

Business Casebook

20 Years of Efficiency and Innovation



One Code

to Efficiency
and Innovation



About GS1 Hong Kong

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

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

The GS1 community has over one million corporate members spanning over 150 countries and more than 20 industries around the world.

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

Foreword



Anna Lin

Chief Executive, GS1 Hong Kong

The business landscape has changed dramatically in the past 20 years. When our organization was founded in 1989 as the Hong Kong Article Numbering Association, supply chain management was still a somewhat unfamiliar business discipline to most enterprises.

But, as international trade relationships have grown ever more complex and consumers have become increasingly demanding, the need to manage the supply chain efficiently has become as much a necessity for business sustainability as it is for business success.

Here in Hong Kong, where many enterprises play a key role in facilitating international trade as the gateway between Mainland China and the rest of the world, GS1 Hong Kong has devoted substantial effort to assisting businesses in implementing the very best supply chain management solutions. By combining innovation with the GS1 system of standards including barcode, B2B e-commerce services, Electronic Product Code™/Radio Frequency Identification (EPC/RFID) and Global Data Synchronization (GDS), we believe we have helped the local business community to fulfill its potential in the global marketplace.

Retail



A.S. Watson Group

Strengthening ties and collaboration with Mainland China trade partners

“By using ezTRADE’s global-standards-conformant platform, our Mainland China operations and their suppliers reaped multiple benefits, including a streamlined ordering process, improved data accuracy and less manual data entry work.”

Mr Keith Bartlett, Director, Group IT & Logistics, A.S. Watson Group

Background

With a history dating back to 1828, the A.S. Watson Group (ASW) has evolved into an international retail and manufacturing business with operations in 34 markets worldwide.

Today, the Group operates over 8,400 retail stores running the gamut from health & beauty, food, electronics, fine wine and airport retail arms. Also an established player in the beverage industry, ASW provides a full range of beverages from bottled water, fruit

juices, soft drinks and tea products to the world’s finest wine labels via its international wine wholesalers and distributors.

ASW employs 87,000 staff and is a member of the world renowned Hong Kong-based conglomerate Hutchison Whampoa Limited, which has five core businesses – ports and related services; property and hotels; retail; energy, infrastructure, investments and others; and telecommunications in 54 countries.

Business Challenges

ASW has been a leading adopter of supply chain innovation. The Group began exploring the use of ezTRADE – the B2B EDI platform 12 years ago and now uses the service extensively across its Hong Kong operations. Currently, its two largest retail chains in Hong Kong, PARKnSHOP and Watsons Your Personal Store, processes 99% of their purchase orders electronically.

ASW found the adoption of ezTRADE in Hong Kong greatly improved the efficiency of its purchase order and invoice matching processes, generating costs savings through its supply chain and closer ties with suppliers. With the benefits of ezTRADE clearly evident, the Group made the strategic decision to adopt EDI across the Group and roll out its successful Hong Kong model for all suppliers of the PARKnSHOP and Watsons Your Personal Store Mainland China retail chains which are expanding. For these Mainland operations, ezTRADE had the significant added benefit of allowing integration with the government tax bureau’s eVAT system.





Solutions

ASW chose GS1 Hong Kong's ezTRADE as the EDI platform for its Mainland China operations because of its global standards conformance, full EDI/XML support and excellent technical support. In addition, GS1 Hong Kong business-to-business e-commerce platform has a proven track record with over 1,700 users and endorsements from other major retailers, manufacturers and government organizations.

The Group started its Mainland China EDI rollout in May 2008 by collaborating with a select group of suppliers to implement a pilot program. After helping suppliers cleanse data, conducting pilot testing and reviewing results, ASW pushed forward with the rollout, providing the rest of the suppliers with the necessary training and support to use the system in three batches. The project was completed in March 2009. A total of 767 suppliers joined the EDI program, including 539 trading partners of PARKnSHOP and another 228 trader partners of Watsons Your Personal Store.

Customer Benefits

"By using ezTRADE's global-standards-conformant platform, our Mainland China operations and their suppliers reaped multiple benefits, including a streamlined ordering process, improved data accuracy and less manual data entry work," said Mr Keith Bartlett, Director, Group IT & Logistics, A.S. Watson Group. The Mainland operations also reported improved logistics management, reduced inventory levels and faster response from suppliers to market changes. These benefits, in turn, resulted in cost savings for ASW in Mainland China.

In addition, through the EDI program, ASW in Mainland China strengthened its business relationships with its Mainland partners, laying the foundations for further collaboration on improving business data communication processes in the future. "The adoption of ezTRADE has been a win-win situation for all involved, both ourselves and our trading partners," Mr Keith Bartlett concluded.



Retail



Dairy Farm Group

Seamless trade execution with suppliers through ezTRADE

“We realized that we could improve the efficiency of our invoice handling processes by switching to an EDI system. GS1 was a logical choice to help with this challenge because of its expertise in standards-based e-commerce solutions.”

Ms Carisy Kwong, Finance Director, North Asia, The Dairy Farm Company Ltd

Background

Dairy Farm, one of the leading food and drugstore retailers in the Asia Pacific region, operates a vast network of 4,847 outlets, ranging from supermarkets and hypermarkets to health and beauty stores, convenience stores, home furnishings stores and restaurants.

Business Challenges

The group had huge volumes of invoices to process each day and wanted to look for ways to make its invoice processing system more efficient.

Prior to adopting Electronic Data Interchange (EDI) system for invoicing, the company's stores received paper invoices from suppliers. These paper invoices needed to be physically dispatched to the company's accounting team, where staff would input the invoices to the system by hand.

This manual process could cause delays in settlement, as accounting staff could not process invoices until they were physically in possession of them. The risk of paper invoices getting lost during the transfer from stores to the

finance department, which is based in Guangzhou, was considerable. There was also the risk of mistakes being made in the manual data inputting process. These potential pitfalls, in turn, would require extra resources and manpower to reconcile discrepancies.

Solutions

Dairy Farm decided to improve its invoicing procedures by partnering with GS1 Hong Kong to develop an automated invoice processing system through ezTRADE in 2009. “We realized that we could improve the efficiency of our invoice handling processes by switching to an EDI system. GS1 was a logical choice to help with this challenge because of its expertise in standards-based e-commerce solutions,” said Ms Carisy Kwong, Finance Director, North Asia, The Dairy Farm Company Ltd.

The system is currently being progressively rolled out across three of its largest retail chains, namely Wellcome, Mannings and 7-Eleven, and encompasses both their direct-to-store and warehouse suppliers.





The system allows its suppliers to send EDI invoice files to ezTRADE messaging platform, where the invoicing data are automatically and electronically integrated into their back office systems. The suppliers are then paid based on the e-invoice information received from the ezTRADE platform. Paper invoices are still issued by the suppliers to the stores, and these invoices continue to be delivered physically to the accounting department for control checking and reference purposes. If there are discrepancies after control-checking, suppliers are issued debit/credit notes.

Customer Benefits

“By adopting ezTRADE, Dairy Farm’s retail chains gained access to a business tool that allows them and their suppliers to transmit mission-critical commercial data efficiently to each other’s computer systems with no compatibility issues,” said Ms Carisy Kwong, Finance Director, North Asia, The Dairy Farm Company Ltd.

The adoption of EDI invoicing has improved efficiency on two fronts – the payment cycle and data accuracy. The payment cycle has been greatly accelerated, as invoices no longer need to be physically delivered to facilitate payment but are instead matched and

processed as soon as they are received by the EDI system. Moreover, the electronic transmission of invoicing data eliminates the risk of payments being delayed due to invoices going missing before they reach the accounting department. Secondly, as invoicing data is automatically integrated into systems, the risk of data entry mistakes caused by human error is eliminated.

The implementation of ezTRADE will also contribute to building stronger trading partner relationships, as the implementation process requires close communication and collaboration regarding data exchange.

Retail



mi-tu

Dressing smart with RFID-based intelligent fitting rooms and mirrors

“With the Smart Fitting Rooms and Dressing Mirrors in our stores in Hong Kong, we have been able to increase sales by 30 percent and improve customer satisfaction.”

Ms Katherine Ho, Managing Director, mi-tu

Background

mi-tu is an Italian-style fashion brand established in 1998, with a focus on creating high-quality ladies wear and accessories for modern middle-class female consumers. The company opened its first store in 2003 and has since expanded across Hong Kong, Macau and Mainland China. It plans to extend its network of retail outlets in various Mainland locations, including Shanghai, Xian, Beijing and Shenyang.

Business Challenges

In the highly competitive fashion retailing business, mi-tu recognized that it was important not only to have a wide product range, but also to find effective ways to market its products in-store and deliver a convenient, satisfactory shopping experience.

mi-tu wanted to leverage technology to develop a customer service system which would allow it to cross-sell products at its retail outlets more effectively, thus encouraging customers to spend more. The company also wanted to track customer buying behavior more closely.

Solutions

To address these business challenges, mi-tu developed the Smart Retail System, consisting of the Smart Dressing Mirror and Smart Fitting Room, in collaboration with Schmidt Electronics and the Hong Kong Polytechnic University's Institute of Textiles and Clothing. The system employed EPC-compliant RFID antennas and interrogators to identify tagged items that customers were taking off the rack to try on.

When a customer enters the fitting room and approaches the mirror holding a tagged item, the system captures the item's unique ID number and sends it to a computer server, which then generates suggestions for mixing and matching the identified item with other garments and accessories. Images of the mix-and-match suggested together with information are displayed on a nearby LCD display. mi-tu launched the Smart Retail System at its Shatin shop and soon extended it to the Admiralty shop.

Customer Benefits

After implementing the RFID-based customer service system, sales at the two stores increased by 30%. The company found that of the customers that entered the fitting room with only one item of clothing, as many as 80% ended up requesting additional items to try on along with that item, based on suggestions made by the Smart Dressing Mirror.

In addition to increased sales, the Smart Retail System enabled mi-tu to strengthen its brand image and build customer loyalty. The company launched a VIP customer scheme and issued membership cards embedded with RFID tags, so the system could make personalized promotional offers and product recommendations based on the VIP member's prior purchases.

At the same time, the system allowed mi-tu to gather data about the type of garments that customers were trying on in order to better understand customer purchasing behavior. Using this data, the company personalized promotional offers for customers, offering discounts on items that they had previously tried on but not purchased.

The company received the Demand Creation Excellence Award in ECR Hong Kong Awards 2007 organized by GS1 Hong Kong. The system was also showcased at the Hong Kong RFID Centre established by GS1 Hong Kong and Hong Kong Science Parks as an example of how EPC-compliant RFID technology can be leveraged on the retail shop floor to make shopping more convenient and ultimately increase sales.



Retail



Nuance-Watson (HK) Ltd, Comvita HK Ltd & Po Sum On Medicine Factory Ltd

Uplifting brand integrity with product authentication and RFID technology

“As the largest retail operator at Hong Kong International Airport, we are committed to offering travelers the ultimate in shopping pleasure. With GS1 Hong Kong’s innovative Product Authentication solution and smart RFID kiosks, travelers and local citizens will be able to purchase with complete confidence at Hong Kong’s airport.”

Ms Alessandra Piovesana, Regional Managing Director – North Asia, Nuance-Watson (HK) Limited

Background

Nuance-Watson (HK) Limited is a joint venture between the A.S. Watson Group and The Nuance Group, the world’s largest airport retail company. The company began its operations at Hong Kong International Airport (HKIA) in 1998 and now manages over 40 duty free outlets.

Comvita and Po Sum On are both long-established brand owners and manufacturers. With a 30-year heritage in therapeutic bee-based products, Comvita is one of the world’s largest manufacturers and marketers of Manuka honey and offers natural health products in the categories of woundcare, healthcare, skincare and functional foods.

Marketed in Hong Kong since 1907, Po Sum On is a medicated oil made with a fine blend of medicinal herbs. Today, the company takes pride in its large

modern production facilities and advanced equipment, with its products sold around the world.

Business Challenges

As owners of long-established and famous brands, Comvita and Po Sum On face the challenge of low-quality counterfeits in the market. They need to safeguard company reputation and protect revenues from potentially losing to counterfeit goods. Nuance-Watson, as the largest retail operator at HKIA, is committed to enabling customers to buy with complete confidence.

GS1 Hong Kong’s Product Authentication solution, a pilot funded by the Office of the Government Chief Information Officer (OGCIO) of the HKSAR Government under the 2007/08 Sector-specific Programme for the Supply Chain Sector, allows Nuance-Watson as well as Comvita and Po Sum





On to meet their respective objectives. The retailer and brand owners play different roles in the supply chain and need each other to implement the solution.

Solutions

The Product Authentication solution was applied to four Comvita products and one Po Sum On product, while a smart RFID kiosk was installed at Nuance-Watson's TravelCare Express located at Gate 27, HKIA.

The solution was integrated into Comvita and Po Sum On's existing packaging procedure. In the packaging warehouse, all they needed were Authentic Barcode Labels, EPC/RFID tags, a Barcode and RFID smart handheld reader, and a robust Product Authentication Management System. During the packaging process, the data at item-level and carton-level will be captured by the handheld reader and synchronized to the system. The data will then be loaded to ezTRACK, a web-based community platform developed by GS1 Hong Kong building on the achievement of the HKSAR

Government-funded project named "Establishing an EPC Network Infrastructure to Enable End-to-end Supply Chain Visibility". The community-based service platform provides companies of all sizes with the ability to track and trace the flow of goods and information along the supply chain around the world.

Since the Authentic Barcode Label contains an automatically generated secure "VerCode" which is unique to each individual product item, consumers can verify a product's authenticity by submitting its "VerCode" via BarcodePlus (www.barcodeplus.com.hk) – a trusted product information portal developed by GS1 Hong Kong to enable businesses and consumers to access and share product quality-related information via internet, mobile sms and smart kiosk. Alternatively, consumers can send an SMS message to (852) 6907 4890. A confirmation screen/message will then be sent back to the consumer instantly to show if the product can be successfully authenticated.

Customer Benefits

With the Product Authentication solution, Comvita and Po Sum On can minimize revenue loss due to counterfeit and parallel goods while at the same time guarding their brand reputation against low-quality counterfeits. The use of the innovative solution also adds a high-tech element to their company image.

The smart RFID kiosk set up at Nuance-Watson's TravelCare Express allows shoppers to get detailed information of Comvita and Po Sum On's products instantly, which helps raise product information visibility and build consumer trust. In addition, customers can track the products through critical points in the production line, from goods labeling, packing, picking to distribution at retail stores, by scanning the RFID label on the product.

The kiosk is a touch-screen based device with clear navigation and easy-to-use interface. Shoppers can use the kiosk on a self-service basis and no dedicated staff is required to man the kiosk.

Retail



US-based Home Improvement Retailer

Global Data Synchronization simplifies business communications

Fast, accurate data synchronization over the network, in turn, has helped improve market share by increasing speed to shelf for new items. Moreover, because data synchronization eliminates manual data entry work, sales staff can devote more time to their sales efforts and developing markets.

Background

This case is about a US-based quality home improvement chain, which boasts a network of more than 1,500 stores in the US and continues to grow.

Business Challenges

Data accuracy is essential to the efficiency of a supply chain, especially for a large retailer, which has a complex global supply network and large chain of retail outlets. Inaccuracies and inconsistencies in product data can cause costly disruptions and place an additional burden on business resources. The results could include staff spending more time trying to resolve data inaccuracies and less time fulfilling their core duties, additional transport costs due to the reshipping of goods, inefficient inventory management, and lost sales.

Solutions

The company identified global data synchronization as the key to data accuracy and chose to implement its

vision through GS1's Global Data Synchronization Network (GDSN) solution. At the heart of the GS1 GDSN is the GS1 Global Registry®, a global directory that is connected to source and recipient data pools, allowing trading partners to send and receive validated product information virtually in real-time.

Under the system, the company's suppliers are requested to obtain a GS1 Company Prefix so they can generate Global Trade Item Numbers (GTINs) for their products and a Global Location Number (GLN) to identify themselves. With these product and location information standards in place, the suppliers can then subscribe and begin uploading master data to the GS1 HK Data Pool, which in turn registers that data with the GS1 Global Registry®. The company, through its data pool provided by GS1 US, can then make a subscription request for the data through the GS1 Global Registry® and is then sent the data directly from GS1 HK Data Pool.

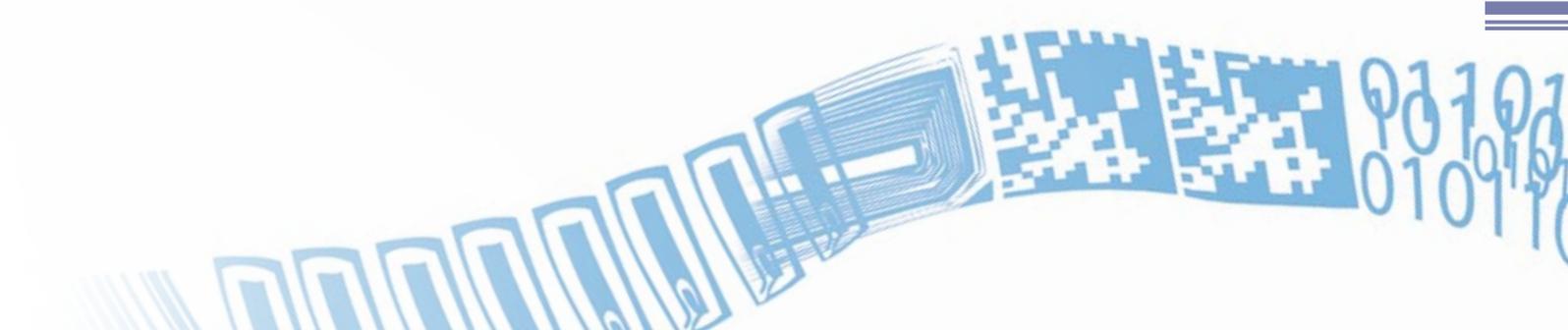
Customer Benefits

The GDSN has simplified the way the retailer and their suppliers communicate by providing a single point of entry into a network which enables them to exchange globally accepted, standards compliant data. Through this system, the company and its trading partners can now do business in an environment of continuous data harmonization, in which item changes are communicated accurately to trading partners across the network in near real-time.

Fast, accurate data synchronization over the network, in turn, has helped improve market share by increasing speed to shelf for new items. Moreover, because data synchronization eliminates manual data entry work, sales staff can devote more time to their sales efforts and developing markets, the company representative added.



Following the implementation of the GDSN, the company has been able to reduce out of stock, lower reconciliation error expenses and increase speed to market. The company's suppliers that have joined the GDSN have reaped similar benefits, including a reduction in expenses related to reconciliation errors. This has made the GDSN a win-win project for all stakeholders.



Food
&
Produce



Chan Yee Jai Ltd

Streamlining
operational processes
with GS1 Keys

“With the adoption of GS1 BarCodes across its full product range and the deployment of the right technology infrastructure, the company has significantly improved its supply chain effectiveness and increased visibility of its brand name in the global market.”

Ms Winnie Ki, Manager, Chan Yee Jai Ltd

Background

Chan Yee Jai Ltd is a famous local brand of confectionery originally from Foshan, China. The company, which has been operating in Hong Kong since 1927, manufactures a range of traditional Chinese confection, including almond cookies, birds' nest cakes and pearl barley cakes.

Business Challenges

Chan Yee Jai owes its success to meticulously following traditional preparation methods. The company

started expanding its business to the United States market in the early 1990s. To stay competitive, both domestically and globally, the company strives to adopt innovative supply chain management practices.

Solutions

To meet its North American trading partners' requirements of automating data capture and identification of trade items, Chan Yee Jai became a member company of GS1 Hong Kong and was assigned Global Trade Item Numbers (GTINs). The company started tagging all its products with GS1 BarCodes embedded with GTINs from 2005.

The company wanted to take further steps in computerizing its operations and decided to upgrade hardware and software applications, create an internal backend database, equip retail counters with an electronic point-of-sales system, and train staff to understand and use the new applications.





These initiatives to enhance operational efficiency encompassed its production plant and retailing business in Hong Kong. The company's retail operations included a flagship retail outlet and various consignment counters opened at large shopping malls for seasonal promotion and marketing programs.

Customer Benefits

Since adopting GS1 BarCodes standards for its products, Chan Yee Jai has enhanced its supply chain efficiency and streamlined its operational processes. The use of GTINs has significantly reduced the amount of time staff required to conduct stock taking. As data is automatically captured and recorded in the internal system, the company now has access to accurate and constantly updated stock levels. This has enabled the company to reduce the frequency of manual stock taking from once a month to once every 4 to 6 months. The system also facilitates more accurate and effective production forecasting and annual planning.

Moreover, the GTINs allow for more effective monitoring of product quality, which ultimately enhances customer

satisfaction and loyalty. Since product data, such as production and expiration dates, are captured through barcodes, the company is able to maintain optimum product quality and respond quickly to customer needs.

The adoption of an electronic point-of-sales system at its retail outlets has made transactions at check-out counters easier to process and the electronically captured sales data has led to an immense enhancement in the flow of retail goods and timely replenishment of items on the shelves. The use of PDAs equipped with barcode scanners for uploading daily sales and inventory data into the system allows for better sales and stock level management.

With the adoption of GS1 BarCodes across its full product range and the deployment of the right technology infrastructure, the company has significantly improved its supply chain effectiveness and increased visibility of its brand name in the global market.

Food
&
Produce



First Edible Nest
Ltd

Building trust and maximizing satisfaction with product authentication

“Maximizing customer satisfaction and trust through integrity and by providing the best-quality health products is the primary objective of First Edible Nest. GS1 Hong Kong's Product Authentication solution is a creative and effective way for us to achieve this goal by differentiating our products from counterfeits.”

Mr Sam Ng, General Manager, First Edible Nest Limited

Background

Founded in 1995, First Edible Nest Limited is a leading nest and health product brand in Hong Kong with 30 specialty shops throughout the territory. Diligently collecting quality health foods from around the world, the company now carries over 100 types of products and endeavors to continuously broaden its business scope with focus on applying modern pharmaceutical technology to traditional natural herbal products.

Business Challenges

Brand integrity and loyalty are of the utmost importance in the health products industry. Having established a reliable reputation for its brand and products over the past 14 years, First Edible Nest faces the challenge of counterfeit goods in the market. Counterfeit nest and health products are usually low in quality, and may even harm customers' health. Such products may give consumers a wrong perception on the brand, thus adversely affecting the image of the brand owner and its whole product line.

To maintain its brand integrity and avoid potential loss due to counterfeiting, First Edible Nest was looking for a brand protection tool that would enable customers to differentiate authentic products from counterfeit copies.

Solutions

Hence, First Edible Nest participated in GS1 Hong Kong's Product Authentication project, a pilot funded by the Office of the Government Chief Information Officer (OGCIO) of the HKSAR Government under the 2007/08 Sector-specific Programme for the Supply Chain Sector that aimed at helping companies fight against counterfeit products and protect their company reputation. The Product Authentication solution contained two set of labels – the Authentic Barcode Label (hidden with a 15-digit VerCode) and EPC/RFID Tag. The solution was applied to six of its products while a smart RFID kiosk was installed at its shop in Luk Yeung Galleria in Tsuen Wan.





The implementation involved only the product packing and picking processes. In the packaging warehouse, all the company needed were Authentic Barcode Labels, EPC/RFID tags, a Barcode and RFID smart handheld reader, and a robust Product Authentication Management System. During the packaging process, the data at item-level and carton-level will be captured by the handheld reader and synchronized to the system. The data will then be loaded to ezTRACK – a web-based community platform developed building on the achievement of the HKSAR Government-funded project named “Establishing an EPC Network Infrastructure to Enable End-to-end Supply Chain Visibility”. The community-based service platform provides companies of all sizes with the ability to track and trace the flow of goods and information along the supply chain around the world.

Since the Authentic Barcode Label contains an automatically generated secure “VerCode” which is unique to each individual product item, consumers can verify a product’s authenticity by simply inputting the “VerCode” hidden under the Authentic Barcode Label on the item they want to check. This can be done directly by logging on to BarcodePlus (www.barcodeplus.com.hk) – a trusted product information portal developed by GS1 Hong Kong to enable businesses and consumers to access and share product quality-related information via internet, mobile sms and smart kiosk. Alternatively, consumers can choose to send an SMS message to (852) 6907 4890. A confirmation screen/message will then be sent back to the consumer instantly to show if the product can be successfully authenticated.

Customer Benefits

The Product Authentication solution enables consumers to easily distinguish First Edible Nest’s products from counterfeits, thus helping the company protect its reputation and avoid potential business loss.

As the company sells quality nest products and health supplements that apply modern pharmaceutical technology, transparent and detailed product information provided by the kiosk is very important for a consumer to make purchase decision on these products.

As most of First Edible Nest’s health supplements come with comprehensive product information, the smart RFID kiosk, which provides product video and product description, can help the sales staff to introduce and explain the products to consumers in a quick and easy manner. This helps increase productivity of sales force as the product range grows.

Food
&
Produce



Swire Coca-Cola Hong Kong Ltd

Managing plastic
bottle recycling
using GS1 BarCodes

“GS1 assigned barcodes allowed us to create a convenient, self-operated recycling system leveraging the power of efficient supply chain management.”

Swire Coca-Cola Hong Kong Ltd

Background

Swire Coca-Cola Hong Kong (SCCHK) Ltd is the sole franchised bottler in Hong Kong for the Coca-Cola Company, the maker of well-known beverages including Coca-Cola, Sprite, Fanta, Bonaqua mineral water and Schweppes brand soft drinks. SCCHK produces over 50 million unit cases of beverages for Hong Kong's population each year, and commands a market share of more than 80% of Hong Kong's carbonated soft drinks market.

Business Challenges

Transparent plastic bottles have become one of the most common forms of soft drink packaging for hygiene reasons, but the empty bottles are bulky to store and take many years to degrade under natural conditions. At a time when concern over the environmental impact of human consumption has grown, SCCHK wanted to create a more efficient recycling system for transparent plastic bottles using supply chain technology. The company's solution was the "Every Bottle Counts" plastic bottle recycling program, an innovative initiative supported by GS1 Hong Kong.





Solutions

The “Every Bottle Counts” plastic beverage bottle recycling program aimed to encourage consumers to return used SCCHK plastic bottles at specific reverse vending machines by offering Octopus Reward Dollars.

The program used vending machines to convert for the purpose of collecting rather dispensing bottles and employed barcode technology to identify SCCHK bottles. As a member of GS1 Hong Kong, SCCHK’s beverage products were assigned a barcode with a unique identification number. By scanning the barcode printed on

empty bottles, the reverse vending machine would be able to identify SCCHK bottles and reward consumers with Octopus Reward Dollars, which could then be used to redeem premiums, including gifts and services. The empty bottles were compacted by the reverse vending machines for recycling.

A total of 9 reverse vending machines were installed in Ocean Park and various housing estates and schools and over 95,000 pieces of bottles have been recycled since the launch of the program in 2007.

Customer Benefits

SCCHK successfully implemented a convenient, self-operating recycling system for plastic bottles with the support of GS1 BarCodes technology. The recycling scheme, which encouraged people to be more environmentally responsible, also enhanced the company’s corporate image.

The “Every Bottle Counts” program demonstrated strong innovation and a high level of collaboration that optimized effective partnership promotion with external parties, thus paving the way for future collaboration. It was an excellent example of how an effective supply chain strategy could be leveraged to fulfill corporate social responsibility. The bottle recycling program received the “Best of the Best Award” and “ECR Innovation Award” at the ECR Hong Kong Awards 2007 organized by GS1 Hong Kong.



Food
&
Produce



Tsit Wing International Holdings Ltd

Creating value
throughout the
supply chain with
SCOR

“By capitalizing on GS1 Hong Kong’s expertise in Supply Chain Operations Reference model, Tsit Wing was able to re-examine every operational process, from procurement and production to warehouse and distribution. They provide a professional service, from consultancy analysis to project management, execution and results measurement. Encouraging improvements in the company’s supply chain – in terms of reliability, responsiveness, flexibility and cost management – have been seen.”

Mr Peter Wong, Chairman and CEO, Tsit Wing International Holdings Ltd

Background

Established in 1932, Tsit Wing International Holdings Ltd is one of Hong Kong’s leading food and beverage suppliers, with business operations spanning Asia and North America. In recent years, the company has expanded its business range to include operating coffee houses, distributing branded coffee and tea machines, and supplying instant beverage products to supermarkets. Tsit Wing has earned numerous quality and management awards and accreditations.

The company has placed great importance on business sustainability, product diversification and service excellence, as it aspires to become a world-class food and beverage service provider. In addition, the company has

laid plans to expand its business to Singapore, Malaysia and other Asian countries, building upon its success in China and Canada. With the assistance of GS1 Hong Kong, the company adopted the Supply Chain Operations Reference (SCOR) model, a cross-industry standard supply chain management diagnostic tool to gain a clearer understanding of the strengths and improvement areas of its supply chain processes.

Business Challenges

Tsit Wing recognized that it was vital for it to strengthen the different functions of its supply chain in order to support business growth and overseas expansion. In addition, Tsit Wing believed improvements in supply chain operations could drive productivity gains and new cost efficiencies. As

such, the company decided to review its supply chain processes and assess how closely they aligned with its expansion plan by adopting the SCOR model.

Solutions

With the help of GS1 Hong Kong, Tsit Wing deployed the SCOR model to gain insight into the strengths and weaknesses of its supply chain practices. GS1 Hong Kong provided consultation, analysis, project management, execution and results measurement services to the company.

Using the SCOR model, GS1 Hong Kong examined Tsit Wing’s functional management of procurement, production, warehouse and distribution processes as well as information flow management. This

enabled the company to understand how its supply chain practices could influence its business performance and how strategic supply chain planning could be conducted to address any operational issues.

Customer Benefits

GS1 Hong Kong, which is a founding member of the Greater China chapter of the Supply-Chain Council, assumed an overall project management and consulting role in the project. In this role, the organization served as a catalyst for the company's important shift towards adopting global supply chain management standards.

The SCOR study conducted by GS1 Hong Kong presented a clear picture of the strengths and improvement areas of Tsit Wing's supply chain and provided the company with detailed findings in the form of results measurements and feedback. Based on the findings, the company raised the overall standard of its supply chain system in terms of reliability, responsiveness, flexibility and cost management.



Healthcare

3-MED Medical Instruments Co Ltd

Enhancing warehouse and inventory management through GS1 consultancy services

“Through the on-site study and professional analysis provided by GS1 Hong Kong, 3-MED has gained a clearer understanding of its inventory management problems and their respective solutions.”

3-MED Medical Instruments Co Ltd

Background

3-MED Medical Instruments Co Ltd (3-MED) supplies a range of medical and rehabilitation products, including wheelchairs, crutches, diapers, phlegm absorption, feeding and respiratory catheters, and emergency aid items. The company's products are sold to various hospitals in Hong Kong as well as overseas to Europe and America.

3-MED had recently sought to enhance customer service and support through better supply chain management. To this end, 3-MED adopted Global Positioning System (GPS) based shipment tracking to improve the efficiency of its delivery process and customer services.

Business Challenges

Following the installation of the GPS system for better customer services, the company turned its sights to improving its warehouse management and stock control. The company had limited storage space to accommodate a large variety of products ranging from large

items like wheelchairs to small items like respiratory catheters. But because the company's warehouse management was manual, products were not stored systematically and vulnerable to mishandling due to human error.

The same product could be stored in several locations. Small products were boxed individually, making them difficult to handle and sometimes left behind in the truck during delivery. There was no system for managing and storing returned goods, which meant they could be mixed up with normal goods. In addition, the warehouse staff found it difficult to deal with the accumulation of stock when bulk orders had been left undelivered due to delays in the delivery schedule.

Lastly, the company lacked a comprehensive stock control and monitoring system for products with expiry dates. Without this, the company could not efficiently manage stock to avoid hanging onto expiring products, leading to unnecessary losses.



Solutions

After on-site inspections and analysis, GS1 Hong Kong put forward a number of recommendations. It suggested improving warehouse management by designating zones for different functions, such as goods in, goods out, goods returned, waste, fire safety routes and transportation routes. In addition, GS1 Hong Kong advised the company to set up a buffer zone to store excess stock and conduct regular reviews of warehouse utilization to ensure space was being used with maximum efficiency.

A barcode scanning system was recommended for easier pick-and-pack procedures and stocktaking. The system used Global Trade Item Numbers and barcode scanning was done using PDAs, enabling the storing of information in servers for later retrieval. To ensure efficient scanning, different rules and procedures relating to scanning points were developed for different warehouse zones. The deployment of RFID technology was

also recommended in stocktaking and goods tracking, especially for high-value items such as medical equipment.

GS1 Hong Kong recommended uniform cartons for efficient stacking and standardized procedures for handling returned goods. Moreover, a "First-In, First-Out" (FIFO) method of inventory placement to manage goods with expiration dates was to be implemented, along with a procedure to clearly record different expiration dates in system records.

Customer Benefits

With the above suggestions, warehousing was greatly enhanced. The barcode scanning system had greatly reduced mishandling of stock due to human error and had resulted in faster and more accurate inventory management, which in turn has reduced wastage and prevented products expiring.

Better warehouse design and the use of uniform sized cartons had served to maximize storage space, while customized procedures for the flow of goods in and out of the facilities had led to higher operational efficiency. Last but not least, the deployment of EPC/RFID technology helped to drive more precise inventory management for high-value products.



Healthcare

Hospital Authority

Procurement management made easy with ezTRADE

“ezTRADE assisted us to improve the business transaction flow for medical consumables which ultimately benefited our trading partners and improved overall efficiency.”

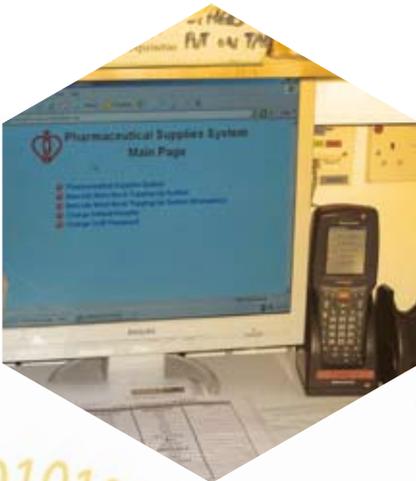
Mr Raymond Wong, Chief Manager, Business Support Services, Hospital Authority

Background

Hospital Authority is the statutory body responsible for running Hong Kong's public healthcare system. Under its auspices are 41 public hospitals and institutions, 48 specialist outpatient clinics and 74 general outpatient clinics. It manages an ever-growing public healthcare expenditure, projected to grow from HK\$32.7 billion in 2007/08 to \$78 billion by 2015 and \$127 billion by 2025.

Business Challenges

Hospital Authority works with a large network of vendors, including pharmaceuticals companies, medical consumables suppliers, as well as third-party equipment maintenance service providers, to keep its 160 hospitals and clinics operational and well supplied. This procurement process is a complex undertaking that requires extensive planning, product standardization, performance monitoring, and risk and information management.





As part of a program of continuous healthcare technology assessment and adoption, Hospital Authority decided in 2002 to modernize its procurement and supplies management processes in order to achieve three goals. The first goal was improving efficiency in order to reduce operational costs and procurement lead time, while raising product safety. The second area was improving security, especially with regard to process control and accountability, data security and segregation of duties. The third goal was to improve traceability with greater information sharing and integrated data management down to the consumption level.

Solutions

Hospital Authority enlisted GS1 Hong Kong and adopted GS1 service by implementing ezTRADE – a B2B EDI platform using standard-based interface for the automatic identification and communication in

the healthcare supply chain. This helps modernize procurement and supplies management through the implementation of an e-procurement system. The system also automated the payment process and could be used to facilitate recalls in case of product defects.

The foundation of the system was GS1 Hong Kong's web-based e-commerce solution ezTRADE. Designed to allow businesses to conduct trading activities seamlessly with full Electronic Data Interchange (EDI) and Extensible Markup Language (XML) support, ezTRADE provided the ideal standards-based platform for Hospital Authority and its suppliers to do business with greater efficiency.

GS1's Global Trade Item Number (GTIN) and Global Location Number systems, both globally accepted identification key standards, were used to execute purchase orders and make available

advanced shipping information. In addition, GS1's identification keys allowed the organization to enhance inventory management through data capturing.

Customer Benefits

"ezTRADE assisted us to improve the business transaction flow for medical consumables which ultimately benefited our trading partners and improved overall efficiency," said Mr Raymond Wong, Chief Manager, Business Support Services, Hospital Authority. The specific benefits included improved effectiveness of operation flow in the communication with suppliers, elimination of duplication of non-value-added work, especially in the administration area, and fewer human data entry errors, and improved collaboration in inventory management.

Healthcare



Hospital Authority

Exposing the potential of RFID in healthcare asset management

“The study presented us with proof that RFID asset-tracking systems can address many key objectives of asset management, maximizing the utilization of assets, reducing asset losses, improving asset maintenance, and enhancing billing accuracy and collection.”

Mr Raymond Wong, Chief Manager, Business Support Services, Hospital Authority

Background

Hospital Authority is an independent organization established to manage Hong Kong's public hospitals and provides a comprehensive range of primary, secondary and tertiary medical services. Accountable to the government, the organization currently manages a portfolio of 41 public hospitals and institutions, 48 specialist outpatient clinics and 74 general outpatient clinics. These operations have a total of around 53,000 staff and more 27,600 hospital beds.

Business Challenges

Fixed asset management is an important concern for every organization, but especially for the modern hospital where keeping track of a barrage of sophisticated high value, mobile medical equipment, such as infusion pumps, ultrasonic scanners and ventilators can be a challenge, particularly when records are managed manually.

Expenses related to equipment ownership are significant. And as the sophistication of equipment used in treating patients continues to grow, these costs are rising, making equipment loss prevention an ever more important task.

Aside from potential economic losses, inefficient asset management in a hospital can lead to other issues, including disruption of medical services and lost productivity of health professionals. One overseas study has shown some hospital staff can spend as much 30% of their time looking for equipment.

Recognizing these potential problems, Hospital Authority wanted to conduct a comprehensive study of RFID technology as a means to facilitate asset management tracking and management at the point of care, and ultimately to improve patient safety and service quality.





Solutions

In 2007, Hospital Authority set up the RFID Asset Management Task Force with GS1 Hong Kong to conduct a study involving the organization's head office as well as the Prince of Wales Hospital and North District Hospital.

"Through the study, we wanted to look for the best way to streamline stocktaking processes and enable faster stocktaking of assets if the selected technology compared with barcode technology currently in use for this purpose," said Mr Raymond Wong, Chief Manager, Business Support Services, Hospital Authority. In addition, the study wanted to build a system that would enable real-time location tracking of assets and streamline the utilization data capture process for high-value equipment.

The study designed three systems for trials using mostly RFID technology-based equipment:

- Passive RFID to further facilitate stocktaking of equipment in operation theatre

- Active RFID to enable real-time tracking of medical devices in ward
- Active RFID to streamline utilization capturing and reporting of high-value assets in hospital.

Of the three applications, the use of active RFID technology for real-time asset tracking proved to be the most helpful to frontline nurses by eliminating time spent locating or counting frequently used devices. Active RFID was also preferred for its user-friendliness and tag capability.

Customer Benefits

"The study presented us with proof that RFID asset-tracking systems can address many key objectives of asset management, maximizing the utilization of assets, reducing asset losses, improving asset maintenance, and enhancing billing accuracy and collection," said Mr Raymond Wong, Chief Manager, Business Support Services, Hospital Authority. And importantly, RFID asset-tracking technology also lifted patient care, safety and satisfaction levels.

**Logistics
&
Manufacturing**



Airport Authority Hong Kong

Getting a handle on baggage with RFID reconciliation and management

Hong Kong International Airport's RFID baggage management system has been a truly pioneering project. As the world's first RFID enabled Baggage Management System, the project has set an international benchmark.

Background

Airport Authority Hong Kong is responsible for the management, operation and maintenance of Hong Kong International Airport, one of the world's leading regional and international aviation centres. In 2008, more than 48.6 million passengers and 3.6 million tonnes of cargo passed through the airport, making it one of the world's busiest international passenger and cargo airports. Since its opening in 1998, the airport has also been consistently ranked among the world's best by respected international industry surveys.

Business Challenges

Airport Authority Hong Kong has a mandate to continually improve service quality, safety, security and efficiency at Hong Kong International Airport in order to ensure passengers have a pleasant and hassle-free journey. In its quest to fulfill this responsibility, the organization identified the development of a faster, more efficient baggage handling system as one of its key long-term goals.

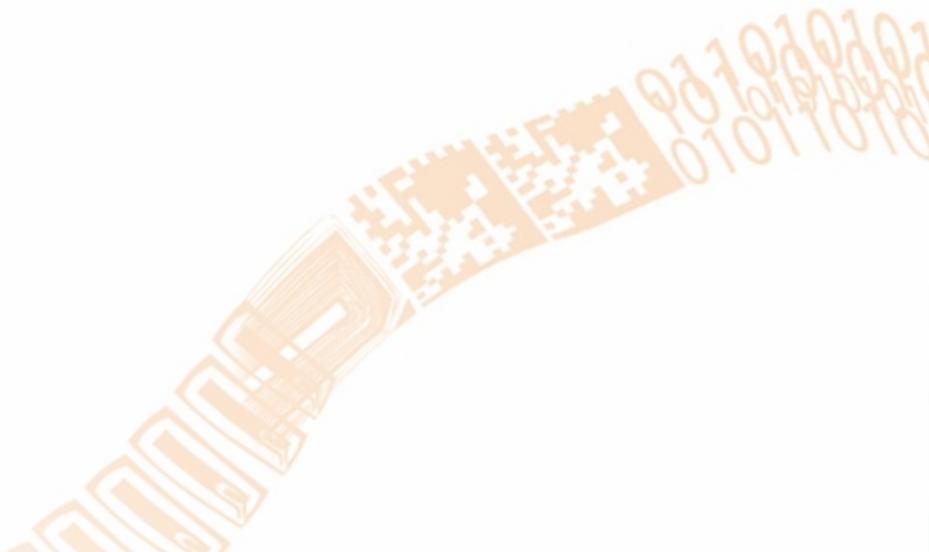
In the past, the baggage handling system with its barcode-based technology had a read rate of about 70%, as barcode tags were sometimes accidentally obscured, folded or soiled. Baggage with defective tags had to be manually processed, a task which was amplified by the sheer amount of baggage passing through the airport each day.

Solutions

Airport Authority Hong Kong began working on a Baggage Reconciliation and Management System with integrated RFID technology in 2003 and has successfully rolled out the project in phases over the past five years. The initial phase of the project, in which the airport established an RFID system in the baggage handling area,

was completed in 2005. This was followed by the migration to second-generation RFID tags, which have read/write capabilities, in 2006. In 2008, Airport Authority Hong Kong rolled out RFID integrated bag tag printers to all airlines, bringing the RFID system into full effect.

The airport now has more than 500 RFID read points and 200 RFID readers installed in the baggage handling areas, together with wireless network infrastructure to support handheld readers at the apron and baggage hall areas. In addition, there are more than 500 RFID integrated bag tag printers at all check-in desks at the airport and at the Airport Express stations in Kowloon and Hong Kong Island.





Customer Benefits

Hong Kong International Airport's RFID baggage management system has been a truly pioneering project. As the world's first RFID enabled Baggage Management System, the project has set an international benchmark.

Baggage handling at Hong Kong International Airport has speeded up and become more accurate since the switch to the integrated RFID system. The baggage read rate has improved dramatically to 97 percent by using second generation RFID tags. This has significantly improved the processing capacity and efficiency of the baggage handling system.



Logistics
&
Manufacturing



Asia Airfreight Terminal Co Ltd & NEC Hong Kong Ltd

Finding new levels of
efficiency with RFID
dock management

The RFID-based vehicle management system has been a great success in improving service quality, reducing truck queuing times from an average of 13 minutes to 8 minutes.

Background

Asia Airfreight Terminal Co Ltd (AAT) is a cargo terminal operator based at Hong Kong International Airport. The company provides a comprehensive range of services to international airlines, from physical cargo handling to documentation processing. With 166,000 square meters of warehouse space and 230 truck bays across four levels, the company has a total handling capacity of 1.5 million tones of cargo per year.

NEC Hong Kong Ltd, the solution provider, is the local subsidiary of the Japanese electronics giant NEC Corporation. The company designs and manufactures integrated information technology and network solutions, including RFID solutions, supported by a specialized development team.

Business Challenges

AAT manages high vehicle traffic volume at its terminal, consisting largely of trucks coming to pick up or

drop off cargo. To ensure smooth traffic flow and efficient allocation of truck docks to vehicles, the company migrated from a manual process of managing access and truck docks to an automated system based on proximity card technology in 2001. The Truck Control System required drivers to swipe assigned cards over a smart card reader in order to register their entry or exit from the facilities.

While the proximity card based access management system was significantly more efficient than manual processing, the company realized that there was still room for improvement. Because the Truck Control System required drivers to pass their proximity cards over a reader, the data recorded by the system was only as reliable as the drivers using the cards and did not reflect the real-time status of truck docks. In addition, the need for drivers to stop to register their presence using their proximity cards on the way in and out slowed down traffic flow and thus reduced utilization of facilities.





Solutions

The company felt that in order to achieve further efficiency gains, it needed to upgrade its Truck Control System by switching to RFID technology to control vehicle access. In doing so, the company could ensure trucks would be promptly assigned to the right dock, thus reducing waiting time and optimizing cargo processing efficiency.

The company turned to NEC Hong Kong to design an RFID system for use in its semi open environment, where system performance could be affected by changes in environmental conditions. Particular attention was paid to details such as the installation angle of the RFID antennas and readers at the access points and truck docks, and the tags inside vehicles, in order to ensure optimal positioning of components for vehicle of various heights and sizes. The company installed loop detectors to ensure trucks were visible to the system even if their drivers did not park them in their assigned locations.

Customer Benefits

AAT's RFID-based vehicle management system is the first of its kind installed in an air cargo terminal, and provides proof of RFID technology's capabilities and business value. The new system has been a great success in improving service quality, reducing truck queuing times from an average of 13 minutes to 8 minutes, while relieving truck drivers of the responsibility to manually input the status of their vehicle.

From the perspective of return on investment, RFID technology has helped boost income by optimizing truck dock utilization and consequently raising cargo turnover. The smaller number of staff required to operate the new truck control system has also helped lift the company's bottom line by reducing the division's manpower requirements. All said, the project has made a significant positive business impact on the company.

Logistics
&
Manufacturing



Asia Pallet Pooling LLC

Enhancing global logistics visibility with track-and-trace platform

“By adopting GS1 Hong Kong’s ezTRACK – a globalized EPC/RFID-based track-and-trace platform, we were able to help our clients achieve real-time traceability of shipments and thus end-to-end logistics visibility coupled with our pallet pooling services and added security.”

Mr Stanley Tseng, President, Asia Pallet Pooling LLC

Background

Asia Pallet Pooling LLC (APP) is a supply chain solutions company, which operates a global plastic pallet pooling system. The company’s services include an open-loop plastic pallet pooling program and cold chain solutions which work in unison to help businesses track and trace shipments securely and efficiently around the world. Pallet pooling is an environmentally friendly solution, which re-uses rather than disposes

pallets after shipment, creating a cycle of sustainability. APP, which is at the leading edge of this industry, has its offices in Taipei, Shanghai and the US.

Business Challenges

APP’s Pallet Pooling Program allows its clients to lease lightweight pallets for export purposes. APP supplies clients with pallets for use at the point of origin and collects the pallets at the destination, relieving their clients of the responsibility of pallet management. In doing so, APP helps its clients save time and costs associated with pallet maintenance, repair and disposal.

However, APP wanted to take its pallet pooling solution to the next level, enhancing the efficiency of its pallet collection process by decreasing the turnaround time. In addition, the company was looking to create a value-added service by providing track-and-trace functionality through its pallets to help clients increase supply chain visibility and enhance inventory and resources management.

Solutions

APP chose GS1 Hong Kong to help it develop a cutting-edge intelligent pallet pooling solution because of GS1 Hong Kong’s extensive knowledge and experience in the application of EPC standards based traceability solutions with RFID technology. Working closely with APP, GS1 Hong Kong provided the RFID solution that would best match its pallet pooling services, including optimal RFID hardware configurations and software solutions.





One of the key components of the RFID-enabled pallet pooling solution GS1 Hong Kong designed for APP was ezTRACK, a web-based community platform that was developed based on the achievements of the HKSAR Government-funded project, “Establishing an EPC Network Infrastructure to Enable End-to-end Supply Chain Visibility.” The community-based service platform provides companies of all sizes with the ability to track and trace the flow of goods and information along the supply chain around the world. By integrating its RFID-enabled pallet pooling system with ezTRACK, APP could offer its customers the ability to monitor the location and status of their shipments in real time.

Customer Benefits

“By adopting GS1 Hong Kong’s ezTRACK – a globalized EPC/RFID-based track-and-trace platform, we were able to help our clients achieve traceability of shipments and thus end-to-end logistics visibility coupled with our pallet pooling services and added security,” said Mr Stanley Tseng, President, APP. For APP’s clients, this meant the ability to more accurately track shipments, anticipate delays and ultimately better manage inventory.

In addition, APP installed RFID sensor tags on its pallets to allow clients to monitor the temperature at a microclimate level within containers. This allowed clients shipping temperature sensitive products, such as pharmaceutical companies, to ensure the integrity of their products.

Aside from upgrading its service offering, the new RFID track and trace capabilities of the pallets allowed APP to improve the management of its pallet pooling system, speeding up pallet turnover time.



Logistics
&
Manufacturing



Kwong Wah Paper Products (HK) Co Ltd

Optimizing inventory
control with GS1
consultancy services

“The professional analysis and recommendations provided by GS1 Hong Kong enabled us to increase inventory management efficiency and workforce productivity.”

Kwong Wah Paper Products (HK) Co Ltd

Background

Kwong Wah Paper Products (HK) Co Ltd is a manufacturer of food and beverage related disposable paper products established over 30 years. The company's paper products include boxes, containers, cake cups, bags, doilies, coffee filters, paper napkins, coasters, paper lids, paper aprons/hats, crafting dish containers, dim sum papers, paper drinking cups and plates. It also makes packaging paper, chopsticks, toothpicks and paper napkins with cutlery items.

Kwong Wah Paper Products has ISO9001 international safety standards certification and operates its own fleet of vehicles for delivering products to customers. The company also provides its own design and printing service from beginning until the end as one stop service. In order to enhance its

service quality and supply chain system, the company joined the “SME Ambassador Program 2006 – Inventory Management” organized by GS1 Hong Kong.

Business Challenges

Kwong Wah Paper Products faced challenges relating to managing orders due to the sheer variety of designs, paper textures and colors from which its products came. Customers and even new employees would have difficulty in keeping track of all the different products and their differences, which led to product delivery errors and incorrect order placements.

In addition, the company encountered difficulties in managing products with expiry dates, as it did not have a system for tracking product expiration. This led to increased production costs and revenue loss.





Solutions

After on-site inspection and analysis, GS1 Hong Kong put forward a number of recommendations to help the company improve its inventory management. It recommended the adoption of Global Trade Item Numbers (GTINs), so products in different designs, sizes, colors, and with different packaging quantities and expiration dates could all be uniquely identified. The GTIN system helped the company reduce errors in order placement and led to better management of products with expiration dates. Coupled with a Customer Relationship Management (CRM) system, the company could record the purchasing history of customers, paving the way for better sales planning and inventory control.

GS1 Hong Kong also recommended the company to adopt barcode scanning at various checkpoints in goods in, goods out and returned goods zones, so the company could speed up stock taking and eliminate human error. In addition, GS1 Hong

Kong proposed the company to formulate guidelines for scanning checkpoints and regularly review operations and problems. Handheld devices such as PDAs were suggested for executing barcode scanning. EPC/Rfid technology was also recommended for tracking multiple items simultaneously. To manage product expiration more efficiently, GS1 Hong Kong highly recommended the company to adopt "First-In, First-Out" (FIFO) asset management system.

Customer Benefits

Through the above recommended solutions, the accuracy of order placement was significantly improved. The barcode system reduced human error and data delay. These factors, in turn, contributed to the improved accuracy of inventory management and goods in, goods out records. Moreover, with a FIFO system in place, the company could prevent inventory expiring unsold, thus reducing operating cost overall.



Apparel & Textiles



Delicron (HK) Ltd

Optimizing warehouse management with GS1 BarCodes

“The professional analysis and recommendations that GS1 Hong Kong made enabled us to gain a thorough understanding of our supply chain performance in a short time frame and increased the efficiency of our business.”

Delicron (HK) Ltd

Background

Established in 1952, Delicron (HK) Ltd is an underwear manufacturer and distributor. The company's product range, which includes men's underwear, socks and office wear, as well as children's underwear and school socks, are sold in major department stores throughout Hong Kong and Southeast Asia.

The company manufactures most of its products at production facilities in Qiangdao and Guangzhou, China, but also sources some items from Australia, Korea, Italy and other European countries. The company has significant consignment operations with 20 consignment counters in Hong Kong and Mainland China.

Business Challenges

Delicron was faced with several operational challenges common to small- and medium-sized enterprises, which have hampered its ability to do business more efficiently.

Firstly, the company had limited warehouse space, yet manufactured products in a wide range of colors and sizes, which often ended up being stored non-systematically.

Secondly, the company did not have an effective system for tracking consignment counter stock levels and managing returned goods. Most of the department stores where the company had consignment counters did not keep track of stock levels or record data about items sold, such as model number.

Thirdly, the company used a barcode system for managing stock, which was inefficient and took too long to get orders out of the door. Although 80% of the company's goods cartons were labeled with GS1 BarCodes, the barcode labels were not consistently applied and in some cases missing. In addition, the company's supply of barcode numbers were being exhausted by products that came in a great variety of colors and sizes.

Solutions

After conducting a site inspection and process flow analysis with different departments, GS1 Hong Kong advised the company to identify which were the fast-moving and profitable items, and maintain higher stock levels for those items, whilst reducing stock levels for slow moving and outdated items.



GS1 Hong Kong also suggested negotiating with suppliers to adjust minimum-order-quantity levels and volumes for bulk-order discounts, and agree on a delivery schedule which would allow it to avoid accumulation of excess stock. To reduce the risk of stock shortage, the company could expand its list of suppliers.

In terms of warehouse management, Delicron was advised to acquire extra warehousing in Mainland China, and outsource to third-party logistics service vendors. In addition, the company was advised to consolidate its warehouse facilities into one centralized operation, with designated zones for goods in, goods out, storage, returned goods, obsolete goods, fire passageways and transportation passageways, as well as for excess stock.

GS1 Hong Kong advised deploying a PDA-based barcode scanning system at various checkpoints to track stock in the goods in, goods out and returned goods zones to speed up tracking and reduce human errors. GS1 Hong Kong also advised deploying a barcode based electronic point-of-sales system to enable the company to track sales and stock levels at consignment counters.

Customer Benefits

GS1 Hong Kong's recommendations generated a number of benefits for Delicron. The company's stock levels and warehouse management cost fell. The recommendations facilitated automated warehouse management along with optimized storage space.

The improved barcode system enabled the company to simplify working procedures between sales development and warehouse management departments, while the electronic point-of-sales system allowed the company to formulate a clear picture of sales performance and sales trends through the consignment counters.

Apparel & Textiles



Esquel Group

Efficient production tracking and monitoring with RFID technology

“The clarity of a real-time track-and-trace network is vital for us to ensure speed-to-market for our customers around the world, especially given the complexity of cross-border production process.”

Mr Raymond Yip, Director of Corporate Technical Engineering Department, Esquel Enterprise Ltd

Background

Esquel Group is a leading manufacturer of premium cotton shirts for some of the world's best-known fashion brands. The company is a truly vertically integrated garment manufacturer, with operations spanning cotton cultivation, yarn spinning, weaving, dyeing, garment manufacturing and packaging and even retailing. Esquel Group also has significant research and development capabilities to create new fabrics, most notably using nanotechnology.

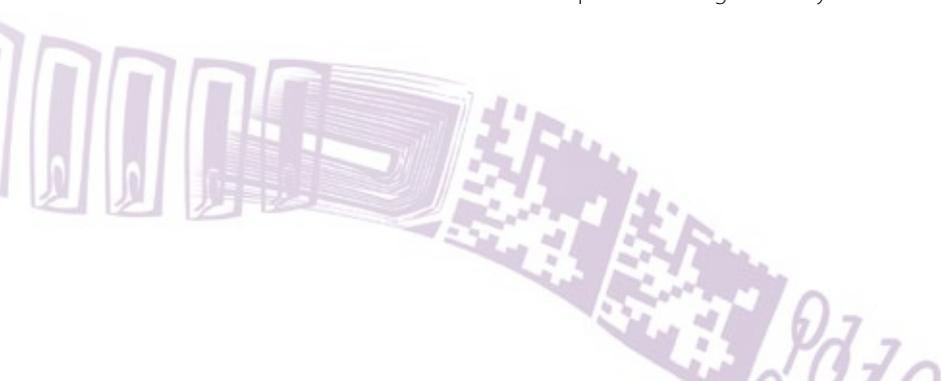
Business Challenges

In the past Esquel Group's garment manufacturing factories mainly used barcode ticketing to keep track their manufacturing processes from the cutting and preparation of fabric through to the assembly and packaging of garments, but the company felt that the system did not provide enough visibility.

Because the system did not have real-time monitoring capabilities, managers on the shop floor could not respond quickly to problems occurring along the production line. Production data often could only be made available three hours after the fact, by which time it could be too late to formulate an appropriate response. In addition, the data lacked sufficient granularity and was error prone, making it difficult to accurately measure production cycle times or pinpoint the source of quality control problems. Esquel was keen to address these challenges as apart of its long-term goal to implement lean production across its entire operations.

Solutions

Esquel Group commissioned a technology company to build and implement an RFID-based tracking system that would automate the collection of production data on the shop floor to allow real-time monitoring and analysis at its factories in Malaysia, and Gaoming and Yang Mei in China.





The system replaced conventional barcode job tickets with read/write capable SmartTags. These tags were attached to bundles of cut fabric at the beginning of the production line and would be updated by every operator directly at their individual workstations using SmartTerm RFID terminals. In this way, the SmartTag was embedded with a range of information about each bundle, including job order number, style number, color, size, bundle quantity and the workstation responsible for it.

From the RFID terminals, information about each bundle is sent to data servers for processing, giving managers a real-time view of how production is proceeding and how individual employees are performing.

The SmartTags also come in useful in the matching of cut pieces for assembly, a process previously painstakingly carried out by teams of workers through laying out the bundles in a large wide table. With RFID, subparts are organized into racks and easily located by RFID readers.

When production is completed, the RFID tags are collected for reusing to help save cost.

Customer Benefits

With the RFID System in place, the company has been able to identify and solve bottlenecks in the workflow, benchmark and improve line performance and trace defective products back to the source. At one factory, the system reduced production cycle time for cutting and assembly by 16 percent or almost two days.

As the system keeps track of each operator's attendance and productivity, workers need not waste time clocking in and out. Each worker has access to their personal performance data in real time, improving accountability and encouraging them to lift their productivity. At the same time, it allows managers to track machine downtime and the performance of individual workers, as well as automate payroll processing.

As part of its long-term goal to achieve end-to-end lean production, Esquel Group plans to expand the RFID System from the cutting and pre-assembly lines to the entire production process, including ironing and packing.



Apparel
&
Textiles



Fountain Set (Holdings) Ltd

Leveraging SCOR
model to measure
and improve supply
chain performance

“Through the findings of the GS1 Hong Kong study, we gained a better understanding of the manufacturing cycle and explored opportunities to improve our supply chain operations through SCOR metrics.”

Fountain Set (Holdings) Ltd

Background

Fountain Set and its subsidiaries together form one of the world’s largest circular knitted fabric manufacturers. As a fabric supplier to garment manufacturers in over 40 countries, which in turn supply internationally renowned retail brands, the company is a major participant in the global textiles market with vertically integrated operations in spinning, knitting, dyeing, printing and finishing.

Business Challenges

The fabric manufacturing industry is highly machinery-dependent and manufacturers in this field often face multiple challenges in terms of meeting quality, technical design and time to market requirements. Excessive work-in-progress inventory is a tangible business risk, along with order cancellations and import quotas. To deal with these issues, textiles producers need to adopt lean manufacturing through which production time and cost can be reduced.

GS1 Hong Kong agreed to work with Fountain Set on a project which would apply the Supply Chain Operation Reference (SCOR) model to increase visibility in the company’s “Make” production process with the ultimate goal of reducing production lead time and eliminating non-value-added activities.



Solutions

Based on SCOR, the company's "Make" process could be broken down into the following procedures: production activity scheduling, production, testing, packaging, staging, product release for delivery. But in reality, Fountain Set's "Make" process was shared by its knitting, dyeing and finishing mills.

Through its work with GS1 Hong Kong, the company would gain a better understanding of its production processes and learn how SCOR metrics could be adopted to improve operational efficiency, data accuracy and enhance supply chain operations.

Using a measurement tool called value-stream analysis, the project team identified the time the company's factory spent on value-added and non-value added processes. The findings were translated into recommendations targeted at eliminating non value-added processes.

Further recommendations based on various metrics designed to assess the performance of vendors and warehouses, especially in the area of reliability in product delivery. No less important was the capability for quick order fulfillment by vendors and warehouses.

The project team suggested that an internal benchmarking system should be established, where the operational performance of different working units could be quantified. In doing so, the company could acknowledge and reward working units that performed the best, thereby encouraging the adoption of best practices.

Customer Benefits

The adoption of lean manufacturing eliminated wastes stemming from over-production, transportation, over-processing, waiting time, inventory, motion and scrap. Waste elimination, in turn, allows optimization of scarce resources. Ultimately, operational efficiency is enhanced in the overall supply chain.

With the synchronization analysis, the project team found out how well production processes were synchronized. The subsequent recommendation to implement better data synchronization facilitated accurate real-time data sharing among different working units, which helped enhance supply chain visibility.

By the use of various metrics in quantifying the performance of different participants in the supply chain, the company managed to increase productivity and ultimately build momentum for continuous business improvement.

Apparel
&
Textiles



Timberland

Stepping up inventory management through the power of IDS and GS1 Keys

“By centralizing our inventory management in this way, we were able to greatly reduce lead time for stock replenishment and become more responsive to market changes in supported countries.”

Mr Jack Keating, Vice President, Timberland

Background

Timberland is a leading designer, manufacturer and distributor of footwear, which operates more than 200 stores and outlets across the world.

The IDS Group is a leading integrated distribution and logistics services provider. Headquartered in Hong Kong, the IDS group has an extensive logistics and distribution network in Greater China, ASEAN, the US and UK offering customized services to over 400 customers.

Business Challenges

Timberland has a global retail footprint and manufacturing plants across the world. Most of the company's products are made in China, Vietnam and India, or various European countries. This geographical breadth made supplying its various markets across the world efficiently a major challenge. In the past, each sourcing country would independently supply target markets.



In this complex web of shipping lanes, each purchase order would be handled and delivered independently, which proved expensive with very long lead times from order placement to goods delivery. While its practices were normal for a company that sourced and supplied market globally, Timberland wanted to explore ways to manage and distribute inventory more efficiently.

Solutions

Timberland decided the way forward would be to set up a central distribution hub for its Asian markets and chose leading logistics service provider IDS as its strategic partner. Working closely with IDS, Timberland consolidated and centralized its logistics activities in Hong Kong, creating a hub that provided centralized inventory control and value-added services to facilitate more systematic and efficient distribution.

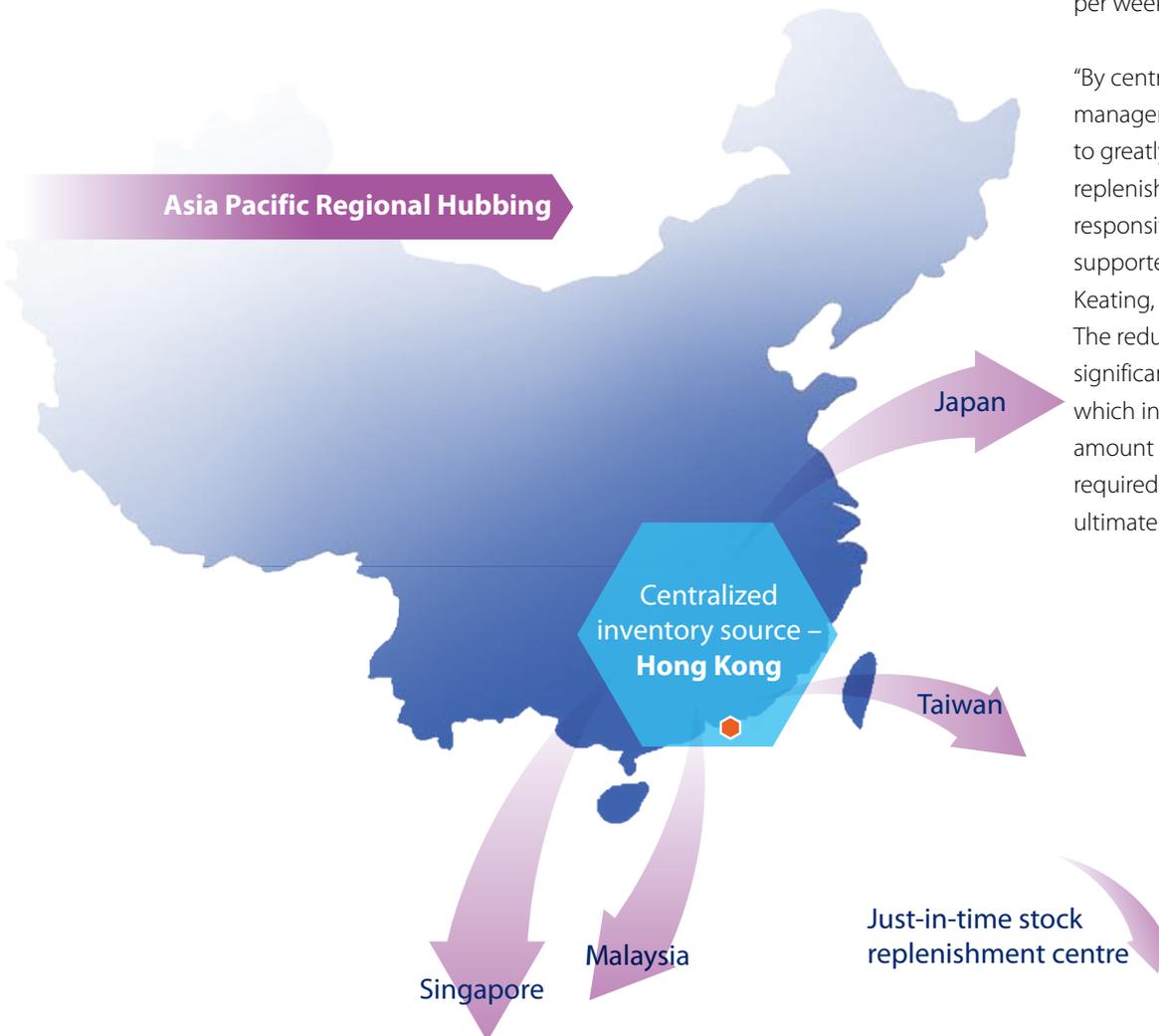
Under the system designed by IDS, Hong Kong became the main inventory source where finished goods would be shipped, while regional warehouses in Japan, Taiwan, Singapore and Malaysia became just-in-time stock replenishment centers for local markets. A Warehouse Management System (WMS) was deployed to control inventory movements and optimize the efficiency of the picking process by combining and consolidating multiple orders. Picking staff were equipped with personal digital assistants (PDAs), which enabled the WMS to tell them where to pick up what via radio frequency. The handhelds were also used to scan GS1 BarCodes on items and cartons to record stock movements.

The system used GS1 Identification Keys, the globally accepted standard for the identification of items, locations and services developed by GS1, to facilitate the automation of the trade and logistics processes. Every carton in the warehouse was assigned a Global Trade Item Number (GTIN) under the system. This allowed order-picking staff to confirm orders with the warehouse management system simply by scanning the label on the carton with their handheld.

Customer Benefits

Through the logistics solution designed by IDS system coupled with the use of GS1 Identification Keys, Timberland's Hong Kong distribution hub was able to handle high volumes of fast moving stock with almost 100% accuracy. Currently, the system handles a volume of more than 700,000 items and receives around 20 containers per week.

"By centralizing our inventory management in this way, we were able to greatly reduce lead time for stock replenishment and become more responsive to market changes in supported countries," said Mr Jack Keating, Vice President, Timberland. The reduction in lead time led to a significant decrease in inventory levels, which in turn greatly decreased the amount of working capital Timberland required to support its supply chain, ultimately leading to cost savings.



Service Portfolio



The Global Language of Business

Overall Benefits: Improving efficiency and visibility in supply and demand chains

GS1 BarCodes

Global standards for automatic identification and data capture

Barcode Plus

Barcode enables a quick, simple and fully-automated way to cache transaction information for retail automation and efficiency. Exploiting the value of barcode beyond retail POS scanning, BarcodePlus is a reliable product information portal to enable consumers to access to product quality-related information using GS1 BarCode via the Internet for consumer safety

Global Electronic Party Information Registry (GEPIR)

GEPIR is a global online directory of suppliers, with information of over 1 million companies worldwide, creating boundless business opportunities

GS1 eCom

Global standards for electronic business messaging

e-TRADE

Powered by GS1 Hong Kong

An industry B2B platform facilitating paperless trading and helping companies achieve greater efficiency

GS1 GDSN

Global standards for product data synchronization

GS1 HK DataPool

Powered by GS1 Hong Kong

A certified platform operating with the GS1 Global Registry® to allow the exchange of timely and accurate product information between trading parties

GS1 EPCglobal

Global standards for RFID-based identification and traceability

ezTRACK

Globalized EPC/RFID-based track-and-trace platform enabling visibility of goods and information flow throughout the supply chain bringing forth solutions like product authentication, asset management, product recall, etc.

HONG KONG RFID CENTRE (SCIC)

The Hong Kong RFID Centre demonstrates the latest EPC/RFID applications in various sectors aiming to create awareness, nurture development and facilitate knowledge transfer of EPC/RFID technology

Supply Chain Management Practices

KPI-driven model for supply chain excellence

SCOR Supply-Chain Council

World's proven KPI-driven supply chain management model helping different businesses uplift overall supply chain competencies

SUPPLY CHAIN MATURITY REFERENCE MODEL

Hong Kong's Maturity Reference Model designed for SMEs with a step-by-step roadmap to assess and improve supply chain performance

Industry Engagement and Adoption





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