界證明它有能力配合市場需求，能有效執行跨境貨運流程，確保供應鏈透明度，以及提供產品及服務，以贏取國際投資夥伴的信心。

挑戰
亞洲各國政府現時已充分了解供應鍊透明化的重要性，並積極進行有關技術和體現在供應鍊透明化的重要。2010年，亞太經濟合作組織推出了《亞太供應鍊透明化項目》，目標是推進區域貿易及為亞太經濟合作組織成員國供應鍊供應者創造價值。

然而，要實現供應鍊透明化，不但要顧及技術的問題，亦必須考慮經濟上及操作上的可行性。要達到這個目標，必須找到一個有價值且可操作的方案，並有效地實施及改進相關的商業模式。

方案
由於各國對供應鍊透明化的定義有不同，所以研究 Yah conviction 定義為：“EPCIS 提供實時的貨物或貨物，相關業務數據，及供應商和消費者之間的供應鏈透明度的流程。該研究主要就供應鏈透明度的重要性、項目及狀況進行分析，及其對跨境供應鍊平台的效益。EPCIS 提供補充性的信息，以便供應商及物流服務供應商的供應鏈數據，以確保貨物的準確及高效的方式處理及檢查。

效益

供應鍊透明化平台為海關提供了一個實時的工業，有助於他們的供應商及物流服務供應商的供應鏈，使其能夠及時及有效地處理及檢查。

供應商或貿易商
跨境供應鍊透明化對買家及出口商來說相當重要，特別是針對高價或特殊性質的貨物而言。透過供應鍊透明化，由中國、香港及台灣等國家的供應鍊過程將變得更簡捷及透明。

物流服務供應商
透過供應鍊透明化流程，香港的貨運代理公司可於貨物運離生產線時便能掌握其流向，確保貨物有序地流通，以完善其運輸流程。供應鍊透明化平臺提供的貨物追蹤及追蹤資訊，有助香港的物流業透過更優質的服務及更便宜的收費提升競爭力，及協助本地航空公司加強對貨運產品的保安措施。

EPCIS provides supplementary information channel for Customs to validate clearance information and improve risk assessment.

A seal is attached on every container's door frame to prevent smuggling and cargo loss.

EPCIS is an extended standard data pipeline that provides real-time visibility into the supply chain.

This improves overall customs efficiency by allowing the goods to pass through without any further delay.

This reduces the cost of transport efficiency, and allows

Shippers and logistics service providers in Asia provide

standard-based data pipelines (EPCIS) before shipment

to harmonise the Asia-Pacific trade and logistics system.

The new Advanced Information Management System (AIMS) in Hong Kong provides a more efficient and sustainable supply chain.

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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、摘取及分享在全球價值鍵上的資料。

COMPANY / LOCATION 公司／位置
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。

例如：(410) 48916680000008

PRODUCT 產品
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，而該貨品單位位處於收銀處、倉庫、或是電子目錄內。

例如：4 891668 326698

LOGISTICS 物流
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：用作識別物流單位，例如是貨箱、貨板或空運貨運單位的貨運貨櫃箱。

例如：(00) 04891668000000015

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：用作識別一個具邏輯性的物流單位，該組單位由組合並根據一張運單單據運送。

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位，該組單位附有待運通知及／或提單。

ASSETS 資產
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：用作識別可循環再用的包裝或具一定價值的載運器材，例如是氣瓶、貨板或裝箱。

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 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。

SERVICES 服務
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、忠誠計劃及入住醫護服務。
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 DataMatrix/QR code: 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.

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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 Code: is a 13-digit code used to identify retail products. It can be scanned at the point of sale to provide information about the product.

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.

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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.

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EPC-ENABLED RFID TAGS
产品电子代码/無線射頻識別標籤

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 產品電子代碼儲於電子代碼內。

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.

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EPCIS: is an interface standard for exchanging event-related information to track progress of objects as they move through the supply chain.

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Enhancing Visibility, Efficiency, Safety and Quality

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- **GS1 BarCode numbers registration and administration**
- **Supporting local businesses with the implementation of GS1 BarCode System and the BarCode quality assurance**
- **為本地企業提供GS1條碼系統及條碼質量保障的支援**

- **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, mobile 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、手機及智能貨機，獲取產品及位置資料的資訊平臺

- **Global Electronic Party Information Registry (GEPIR)**
  - 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，為業界帶來無限的商機

- **Global Traceability Conformance (GTC)**
- **Global Traceability Standard (GTS)**

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GS1 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蹤技術

e2TRACK™
雲端無線射頻識別系統

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料庫標準的追跡網絡，提供貨物流及資訊流的實時追蹤

GS1 B2C

Mobile Application for Connecting Consumer
流動電話應用程式連接消費者

Hong Kong Internet of Things Centre of Excellence (IoT Centre)
香港物聯網科技應用中心
A centre to facilitate the development of IoT and extensive adoption of IoT/RFID technology
一個促進物聯網發展及推廣使用RFID技術的中心

Consumer Connect
物聯網
A direct mobile communications platform for brand owners to provide trusted product information and interact with consumers anytime, anywhere
一個直接的物聯網通訊平臺，讓品牌業主提供可信賴的產品資訊，並隨時隨地與消費者互動

• Achieving supply chain visibility and efficiency
提升供應鏈透明度與效率

• Enhancing anti-counterfeiting for brand integrity
提升防偽及保護品牌整體價值

• Assuring product quality with real-time monitoring control
提升實時監控確保產品品質

• Feature product values effectively
加快產品上市
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 QR code to download the casebook on your mobile or tablet.

可使用手機或平板電腦掃描QR碼下載本個案書刊。