INTRODUCTION
簡介

Catalysing Business Transformation for 30 Years

For 30 years, GS1 Hong Kong (GS1 HK) has been bringing industries together to revolutionise the way they do business.

In 1989, industry leaders in Hong Kong came together to introduce a single standard for product identification — the barcode into the retail industry.

What started as a way to speed grocery store checkout has become the global language of business — a common way for trading partners around the world to identify, capture, and share information about products, locations, and more.

Today, GS1 HK is helping diverse industries drive efficiency, safety, and growth through the adoption and use of standards. From retail to healthcare to fresh foods to foodservice to logistics, GS1 Standards continue to transform our lives.

This booklet aims to illustrate how GS1 HK evolves and stays connected and relevant with local business communities throughout the 30 years, helping them to capitalize on smart data, connect the supply chain with innovations, champion omni-channel business, and pioneer IoT for smarter business, better life.

驅動業務變革三十載

在過去三十年，香港貨品編碼協會(GS1 HK) 一直致力凝聚業界，努力改善營商環境。

1989年，香港業界共同將產品識別的單一標準 — 條碼引進到本地零售行業。

條碼一開始是店舖用來加快結帳速度，現已演變成全球商貿的共通語言，讓全球貿易夥伴以統一方法去識別、讀取及分享有關貨品、位置等資訊。

時至今日，GS1 HK協助各行各業採用標準提高效率、加強安全水平及促進增長。從零售到醫療保健、新鮮食品、餐飲服務以至物流等行業，GS1標準的力量繼續改變著我們的生活。

本刊物闡述了GS1 HK成立三十年以來的演進過程，如何與本地企業維持緊密連繫，協助它們善用智慧數據、把最新科技融入供應鏈，開拓全渠道業務發展及利用物聯網科技引領智能商貿，優質生活。
Message from Founder
始創人獻辭

Message from Founding Chairman
創會主席獻辭

Message from Ex-Chairman
前主席獻辭

Our Former and Present Chairmen
歷任及現任主席

Igniting The Barcode Revolution and Ushering into the Smart Data Era
觸發條碼革命 款動智慧數據年代

Our Member Since 1989 - Chewy
30年會員 — 超力

Connecting Supply Chain with Innovations
創新供應鏈連繫

Our Member Since 1989 - A.S. Watson Group
30年會員 — 屈臣氏集團

Our Member Since 1989 - Wellcome
30年會員 — 惠康

Pioneering IoT/EPC Standards for Smarter Business, Better Life
開創物聯網/電子產品訊息標準 引領智能商貿、優質生活

Our Member Since 1989 - Swire Coca-Cola
30年會員 — 太古可口可樂

Our Member Since 1989 - Li & Fung
30年會員 — 利豐

Championing Omni-channel Business Strategies
驅動全渠道商業策略

Our Member Since 1993 - Circle K
25年會員 — OK便利店

Our Member Since 1989 - Nestlé
30年會員 — 雀巢

Board of Directors 2019
2019年度董事局

GS1 HK Team Throughout the 30 Years
GS1 HK團隊30年精選剪影
I first became aware of bar coding in 1989 when introduced to the concept by a member of the Hong Kong General Chamber of Commerce HKGCC, Mr George Elledge, who at the time was the Chief Technology Officer of Wellcome. George was anxious to promote bar coding in Hong Kong and thought HKGCC would be a suitable platform to achieve this. I was pleased to support this initiative as I thought the Chamber should be at the forefront of business technology. I established a Chamber committee as an incubator chaired by George. Shortly afterwards he passed the chairman’s baton to Mr Russell Sticki, the Managing Director of ParkNshop during which time the Hong Kong Article Numbering Association (HKANA) was formally established.

HKANA’s promotion and development of improved supply chain management and just-in-time techniques readily attracted support from both retailers and suppliers. HKANA later evolved into an independent organisation in offices adjoining the Chamber and subsequently became GS1 Hong Kong in 2005.

My main, and I think very significant contribution to the evolution of GS1 Hong Kong was my recruitment of Anna Lin to be the Chief Executive of that first Article development and success of HKANA/GS1 Hong Kong is largely due to Anna’s leadership and tenacity and to her professional expertise and foresight.

I wish GS1 Hong Kong every success and a bright future.

Mr. Brigadier Ian Christie
CEO, HKGCC (1988 - 1997)
Message from Founding Chairman
創會主席獻辭

I would like to congratulate GS1 Hong Kong on reaching its 30th anniversary and hope that it may long continue to serve Hong Kong’s business community.

My involvement predates both GS1 and its predecessor, the Hong Kong Article Numbering Association (HKANA).

I came to Hong Kong in 1979 to establish an IT Department for the Wellcome supermarket chain. Initially, we addressed the warehousing and distribution side of the business but also had our sights set on the retail side of the business. Scanning, which at that time was already prevalent in Europe and the USA was the obvious solution, but there was a snag: only around ten percent of the products on the supermarket shelves were barcoded.

I therefore decided we needed an Article Numbering Association and set about trying to form one. I turned to the HK Trade Facilitation Council (HKTFC) who were involved with Electronic Data Interchange and seemed to be the right organisation to take on the challenge of article numbering.

The HKTFC accepted the challenge and an Article Numbering Sub Committee was formed in 1986. It got off to a slow start but things started to move when the HKTFC was absorbed by the Hong Kong General Chamber of Commerce (HKGCC) under the leadership of Brigadier Ian Christie, who agreed to provide the initial funding to get the HKANA off the ground.

The late Mr. Harry Garlick, Assistant Director of the HKGCC, took the project under his wing. When the HKANA was launched in 1989. By then I had left Wellcome and the retail industry. I was invited to become the Association’s first Chairman and Ms. Anna Lin was recruited as the Association’s first Chief Executive and bar coding in Hong Kong took off in a big way.

Mr. George Elledge
Chairmanship: 1989 - 1992

Mr. George Elledge

President: 1989 - 1992

I诚意祝賀GS1 Hong Kong的30周年誕辰，衷心期望協會延續為香港商界長期服務的承諾。

當年，我的任期橫跨GS1及其前身HKANA。

1979年我初到香港，主責為惠康超級市場連鎖店建立資訊科技部門，初時我們集中處理及發貨的業務運作，其後亦負責零售方面業務。產品掃描在當時的歐洲及美國發展如日中天，是一項普及科技，唯當時面臨轉機，因當時在超市上架的只有約1成產品承載著條碼。

我於是決定本港需要貨品編碼，並親自成立貨品編碼協會，我向當時涉獵電子數據交換的香港貿易便利局(HKTFC)求助，他們是當時最合適機構去發展貨品編碼。

HKTFC肩負了該責任，於1986年組成貨品編碼小組，雖然起初進展緩慢，但當香港總商會將HKTFC納入旗下，時任總商會主席祈仕德先生同意提供初步資金，便成為HKANA的開端。

時任總商會助理總監Harry Garlick先生其後繼續負責該計劃，並於1989年成立HKANA。其時我已離任惠康以至零售行業，並獲邀成為協會首任主席，而林潔貞女士獲委任為協會總裁，其後，條碼在香港正式普及化，扶搖直上。
Message from Ex-Chairman
前主席獻辭

Mr. Russell Stucki

At the time I was Managing Director of PARKnSHOP Hong Kong and China, I was able to see the benefits of engaging with HKANA (former name of GS1 HK), manufacturers and trading partners to improve communication, and subsequently their profitability.

GS1 Hong Kong has great credibility in the global community and in particular the Asia Pacific region due to its contribution over the past 30 years.

My vivid recollection of the organization was the drive, dedication & belief of a very small group of staff led & driven by Anna the Chief Executive. All credit to Anna who was able to gain support from industry & government from the early days, culminating in corporate membership close to 8,000 some 21 years later.

A word of advice: Always remember you are a member-based organization and help them improve by using the GS1 systems.

回想當時我作為百佳超級市場香港和中國區董事總經理，我能預想到HKANA (GS1 HK前身)與生產商及貿易夥伴合作所帶來的好處，促進彼此聯繫之餘，更能改善企業利潤。

GS1 Hong Kong在這三十年貢獻良多，受到全球尤其是亞太地區的企業廣泛認同。

我對本會最深刻的印象是由總裁林潔貽女士帶領的一群滿有衝勁，不怕付出，堅持信念而人數不多的職員人員。現在協會跟21年前相比，企業會員已經增至接近8,000家，這都歸功於Anna早年對業界及政府的遊說，才能取得他們的大力支持。

最後我想寄語：請牢記GS1 Hong Kong是一個以成員為骨幹的組織，協助會員善用GS1系統是協會的最大使命。

Mr. Russell Stucki

Mr. Russell Stucki
主席任期：1995-1998
Our Former and Present Chairmen

With the wealth of knowledge and experience from the visionaries, they have capably steered our works to become the trusted partner of businesses across industries in Hong Kong.

憑藉多位市場菁英的遠見、豐富知識及經驗，帶領本會成為香港商界各行業不可或缺的夥伴。

George Elledge 1989 - 1992
Alastair McKendrick 1994 - 1995
Russell Stucki 1995 - 1998
Tim Harvey 1998 - 1999
Logan Taylor 1999 - 2002
Glenn Smith 2002 - 2006
Philippe Giard 簡力宏先生 2006 - 2008
Joseph Phi 彭煥鴻先生 2008 - 現任
Chapter 1

Igniting The Barcode Revolution and Ushering into the Smart Data Era

觸發條碼革命，啟動智慧數據年代
The origin of big data – barcodes
Barcodes, which are widely used in our daily life, originated from the United States during the 1970s. The world’s first barcoded product was a 10-pack Wrigley’s Juicy Fruit gum. Today, barcodes have become an indispensable facet of daily life and its influence is ever-growing.

Founded in 1989 by the Hong Kong General Chamber of Commerce, GS1 Hong Kong (formerly known as Hong Kong Article Numbering Association, HKANA) is the non-governmental organization responsible for administering the GS1 identification number system like Global Trade Item Numbers (GTINs), or popularly known as barcode, and promote its usage and support businesses in Hong Kong. Companies can make use of GS1 barcodes to identify, capture and transmit any trade items, assets and locations automatically in electronic ways, helping supply chain stakeholders to speed up retail checkout process, reduce inventory holdings, eliminate out-of-stock situations and accelerate delivery time significantly, thus enabling companies to save costs while enjoying higher productivity.

Barcodes usage throughout the eras
Barcodes have become popular in Hong Kong since 1980s, and with the growing trend of barcode application, retail activities have been driven towards automation. Barcodes and its data have played an instrumental role in enhancing retail efficiency, productivity and overall customer experience across numerous business sectors, from retail, healthcare, food and apparel, among others.

In the 90s, the rise of the internet technology and smart devices started changing the mode of business activities which are no longer limited to a physical location. Instead, consumers can conduct online shopping or product information search anywhere and anytime, through product barcode scanning with the support of smart phones. Such innovations have brought forth a more interactive and autonomous buying experience for consumers.

Our iconic barcode is empowering the digital consumer journey: from searching for trusted product information, to verifying the product authenticity and tracing products origin, and from engaging with brands using social media, to making purchase decision.

條碼是大數據核心來源
條碼，一個廣泛應用於日常生活的「標誌」，在1970年代起源於美國，全球首個印有GS1條碼的商品，就是Wrigley黃箭10片裝香口膠。時至今日，條碼在日常生活早已不可或缺，其影響力更是有增無減。

GS1 Hong Kong(英文簡稱為Hong Kong Article Numbering Association, HKANA)於1989年由香港總商會成立，是香港唯一獲認可簽發及管理GS1編碼識別系統，例如全球貿易貨品編碼(GTINs，簡稱條碼)的非政府機構。企業可透過GS1條碼識別和撮取不同貨品、資產和位置，並以電子方式傳送有關訊息，能加快收銀過程，減少庫存過剩，舒緩缺貨情況和縮短送貨時間，令企業節省成本的同時，亦能提高生產力。

貫穿不同年代 條碼功不可沒
在香港，條碼於80年代普及化，零售活動隨著條碼的應用而轉型自動化。條碼及其數據對於提升本港的零售效率、生產力及整體顧客體驗起著極為重要的作用，獲零售、醫療護理、餐飲及衣業等各行業重用。

90年代藉著網絡科技、智能裝置的興起，商業活動不再侷限於實體店鋪內發生，消費者可隨處隨時透過產品上的條碼及配合智能裝置，在網上購物或在網絡世界搜尋產品資訊，消費過程的互動及自主性大大提高。

我們標誌性的條碼為消費者的數碼購物體驗奠定基礎: 由搜尋可靠產品資訊，驗證產品真偽到追溯產品源頭，以至利用社交網絡與品牌互動，到作出購物決定等。
Unleashing the power of data with GS1 global standards

Presently, retailers and e-commerce professionals are aggressively creating ever-more efficient algorithms to better utilize “big data” and translate it into greater business growth. Big data analytics refers to the practice of gathering market and consumption data through different channels, then using the information for quick analysis and forecasting purpose, with the aid of technology. The objective is to find information, market trends and opportunities of strategic value and help businesses acquire early insights into market needs so they could respond to them swiftly.

In a digital world where networks are vital and data quality reigns supreme, GS1 Hong Kong have been bridging the gap between the world of things and the world of data. We turn big data into “smart data”, providing a trusted foundation for accurate, sharable, searchable and linkable data and for the responsible use of the technologies behind its standards.

The GS1-empowered smart data can be applied in various sectors for business and operational improvements, for example optimising market strategy, identifying targeted customer groups, analysing the effectiveness of promotional activities and predicting product trends, etc.

Businesses looking to gain big data mastery must firstly grasp the core origin of big data – GS1 product barcode. Barcodes not only help businesses of different operational scales to identify, retrieve and share information from the global value chain, but also constitute a core foundation for big-data mining.

通過GS1國際標準 釋放數據的力量
傳統零售商和電子商戶都在積極研發更具效率的運算法則，以求善用「大數據」，藉此帶動業務增長。所謂大數據分析，是指從不同渠道中收集市場及消費數據，通過技術進行快速分析及預測，尋找出有價值的資訊，市場趨勢及商機，令企業可及早洞悉顧客需要，更快回應市場。

在數碼世界中，網絡是至關重要，數據質量可謂至高無上，GS1 HK一直致力拉近物件世界及數據世界之間的距離。本會將大數據轉化為「智慧數據」，讓數據變得準確可信，讓科技在標準上變得更可信賴。

以GS1標準推動的智慧數據，能夠應用於不同行業領域及改善其營運模式，例如優化市場策略、確立目標顧客群、分析推廣活動成效、預測產品潮流等。
By and large, the competition facing future businesses will not only be limited to product quality and price comparisons, but also whether they will be capable of making good use of technologies to collect quality data, undertake market analytics and forecasting and improve their supply chains, so as to offer higher-quality products and services to their customers.

We started from a humble organization and gradually grew to what we are today. Not only has GS1 Hong Kong created a supply chain ecosystem, but we have also established an extensive portfolio of value chain services in the past three decades.

With barcode undeniably becoming a critical part of our daily lives, it can be seen everywhere today including retail stores and hospitals, and appears on a comprehensive range of products, logistic units, books and even boarding passes. It is not too much of an exaggeration to claim that barcoding is one of the greatest innovations in the facilitation of commerce around the world.

Anna Lin
Chief Executive of GS1 HK

本會由一個小組織開始，不斷茁壯成長，不僅締造了一個供應鏈生態系統，還在過去30年於價值鏈上創建出一應俱全的服務。

時至今天，條碼已成為人們生活的一部分，處處可尋，無論是商店或醫院，以至各類產品、物流單位，書籍甚至登機證，條碼俯拾皆是。因條碼系統是世上促進商業發展的最偉大發明之一，並非誇大之辭。

林潔怡
香港貨品編碼協會總裁
First Member Since 30 Years Ago
Opened up Hong Kong’s New Chapter
三十年前首個會員－揭開香港新篇章

Chewy International Foods Ltd. is the first company in Hong Kong to apply for a barcode (Global Trade Item Number, GTIN). Established in 1972, Chewy was formerly known as Trans World Limited and ran on import, export and transshipment business. Chewy used to deal with foreign companies on a daily basis, so to align with international systems and standards, the company became a member when Hong Kong first introduced GTINs in 1989.

Today, Chewy becomes a major food supplier and ranks top ten among rice importers in Hong Kong. Still, it requires GS1 Hong Kong’s barcode standard to continue its expansion in overseas sales network in the global markets.

“By that time our products were exported to overseas supermarket, so it required the inner and outer box of the product packaging attached with barcode for identification, facilitating our flow of goods to global merchants.” Recalled Diana Mok, Managing Director of Chewy International Foods Ltd.

Currently, Chewy focuses on food production, processing, packaging, promotion and sales, in both wholesale and retail functions. Its products include rice vermicelli, rice, noodles and frozen foods, covering more than 200 kinds of variety for sales around the world.

To meet with Hong Kong people’s hectic lifestyle, Chewy introduced frozen and instant food like Udon, 

市民當然亦非常著重食品安全。「我們擁有HACCP、ISO22000及GMP的廠房認證，而內地合山廠房亦具備BRC認證。另外，GS1條碼在我們食品體系中非常重要，透過條碼已可以做到追蹤追溯、確保入口產品來源
fish cake, instant spaghetti, etc., enabling a simple, quick and easy cooking for Hongkongers. Observing the health-conscious lifestyle, Chewy offers a series of new products like quinoa, wild rice, chia seed to cater for the nutritious appetite.

Hong Kong people also place great concern on food safety. “We have HACCP, ISO22000, GMP-certified production plant, and BRC-certified plant in Taishan, China, all to ensure food safety,” says Diana. “GS1 barcode is important in our food system, because it allows track-and-trace to ensure the origins of the imports, while at the same time help us pinpoint the products’ current location, playing a strong part in our traceability and monitoring system.”

Diana said Chewy’s logistics fleet currently handles up to 180 tonnes of food daily, one of the largest self-operated food logistics fleet in Hong Kong. “We are using various technologies including GS1 barcode, global positioning system and RFID, etc. to manage our fleet. They not only help us locate products, but also keep our frozen food below -23°C with temperature monitoring and control. In this sense, barcode and Chewy are closely tied and progress together throughout the years.”

Keeping abreast with time, Chewy applies considerable resources in automation, machinery and technology. Since obtaining the rice stockholder and import and export license in 2003 from the Hong Kong Government, the company introduced various equipment to monitor and maintain the quality of rice, that includes Japan’s most advanced color sorter, polisher, stoning machine, as well as automatic packaging machine and AI arms to help reduce the labour physical activities and enhance packaging and delivery efficiency. Chewy also launched online ordering service to facilitate its customers ordering anytime, anywhere.

Diana said jokingly she has worked in the company since birth, and Chewy’s DNA is in her blood. She believes Chewy’s DNA is about its laser focus on product quality and market needs, so no matter what changes lies ahead, the company will stay strong.

Same for GS1 barcode, being any kind of products’ DNA throughout the 30 years, it not only become an integral part of businesses in Hong Kong, but also the bridge to future digital transformation.
Connecting Supply Chain with Innovations
創新供應鏈連繫
Fueling supply chain efficiency and growth
Communicating with customers, partners and suppliers is a crucial part of business. By capitalizing on global standards, we launched the ezTRADE electronic data interchange (EDI) service in 1995 to connect major retailers with suppliers seamlessly, which facilitates paperless transfer of electronic business documents, such as purchase orders, invoices, shipping advices, between trading partners in a cohesive and high-performing business model.

Until now, more than 2,000 companies in Hong Kong and China, across retail and consumer goods, healthcare to food and food services industries, are connected through the platform, including some of the leading brands and organisations like A.S. Watson Group, Café de Coral, Dairy Farm Group, Hospital Authority, Maxim’s Group, etc. with over 17 million EDI transactions being processed annually. It is one of the largest business communities in Hong Kong with users’ governance.

To support a variety of business needs, especially those of SMEs, GS1 Hong Kong offers comprehensive options including gateway solution for integration with company’s ERP, web-based version and mobile version for users to cost-effectively automate communication between trading partners with minimal technical skills. With closer business ties growing between Hong Kong and mainland China, ezTRADE rolled out its services across the border in 2008, to facilitate paperless business transactions for buyers and their suppliers there.

促進供應鏈效率 健康發展
無論任何企業，都必須與顧客、合作夥伴及供應商有完善的溝通方式。我們於1995年以全球標準創建了「通商易」電子數據交換服務，是主要零售商與供應商聯繫無間，於貿易夥伴間實現無紙化電子商業文件傳輸，如採購單、發票、付運單等，組成緊密的高效商業系統。

至今，逾2,000家在兩地，橫跨零售及消費品、醫療保健、食品及餐飲服務行業的公司，均利用這平台互聯，當中包括不少首屈一指的品牌及機構，如屈臣氏集團、大家樂、牛奶公司集團、醫院管理局、美心集團等，每年總共處理超過1,700萬條以上的電子數據交易訊息，是迄今規模、以用戶管理為中心的商界群體之一。

為迎合包括中小企在內的不同企業需要，GS1 HK提供多元化的選項，包括能與企業自身ERP融合的增值網電子商務解決方案、互聯網方案及流動裝置應用程式方案，適合尋求價格相宜、技術不高的企業應用。

隨著香港和內地的商業交往更加緊密，通商易在2008年於內地面世，鼓勵內地買家和供應商進行無紙的商業交易。
Demand for track and trace on supply chain takes off

The ability to track-and-trace along the product supply chain is increasingly important today, as consumers demand total transparency of what they buy and consume. Leveraging on IoT / Electronic Product Code (EPC) standards, GS1 Hong Kong launched a supply chain visibility cloud-based ezTRACK platform, where businesses can monitor the entire supply chain flow in real time, obtain updated information about cargo movements and increase supply-chain transparency.

The application of ezTRACK is useful in helping businesses and customers to easily track food and pharmaceuticals origins and gather other key information. This is especially valuable for perishable food and temperature-sensitive medicines, which are easily affected by their storage conditions. DCH, for example, adopted ezTRACK, GS1 Global Traceability and RFID-based cold chain solution to manage its frozen products from Argentina to China door-to-door services, not only ensuring the product quality by achieving full supply chain visibility from farm to fork, but also maintaining consumer safety and winning their confidence.

Facilitating Trade at APEC GDS Project

In the APEC's Global Data Standards (GDS) project which GS1 Hong Kong was appointed as project manager, we had successfully completed five trade routes across seven economies including Australia, China, Hong Kong, Malaysia, Mexico, Peru, the US, which demonstrated significant value including enhanced efficiency, better integrity, improved visibility and inspired innovations. The achievement was recognised at the APEC Joint Ministerial Statement: “We welcome the conclusion of the study on Global Data Standards (GDS) and encourage officials to explore the wider use of interoperable GDS in the APEC region.”

供應鏈追蹤追溯需求與日俱增

消費者對產品在供應鍊追蹤追溯的能力越來越看，全因消費者要求產品須具備完全透明的資訊，包裝運用物聯網及電子產品編碼標準，開發出離名為「縱橫網」的供應鏈可視化雲端平台，讓企業能實時監督整個物流過程、掌握貨物流向資訊及增加供應鍊的透明度。

「縱橫網」的應用廣泛，這對易腐食品及容易受儲存環境的影響而變質的藥物都特別適用。例如大昌行便採用了GS1全球追溯標準的「縱橫網」，以及使用無線射頻識別（RFID）為基礎的冷鍊管理系統，在跨境運送冷凍產品上實行全面的可追溯物流服務，提供冷凍產品由阿根廷運送到中國的門到門送貨服務。這不但促進全程供應鍊的能見度、確保產品質量、更保障消費者安全，贏取他們的信任。

亞太經合組織全球數據標準計劃 達致貿易便利化

協會參與了亞太經合組織(APEC)的「全球數據標準」(GDS)的先導計劃，獲委任為項目經理，曾在橫跨七個經濟體的三條貿易路線上，包括澳洲、中國、香港、馬來西亞、墨西哥、秘魯及美國，展示出更高效率、更完善表現、更佳透明度及推動創新等重大價值。APEC部長聯合聲明中亦表示：「我們歡迎GDS的研究計劃成果，並鼓勵官員進行下一步研究，讓具相互操作性的GDS在亞太區中廣泛部署。」
Product tracking for uplifting chain visibility and trade facilitation

Built on the success, GS1 HK recently introduced smart traceability solution, helping businesses to address the demand for traceability and build trust among supply chain stakeholders, from upstream suppliers to end consumers. Based on Global Traceability Standard (GTS) and Global Information Sharing Standards (EPCIS), the solution enable all stakeholders benefit from the transparency that comes with access to accurate and dynamic information about the products, fostering a trusted relationship along the supply chain.

Transformation for Connected Supply Chain

As supply chains are more global and connected than ever before, the world today is evolving into a massive digital network, and it’s an ongoing battle for many organizations to stay connected and in communication with their trading partner networks, as well as providing transparency of the products information from source to selling point for consumers. Whereas our standards and solutions enables efficient and accurate transmission of commercial documents among trading partners, we are also offering high transparency about product availability, traceability and authenticity, eventually building trust between the parties, helping businesses to thrive in the increasingly connected world.

“
I am so delighted to see that the transformation driven by EDI facilities and EPCIS standards so successful and well recognized by the market, and had revolutionized the operation model in various industries in Hong Kong. Numerous companies in different sectors have been benefited by replacing paper-based processes with electronic document and achieving real-time supply chain visibility and traceability with such innovations, which pertain to the success of any businesses in Hong Kong.

Anna Lin
Chief Executive of GS1 HK

能夠見證電子數據聯通及EPCIS所帶來的改革取得成功，獲市場廣泛認可，令香港多個行業的營運模式煥然一新，我深受鼓舞。各行業還有不少企業以電子文件取代紙本文件，達到實時供應鏈能見度及追蹤追查的能力，實是企業成功的奠基石。

林潔怡
香港貨品編碼協會總裁

GS1 HK 30th Anniversary Special Booklet 16
Streamlining the Retail Supply Chain
精簡零售供應鏈流程

Established in Hong Kong in 1841, A.S. Watson Group is one of Hong Kong’s most long-established businesses with over 178 years of history. Being the world’s largest international health and beauty retailer, A.S. Watson operates 15,000 stores across 25 markets, with annual turnover of more than US$20 billion, making it one of the most successful retail company.

屈臣氏集團於1841年在香港創立，至今超過178年，是香港歷史最悠久的公司之一。作為全球最大國際保健美容零售商，集團在全球25個市場經營15,000間零售門店，每年帶來超過200億美元收入，是最成功的零售企業之一。

The Group’s links with GS1 Hong Kong date back to 1989, when it became a founding member of the organisation’s branch in the city. In 1992, it collaborated with GS1 HK’s Retail Industry EDI Committee to launch an electronic data interchange (EDI) pilot scheme with its supermarket chain PARKnSHOP among the participants.

That same year, PARKnSHOP began using paperless procurement and invoicing processes with its suppliers to accelerate order-to-cash transactions. Following with the implementation of eTRADE in 1997, a business-to-business EDI platform for communications with suppliers.

In the early 2000s, PARKnSHOP began using the system to handle internet-based invoicing. “We were the first company to use the eTRADE invoice system,” said Simon Tsoi, Head of Finance Share Service, Retail Hong Kong of A.S. Watson Group.

“EDI invoicing is efficient and we only need a small team of five or six staff to handle invoices,” said Tsoi.

The success of these systems prompted the company to extend EDI facilities across the group’s other brands – to its Hong Kong health and beauty chain Watsons

屈臣氏集團與GS1 HK的合作源於1989年。集團是當時GS1(國際貨品編碼協會)於香港地區的創辦成員之一。1992年，集團與GS1 HK的零售業電子數據聯通 (Electronic Data Interchange, EDI) 委員會合作，推出EDI試點計劃，旗下的連鎖超市百佳超級市場亦是其中一個參與企業。

同年，百佳開始進行無紙化商業交易，處理與供應商的採購及發票過程，加快「訂單到現金」的交易過程。隨後於1997年，電子商貿平台「通商易」(eTRADE)正式面世，讓商家可以電子化的方式與供應商溝通。

屈臣氏集團財務部財務共享服務主管 香港零售蔡俊光表示：「我們是首間採用eTRADE發票系統的公司。」早於2000年初，百佳開始以此系統處理以互聯網為基礎的發票通知。

蔡俊光續说：「EDI發票系統效率高，我們僅需要5至6位員工便能妥善處理。」

系統的成熟促使集團將電子數據聯通系統延伸至旗下各品牌，包括2003年應用於香港屈臣氏保健美容連鎖店上，並於三年後推廣應用於電子產品零售商豐澤上，隨後更拓展至中國百佳及中國屈臣氏。
in 2003, to electronic and electrical retailer Fortress three years later and then to PARKnSHOP China and Watsons China.

More recently, GS1’s mobile version of ezTRADE has enabled the company’s hundreds of small and medium-sized suppliers to seamlessly collaborate anywhere at any time. As a result, over 600 major suppliers in Hong Kong and 400 in China use the platform to optimise their supply-chain management, allowing PARKnSHOP and Watsons to process 99% of their purchase orders electronically.

A.S. Watson is also a member of ezTRADE’s Electronic Commerce Users’ Committee, helping to promote the efficient use of a paperless standard-based order-to-cash B2B electronic commerce platform in Hong Kong. It regularly provides feedback on GS1 Hong Kong’s e-commerce initiatives.

Since 2012, the company has partnered with GS1 and the Centre of Food Safety to protect public’s safety and supporting traders in proactively putting a stop to the sale of or recalling any unsafe food products.

“We have always prided ourselves on our uncompromising standards when it comes to product quality and safety. The Programme was indeed a good news that helps strengthen our pursuit on food safety and enhances our customers’ confidence,” said Tsoi.

Continuing its tradition of being one of Hong Kong’s leading digital transformation pioneers, A.S. Watson is working on the development of optical character recognition applications that can speed up the handling of paperwork, notably on cross-border transactions which require companies to deposit documents with customs, inspection and quarantine.

The group is also rolling out projects that use artificial intelligence and big data tools to manage its internal operations and testing various customer-facing applications, including its customer loyalty programme and specific retail applications to put a smile on customers faces.

近年，ezTRADE推出流動應用程式，讓超過百間中小型供應商與集團能隨時隨地連繫協作。目前，超過600個香港及400個內地主要供應商以此平台優化供應鍊管理，讓百佳及屈臣氏都能以電子方式處理99%的訂單。

作為GS1 HK的電子商貿用戶委員會成員之一，屈臣氏集團亦負責任務在香港實行無紙化B2B電子商貿平台，亦經常向GS1 HK的電子商貿項目提供意見。

自2012年開，集團與GS1 HK及食物安全中心合作，以保障公共安全及支援業界積極髮防止售不安全產品及回收有關產品。

蔡俊光：「在產品質量和安全方面，我們一向以永不妥協的標準為榮。此計劃加強了我們一直以來對食品安全的追求，鞏固顧客對我們的信心。」

屈臣氏集團向來是數碼轉型的先鋒，現正研發光學字元辨識技術的應用，以加快文書處理工作，主要針對向海關提交檢驗檢疫文件的跨境貿易程序作出優化。

集團同時陸續推行多個採用人工智能及大數據分析工具的計劃，以便管理公司的內部營運及測試各個與顧客相關的應用程式，當中包括提升客戶忠誠度的會員計劃及特定零售應用程式，務求讓顧客會心微笑。

“Some 99% of its major suppliers use ezTRADE platform to optimise their supply chain management, allowing PARKnSHOP and Watsons to process 99% of their purchase orders electronically. 約99%主要供應商以「通商易」優化供應鍊管理，讓百佳及屈臣氏能以電子方式處理99%的訂單。”
A Hearty Welcome to the Retail Revolution
熱烈投身零售革命

To thrive in today’s retail market, companies have to be flexible and fast-moving. “The supermarket sector in Hong Kong is very competitive. As a result, efficiency is one of the major drivers of performance,” says Timothy Tang, Managing Director – Hong Kong/ Macau Food of Dairy Farm Company Ltd’s Wellcome supermarket chain.

要能在瞬息萬變的零售環境中脫穎而出，企業需要具備靈活性及迅速的發展步伐。牛奶有限公司—惠康常務董事—香港/澳門食品廳長正有深切見解：「本地的超級市場行業競爭非常激烈，而效率是其中一個致勝關鍵。」

“GS1 Hong Kong has made Hong Kong a world-class centre in supply chain management by driving innovation, leading process standardization and sharing best practices,” says Tim.

At Wellcome, the adoption of GS1 product barcode standards allowed for the automation of checkouts and internal processes.

Today, barcodes are used to help Wellcome serve more than 17 million customers every month in its more than 340 stores in Hong Kong and Macau. They continue to be Wellcome’s primary mode for point-of-sale scanning, product replenishment in stores and warehouse picking and packing.

They also play a crucial role in the company’s innovation strategy. “We use barcodes whenever we look at how to streamline checkout services. For example, if you look at the way we do our markdown products, this used to be a manual process, with staff at the checkout having to punch the new prices in. Now what we do is barcode based, with the markdown embedded into a QR code which just needs scanning, speeding up the process,” says Tim.

In 1991, when GS1 introduced its code of practice for

「GS1 HK透過推動創新，引領企業將程序標準化及與業界分享最佳範例，造就了香港成為世界一流的供應鏈管理中心。」惠康應用了GS1的貨品編碼標準，讓收款及內部流程變得自動化。

時至今日，惠康利用產品條碼服務香港及澳門超過340間店鋪，每月超過1,700萬名顧客。條碼仍然是惠康的重要支柱，讓惠康各銷售點能進行掃描條碼、補貨及倉庫取貨和包裝等程序。

條碼亦在公司的創新策略中扮演著重要角色。鄧達正表示：「每當我們想優化收銀服務時，均需要使用貨品條碼。比如說是減價貨品，我們過去的處理方法是收銀員以人手輸入新價錢。現在我們能以條碼為基礎，加快整個收款程序。我們預先把減價貨品的新價錢輸入二維碼內，收銀員只需掃描該二維碼便可收款。」

回溯到1991年，GS1 HK推出《零售商引進電子銷售系統操作守則》，而惠康是最早參與的零售商之一。

及至1992年，惠康參與了GS1 HK推出的電子數據聯通 (EDI) 試點計劃。鄧達正說：「這個無紙化採購及付款交易平臺簡化了我們的業務流程，並讓我們能更有效地與供應商聯繫，以電子方式傳送關鍵的數據。」四年后，惠康
barcode scanning in retail stores, Wellcome was one of the early retail adopters.

In 1992, Wellcome participated in GS1 Hong Kong’s electronic data interchange (EDI) pilot scheme. “This paperless platform for procurement and payment exchange streamlined our business processes and allowed us to transmit critical data efficiently to our suppliers,” says Tim. Four years later, using GS1 Hong Kong’s e2TRADE service developed as a result of the scheme, Wellcome was the first supermarket in Hong Kong to employ EDI technology to connect with its suppliers. Today, a majority of Wellcome’s more than 500 suppliers in Hong Kong use the service, allowing the company to process more than half of its purchase orders and nearly 80% of its invoices electronically.

In 2010, Wellcome adopted the Unsafe Products Prevention Program (UPPP) and Food Safety Alert System using GS1 Hong Kong's BarcodePlus platform.

The programme was launched with the support of Hong Kong’s Centre for Food Safety (CFS), the Hong Kong Food Council and major supermarkets. Under it, when the Rapid Alert System reports an identified unsafe product, Wellcome can map out the appended GTIN in its internal inventory so they can immediately block the product at point-of-sale, eliminating the need for tedious and error-prone manual searching and matching using internal records.

The programme enhances supply-chain efficiency and visibility while providing consumers with a higher level of quality assurance. With it, the processing time for identifying unsafe products can be streamlined by at least 30%. “Quality and safety is a top priority for all the products we sell so we adopted the programme to improve food safety,” says Tim.

Another important recent development is the introduction of self-service checkout counters with machines that allow customers to scan the barcodes on products, choose their payment method option and pay simply by tapping a card or using cash. Self-checkout is helping Wellcome make the purchasing element of shopping faster for its customers — with barcodes once again enabling it to both increase efficiency and make shoppers happier.

亦採用了由計劃而產生出來的GS1 HK「通商易」服務，成為香港首間採用此EDI科技與供應商聯繫的超級市場。至今，在惠康超過600個供應商中，大部分均有使用此服務，讓惠康能透過電子化的方式處理過半數的訂單及接近80%的發票。

在2010年，惠康透過GS1 HK的BarcodePlus資訊平台參與了食品安全警報系統項目及自動化的預警通報系統。

此項目獲得食物安全中心、香港食品委員會及主要的超級市場支持，透過項目，當發現不安全產品時，快速警報系統會發出警報，惠康可透過附有的貨品編碼，搜尋相關的內部存倉編碼，然後即時啟動阻截銷售功能，既避免消費者購買不安全產品，又省卻繁複及不準確的內部人手搜尋及處理程序。

項目不但提升供應鏈效率及透明度，更能為顧客帶來品質保證，這方案大大加快了不安全食品的查找速度至少三成以上。呂天正道：「零售商內的貨品品質及安全性對我們來說是首要條件，故此我們參加了此項目，以確保食物安全。」

近年，惠康推出了自助收銀機，讓顧客可以自行掃描貨品條碼，選擇付款方式，如以信用卡或現金付款。此方法再次引證了貨品條碼在提升效率及顧客滿意度的功能，讓惠康為顧客帶來一個更便捷的購物體驗。

"Barcodes are used to help
Wellcome serve more than
17 million customers every month in
its more than 340 stores
in Hong Kong and Macau.
惠康利用產品條碼服務著
香港及澳門超過340間店鋪，
每月超過1,700萬名顧客。"
Chapter 3

Pioneering IoT/EPC Standards for Smarter Business, Better Life

開創物聯網/電子產品訊息標準
引領智能商貿、優質生活
Bridging the World of Things and World of Data

IoT is driving increased connectivity of “things” – which leads to massive data collection. Data is the lifeblood of a smart city, where data quality is more important than ever and GS1 standards provide the foundation for accurate, sharable, searchable and linkable data, starting with standardised attributes.

To connect the dots of all these aspects of lives, we believe interoperability is the key. The GS1 standards are fully compliant with ISO Standard 29161: “Unique identification of the Internet of Things”. This interoperability further enables the convergence of IoT, big data and cloud, paving the way to revolutionize many aspects of our society in a smart city environment.

GS1 HK’s IoT/EPCIS cloud-based platform, ezTRACK, enables interoperability, secure data sharing. A platform that supports smart retail, smart food, smart healthcare, it forms the basis for smarter business, better life in a smart city.

Enhancing Consumer Experience Smart Retail Solutions

Major retailers such as Target, Kohls, Macy’s, Marks & Spencer, and Zara, etc. have begun to scale their initiatives as the benefits of RFID Item Level Tagging begin to develop. In a study conducted by Auburn University’s RFID Lab and GS1 US, brand owners and retailers who used RFID technology to optimize inventory management and reconcile product shipments were capable of achieving 99.9 percent order accuracy.

Locally, Chow Tai Fook has adopted a RFID-enabled inventory control system, featuring the use of RFID-enabled price tags; and Smart Tray backed by an IoT platform. It not only helps frontline staff provide fast, professional customer service, streamline sales process and enhance customers’ shopping experience, but also support the collection of big data for understanding customer tastes and preferences, shopping behavior.

連繫物件與數據世界的橋樑

物聯網正驅動千萬物聯發展，令大量數據爆炸性涌現。數據是智慧城市的生命脈，而數據基準更是成敗關鍵。GS1標準以統一特性提供可信的基礎，讓數據準確、可共享，可被搜尋並具備連結能力。

要以標準連繫生活各層面，本會相信相互操作性是無往不利。GS1標準完全符合ISO 29161物聯網獨一無二標準，其相互操作性能進一步融合物聯網，大數據及雲端系統，是推動智慧城市、改革日常生活的蹼礎石。GS1 HK的物聯網/EPCIS雲端平台－－ezTRACK便具有相互操作性的特性及安全資料分享的能力，它能支援智慧零售、智慧食品及智慧醫療保健，是組成智慧城市中的智慧商貿和優質生活的基本條件。

智慧零售方案提升消費者體驗

主要零售商如Target、Kohls、Macy’s、Marks & Spencer及Zara等，已經意識到RFID單品標籤(Item Level Tagging, ILT)所帶來的優勢及擴大使用規模。美國密歇根大學與美國GS1聯合研究發現，品牌商與零售商透過RFID技術去優化庫存管理及記錄成功付運時，能達到99.9％的準確率。

在香港，周大福珠寶研發出存貨控制系統(ICS)，它採用RFID(sid標籤，而其所使用物流盤僱物聯網平台支援。該技術服務前線工作人員為顧客提供快捷而專業的客戶服務，簡化銷售程序，提升顧客購物體驗，同時收集大量數據以助分析消費者口味與喜好。
The History of IoT: from industry-academia partnership

Back in 1999, the Auto-ID Centre at the Massachusetts Institute of Technology (MIT) of the United States commenced a research project on integrating the internet with RFID technology such that it can automatically identify any object along the supply chain. The study finally resulted in a set of solutions based on a coding system, low cost passive RFID tags and a network of exchangeable supply chain data. In 2003, the research outcome was submitted to GS1 organization, which later formed EPCglobal Inc. to develop and drive the adoption of Electronic Product Code (EPC) standards towards global application. Using these standards, enterprises can make use of EPCglobal network to share information and data including the location of a product and its status.

In 2007, the standards of the EPC Information Services (EPCIS), developed on the basis of the EPCglobal network, were formally released. These standards, with the internet as the backbone and an open interface, support information sharing and allow the interoperability and integration of different data systems.

Ensuring food safety with smart food systems

Increasing demands from consumers for food safety results in the need for food business owners to adopt an efficient and reliable cold chain monitoring and management system, as well as enforcing international standards to ensure safety and interoperability of heterogeneous traceability systems, and supply chain efficiency.

Besides the example of APEC’s GDS Project which enables cross-border traceability of goods and shipments, businesses in food supply chain, such as Rich Harvest, an agricultural produce provider in Hong Kong, can also make use of GS1 standards and eZTRACK platform to establish an end-to-end traceability operation, achieving full visibility from farm to fork in order to win consumers’ confidence and ensure compliance with government requirements on food products.
Fostering IoT Ecosystem Development

To raise awareness and foster knowledge sharing of IoT, GS1 HK hosts the Hong Kong IoT Conference every year, and supports in organizing the "Hong Kong ICT Awards", an annual award steered by Innovation and Technology Bureau, to recognise and promote outstanding ICT inventions and applications. We also develop and manage the Hong Kong Internet of Things Centre of Excellence to provide the industry and the general public to experience how IoT can be applied across a smart city.

GS1 HK has been providing professional consultancy and IoT expertise to local enterprises on supply chain technology application, culminating in numerous business and operational breakthroughs. The organization will remain focus on propelling Hong Kong's IoT development and realizing the community’s vision to become a smart city.

“GS1 HK has been the pioneer on IoT front, and our influence never cease. Through our IoT Industry Advisory Council, we connect with industry stakeholders, explore novice applications, and provided strategic advice to the HKSAR government on the direction of IoT and smart city developments in Hong Kong, which serves as the basis for the government’s smart city blueprint.

With our history and involvement with IoT, GS1 HK is well positioned to foster an IoT ecosystem, in support of the continuous growth and implementation of this game-changing technology in Hong Kong.

Anna Lin
Chief Executive of GS1 HK

"
Leading local beverage manufacturer Swire Coca-Cola Hong Kong ("Swire Coca-Cola") has been a close partner of GS1 HK for decades, both as recipient of its services and supporter of its mission.

The partnership started in the early days of the founding of GS1 HK with Swire Coca-Cola being among the initial batch of leading local businesses having the foresight to see the importance of its work and joining as members.

“As with other businesses involving supply chain management, technology plays a key role in various aspects of our operations, from procurement, production and quality assurance to inventory control, logistics and distribution.” says Neil Waters, Swire Coca-Cola’s Director and General Manager.

“Thanks to GS1 HK’s consultancy and system development services, we have been able to apply more effectively the technologies adopted in our operational processes.

“In return, we from time to time endeavour to provide them with our professional support the best we can, making it a point to ensure that our views, expertise and experience would be shared with GS1 HK for the benefit of our fellow members,” says Waters who also sits on its Advisory Board for the food and beverage industries.

Founded in 1965, Swire Coca-Cola’s beverage sales in Hong Kong totalled 65.5 million unit cases in 2018. At its local production facility in Shatin, it operates 15 production lines making a wide range of beverages, among them still, sparkling and functional drinks, mineralised water, tea, ready-to-drink coffee and milk tea, as well as Coca-Cola.
The effective application of technologies such as those associated with barcodes and other supply chain management applications has also contributed greatly to Swire Coca-Cola’s ability to make sound business projections, keep costs under control, maximise efficiencies and respond swiftly to changing market circumstances and consumer preferences.

As beverage manufacturer, Swire Coca-Cola attaches great importance to food safety and traceability systems. GS1’s food traceability audit scheme has played an important role in helping Swire Coca-Cola review its internal processes with a view to making improvements and setting new standards.

Waters added that in August 2018, the company was proud to be recognised as a Diamond Enterprise Winner for the fourth consecutive year for its excellent performance in food safety and traceability.

“From time to time we send members of our 1,300-strong staff to various GS1 seminars, conferences and training programmes, allowing them to keep abreast of the latest developments and knowledge in the supply chain, retail and other related fields,” says Waters.

In 2007, Swire Coca-Cola implemented an “Every Bottle Counts” incentive scheme encouraging customers to return used plastic bottles. GS1 barcode technology was used to identify the returned bottles eligible for rewards. “That was an excellent example of how GS1 can help its members in innovative ways,” says Waters.

In January 2019, as part of the Swire Group’s ongoing sustainability commitments, Swire Coca-Cola’s parent company, Swire Beverages, partnered with local companies to build and operate a state-of-the-art plastic waste recycling plant in Hong Kong.

The plant will be able to process the territory’s entire domestic volume of post-consumption PET and high-density polyethylene (HDPE) bottles. “This is an unprecedented move by a leading company to take concrete steps directly addressing industry-related environmental issues, taking corporate social responsibility to a new level,” says Waters.

利偉達亦道：「我們不時邀請公司1,300名員工出席協會不同的研討會、會議及訓練課程等，讓他們可以掌握供應鏈、零售業以至其他相關行業的最新發展及知識。」

2007年，太古可口可樂推出「分瓶有賞」之飲品膠樽回收獎勵計劃，鼓勵顧客退回飲用過的膠樽。GS1條碼技術便用作核實回收膠樽獎賞的資格。利偉達表示，該計劃是GS1以創新方式幫助會員的好例子。

於2019年1月，為配合太古集團對於可持續發展的承諾，太古可口可樂的母公司太古飲料與本地公司合作，在香港興建及營運先進的塑膠回收處理設施。

計劃預期能夠處理全港所有家居廢棄飲品膠樽(PET)及個人護理產品膠樽(HDPE)。利偉達表示：「這開創了先行企業對業界所關注的環保議題作出實際回應的先河，讓公司在實踐社會責任方面更上一層樓。」

“Thanks to GS1 HK’s consultancy and system development services, we have been able to apply more effectively the technologies.

GS1 HK的顧問及系統研發服務，讓我們更有效應用科技。”
Throughout its history — from its earliest days as an import and export trading firm, to its current position as an expert in global supply chain management — Li & Fung has been an early adopter of new technologies, says Joseph Phi, Group President & Executive Director of Li & Fung and President of LF Logistics.

For the last three decades, this has meant embracing digital technologies. “Since the mid-1990s, we have been capitalising on internet developments and technological innovations to strengthen communications with customers, vendors and branch offices and to launch services and solutions to facilitate e-commerce,” says Phi.

At the heart of the company’s supply chain management systems stand the standards and practices developed and supplied by GS1. “GS1, with its trusted foundation for accurate, sharable, searchable and linkable data, provides the standards we all work with,” says Phi. “These have paved the way for information connectivity in the business community, across industries and enhancing supply chain management.”

The flow of data from barcodes alone transformed the retail industry, says Phi. “As a source of unique identity for every SKU managed along the supply chain, they gave every item a unique characteristic that could be tracked and analysed at all points and times.”

Previously, companies had to build inventory at various points to ensure goods could be delivered to shops whenever they were needed. The arrival of

在過去三十載，集團一直擁護數碼科技，他憶述：「自九十年代中，我們便已緊隨互聯網發展及創新科技，加強我們與客戶、供應商及各地辦公室的連繫，並推出各式各樣服務及解決方案，推動電子商貿。」

GS1發展和提倡的標準和準則，為集團供應鏈管理系統帶來重要基礎。「GS1賦予數據一個可信的基礎，讓數據變得準確、可共享、可被搜索並具備連結能力，讓大家都在同樣的標準上協作。這為各行業的商界體繫造了資訊互通的基石，並加強了供應鏈管理。」

彭煒煒解釋，單單條碼的數據互通已改革了整個零售行業。「條碼為供應鏈上每項產品提供了獨一無二的身份認證，並賦予它們特徵，隨時隨地能被追蹤及分析。」

以往公司須在運輸過程的節點上建立庫存記錄，確保店舖在產品缺貨時能即時補貨。條碼技術便能優化產品流通管理，只需確保足夠庫存去補充店舖所需。「這在當年是項突破，為業務變革帶來許多契機。」

利豐馮氏集團的多項計劃和舉措，都與條碼標準有直接關係。就在1990年GS1 HK成立後不久，利豐提出「無國界生產」（Borderless Manufacturing）的方針及策略，旨在管理傳統及新興採購市場中，龐大的供應商及夥伴網絡，透過創造巨大效益的方法，為客戶帶來裨益。
barcode technology led to them managing product flows — being able to ensure that just enough inventory was available to resupply stores at the same rate as it was sold. “Barcodes allowed us to gather data and make sense of it,” says Phi. “This was a breakthrough — opening the way for business transformation in many ways.”

Many of Li & Fung’s initiatives have been directly linked to the establishment of such standards. In 1990, shortly after the establishment of GS1 Hong Kong, Li & Fung launched its “Borderless Manufacturing” system tasked with giving it the ability to manage a large network of vendors and suppliers across traditional and newly emerging sourcing markets in a way which created significant efficiencies for the benefit of its customers.

Phi sees the work GS1 has done with barcodes carrying on into the future with RFID tags. “RFID will change things. You’ll be able to know how many times an item of clothing has been touched, for example, opening the way for a far more detailed understanding of how consumers behave, which products they react to and so on,” says Phi. Companies that can leverage on this opportunity will be better equipped to respond more accurately and timely to changing consumer needs.

One of the company’s current goals is creating an end-to-end digital supply chain that — augmented by data analytics — can help its customers optimise their ordering decisions and react to market changes with enhanced speed.

“Product samples have always had to be sent backwards and forwards between the manufacturer and the retailers,” says Phi. “We’re trying to digitalise this process.” That means allowing a buyer in say the United States or Europe to communicate changes in design or specification with Asia electronically rather than by couriering products between two continents. “This portion of the supply chain provides the biggest opportunity for Li & Fung,” says Phi.

“We aspire to create the supply chain of the future to help our customers navigate the digital economy. We are focused on speed, innovation and digitalization to get there,” says Phi.

彭烱煒觀察到GS1條碼對商界之影響，未來將以RFID標籤的形式呈現。「RFID將會改變一切，例如商家會知道某一件服飾衣履被顧客拿起的次數，或消費者對某項產品的反應等等，這將有助商家更深入了解消費者行為。」任何公司只要善用這機會，便能隨時更準確地應對消費者不同需要。

集團現時其中一項目標，便是善用數據分析，締造出端對端的數碼供應鏈，幫助集團客戶改善他們的下單決定，並以更快速度回應市場轉變。

彭烱煒闡述：「一直以來，產品樣本必須在生產商與零售商之間寄送往來多次，費時失事，所以我們正將流程電子化。」舉個例子，身處美國或歐洲的買家能以電子形式與亞洲的生產商密切配合，確保貨物的設計更改或技術更新。他今後將產品樣本在兩大洲間傳遞。「就算部分的供應鏈對利豐而言潛藏著效益大商機。」

他續道：「我們銳意打造未來創新供應鏈，著力經管速度、創新及數碼化三大範疇，助客戶在數碼經濟中乘風破浪。」

“GS1 enables a trusted foundation for accurate, sharable, searchable and linkable data
GS1賦予數據一個可信的基礎，讓數據變得準確、可共享、可被搜索並具備鏈接能力

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Chapter 4

Championing Omni-channel Business Strategies

驅動全渠道商業策略
Integrating Online and Offline Shopping
Modern consumers tend to browse product information or compare prices on the internet before making purchase decisions. With the prevalence of multi-channel behavior, customers are expecting a unified shopping experience with complete, reliable, real time and high quality information across channels, anytime, anywhere.

Capgemini Consulting, a world-renowned consulting firm concluded that in response to these market changes, three critical components need to be considered to help drive a successful omni-channel strategy: web-ready products, predictive customer analytics and inventory visibility.

Expanding e-commerce market with more web-ready products
Consumers are increasingly sophisticated and demand total transparency of the products they buy. Apart from product price and country of origin, customers want to learn more about information such as nutrient content, expiry date, product authenticity, brand, background of manufacturer, discount offers and so on.

With GS1 Hong Kong REAL Visibility solutions, consumers can access up-to-the-minute product information, from the source to the latest store condition just by a simple mobile phone scan, and easily verify product authenticity at the same time. With more ample and accurate information provided, consumers’ needs for product knowledge are likely to be satisfied, thus making it easier for purchase transactions to be concluded.

Besides, major e-commerce players such as Alibaba, Amazon, eBay, Google are either requiring or asking sellers to adopt GS1 standards, for product information management and for uniquely identifying their products in global e-commerce. This also helps brand owners to manage their supply chain more efficiently, comply with laws and regulations for accurate product information, meet the demands for consumer transparency, strengthen brand integrity and improve the consumer experience.

整合線上線下購物
當今消費者在購物前，都傾向於先於網上了解產品或比較價格。現今流行不同渠道的購物模式，消費者普遍會期望一致的全方位購物體驗，並能隨時隨地取得跨媒介的完整、可靠、實時和高質素的資訊。

根據凱捷管理顧問公司的分析，企業要應對這些市場轉變，需制訂成功的全渠道零售策略其中三大條件，包括網上產品資訊、顧客分析預測及倉存能見度。

網上產品資訊開拓電子商貿市場
時下消費者日益精明，對所購買的產品資訊透明度要求越來越高。除了產品售價及來源地等主要資訊外，亦希望了解產品的營養成分、過期日、正貨認證、品牌和生產商背景，以及折扣優惠等額外資料。

有見及此，GS1 HK推出REAL Visibility解決方案，讓消費者只需通過簡單的手機應用程式掃描產品條碼，便可獲得有關產品從源頭到零售店倉存的最新資訊，輕鬆核實產品真假。產品資訊更豐富準確，便能滿足消費者的需要，促使達成交易。

此外，全球大型電子商貿平臺如阿里巴巴、亞馬遜、eBay、Google等，都規定或要求商戶採用GS1條碼標準，方便產品的資料管理，並能在全球電商平台上獨有識別他們的產品。這有助品牌持有人更有效地管理供應鏈，以準確的產品資訊合法規要求，回應消費者對透明度的要求，提高品牌誠信及使消費體驗更臻完善。
Data analytics and insights to drive sales strategies

Just by using a globally unique product key, GTIN (the barcode number), retailers can collect and utilize consumption data to analyze consumers’ past shopping habits in order to predict their future needs. As both online and offline sales channels become more diversified, so have data mined for analytic purposes become more varied and complex too.

With GS1 data cloud platform, data mining can be automatically carried out as each of their products is registered with a unique barcode, a GTIN that helps monitor the sales performance and other details, such as customers’ spending patterns.

With the latest GS1 Hong Kong solution - Smart Kiosk, retailers can derive real-time visitor insights such as demographics and unique face identification, to create a richer experience that translate into profit for retailers. It also offers RFID tracking capabilities that enables insights into product analytics and targeted marketing.

Real time transparency for better inventory management

Accuracy of inventory management can contribute to a unified shopping experience for consumers in omni-channel retailing. By adopting EPC-enabled RFID technology, retailers can monitor their inventory status and movements and track the location of products to improve inventory management.

One recent example in this regard is the adoption of GS1’s warehouse management system with RFID technology by Indigo Living, which helps to facilitate its inventory management during its photo-shooting project. The implementation helped Indigo Living significantly reduced the company’s manpower, whilst improving the inventory visibility and accuracy with automatic wide-area scanning in operation.

分析消費大數據及模式訂定銷售策略

透過全球唯一的產品鑰匙GTIN(即國際貨品編碼)，零售商可以收集及利用所取得的消費數據，分析消費者過去的購物習慣，以預測他們的未來需要。由於線上線下的銷售渠道變得多元化，分析數據比以前更為重要，亦比以前更為複雜。

當每個產品登記了獨特條碼GTIN，企業便可利用GS1的數據雲端平臺，監察產品的銷售情況及取得其中消費數據，並自動進行分析例，獲得如客戶消費模式等有用資訊。

GS1 HK的全新Smart Kiosk方案，讓零售商可以洞察實時消費者資訊，如年齡等基本資料及獨有人面統計等，製造更豐富購物體驗，從而提升銷售盈利。Smart Kiosk配備RFID追蹤功能，提供貨品數據分析及實踐目標行銷。

實時透明度 提升倉存管理

若零售商要為消費者提供統一的全渠道零售購物體驗，倉存管理的準確度是關鍵之一。透過採納以產品電子代碼 (EPC)為標準的RFID技術，零售商可監察庫存及追蹤產品的位置，以作妥善的倉存管理。

傢俬零售商Indigo Living就是一例。Indigo Living在季度目錄拍攝項目中，採用了配備RFID技術的GS1倉庫管理系統，有助管理存貨。此系統為公司大幅減省人手，而利用廣域掃描則有效提升了倉存透明度及準確度。
GS1 standards are fundamental to omni-channel business success

Whether it is physical stores or online shops, barcodes are able to help them share their product information with consumers through e-commerce platforms or on the internet. Customers can scan the barcodes affixed on products anytime with a mobile device to access detailed information about these products, which help strengthen consumer confidence.

The physical-digital convergence is transforming the retail experience. With its fast growing connectivity, Hong Kong is experiencing drastic growth in e-commerce and m-commerce channels.

I’m so glad to see how a tiny barcode can evolve to be a significant force in driving future transformations of the retail landscape, supporting seamless O2O connection, enhancing consumer engagement, promoting integrated marketing and fostering a retail ecosystem. In light of this, GS1 Hong Kong will remain committed, as always, to help the retail industry leverage on the infinite possibilities and benefits that the simple barcode may bring.

Anna Lin
Chief Executive of GS1 HK

GS1 standards are fundamental to omni-channel business success

無論是實體零售或網售商，條碼都有助透過電子商貿平台和網絡向消費者分享產品資訊，顧客可隨時利用流動裝置掃描產品上的條碼，從可靠來源了解產品的詳細資料，建立更大的消費信心。

實體及電子世界交匯，電子商貿和流動商貿均發展迅速，香港的網絡銷售額亦節節上升。

我很高興看見細小的條碼能夠造就革新零售業的重要力量，推動暢通無阻的O2O往來，提升顧客連繫，並致力於整合市場推廣及促進零售生態圈。有見及此，GS1 HK將繼續致力於零售業界營造持續創新的環境，發揮條碼獨有的無窮潛力及效益。

林潔怡
香港貨品編碼協會總裁
OK便利店

Re-inventing a Thriving Customer Experience

重塑非凡顧客體驗

“GS1 HK’s barcode standard and other processes have repeatedly transformed the operating models of the retail industry in Hong Kong. Now, its standards are helping business embrace the digital era,” says Richard Yeung, Chief Executive Officer of Convenience Retail Asia, the operator of the city’s Circle K chain of convenience stores.

「GS1 HK的貨品條碼標準，以及其他時代進程正不斷重塑香港零售業的營運模式。目前該標準正幫助企業邁向數碼時代。」OK便利店零售網絡的營運商、利亞零售有限公司行政總裁楊立彬先生對此深有體會。

From its founding in 1985, Circle K Hong Kong has always been an early adopter of new technologies, says Yeung. “GS1’s barcode standard revolutionized Circle K’s point of sale check-out process. It enabled us to speed up the checkout process, optimise inventory management and validate millions of items for delivery along the supply chain in the most cost-effective manner.”

Today, Convenience Retail Asia Limited, a member of the Fung Retailing Group, operates 332 Circle K stores in Hong Kong. Turnover at the stores totalled HK$2.06 billion in the first half of 2018, up 4.4% on the same period of 2017.

The chain was one of the founding members of Efficient Consumer Response (ECR), a supply-chain management system for the fast-moving consumer goods (FMCG) first introduced to Hong Kong by GS1 HK in 1995. Among the ECR initiatives in which Circle K has participated are “On-Shelf Availability”, which is aimed at achieving optimal availability of goods in stores in order to prevent lost sales, and the “Supply Chain Operation Excellence initiative”.

Among company’s key milestones of the last three decades was spending HK$30 million in 1999 on an

楊立彬表示自1985年成立起，OK便利店一直在新科技應用有著領先地位，他表示：「GS1的條碼標準為OK便利店的銷售點收銀過程帶來革命性的改變，讓我們加快收銀流程、優化庫存管理，並以最具經濟效益的方法，驗證供應鏈上過億款貨品的送貨安排。」

時至今日，馮氏零售集團旗下的利亞零售有限公司經營著香港332家OK便利店。在2018年上半年，OK便利店的銷售額達20.6億港元，比2017年同期上升4.4%。

OK便利店亦是ECR(Efficient Consumer Response)香港的其中一名創辦成員。此諮詢委員會於1995年由GS1 HK成立，旨在推動快速消費品(FMCG)的供應鏈管理系統。在多個ECR的倡議當中，OK便利店尤其提倡「上架貨品流通」計劃，目標是改善上架貨品的流通情況，避免錯過銷售機會。此外，OK便利店亦致力參與「卓越供應鏈營運」計劃。

OK便利店在過去三十年，其中一個重要里程碑是在1999年時投資三千萬於具備電子觸控式螢幕的電子銷售(ePOS)系統上。讓OK便利店成為擁有最先進科技的零售商之一。

自2017年起，同時經營著聖安娜餅屋及OK便利店的利亞零售為了增加營業額，推出名為「+」的營運策略。
electronic POS system with touchscreen operation, which made Circle K one of the most technically advanced retailers in Hong Kong.

Since 2017, Convenience Retail Asia, whose businesses include the Saint Honore bakery chain as well as its Circle K outlets, has focused on driving growth through its “Three Plus” strategies — targeting smartphone-savvy “internet+” customers, delivering the “4Ps+” of exceptional products, promotions, places and pricing to offer a “plus” great customer experience, and reinforcing its transformation into a “brick-and-mortar+” O2O enterprise.

Circle K’s online-to-offline (O2O) customer loyalty programme app, OK Stamp It, has opened new avenues of customer engagement to the chain. Linked to a shopper’s Octopus card, it automatically loads redemption stickers on to his or her mobile phone whenever he or she uses the card to pay for items. Since introducing the digital loyalty programme in 2016, Circle K has accumulated more than 1.2 million OK Stamp It users.

The chain also runs e-fulfilment services for leading e-commerce websites, among them Alibaba’s Taobao and Fingshopping.com, another arm of Convenience Retail Asia, which combines an online shopping platform with a safe payment channel, delivery service and after-sale support through the Circle K retail network.

Built around beauty and personal care products, Fingshopping.com offers more than 1,500 brands and 25,000 stock-keeping units (SKUs). Barcodes are used to validate products during the dispatching processes and to ensure accuracy in the last mile of delivery. In 2017, GS1 picked the platform as one its Top 10 e-Commerce Websites.

重視經常使用互聯網的顧客(互聯網+)；著重產品 (product)、推廣(promotion)、店鋪網絡(place)及價格 (pricing)；加上良好顧客體驗(4P+)；以及擴大「線上到線下(O2O)」(實體店+)銷售模式。

OK便利店的O2O會員計劃「OK齊齊印」手機應用程式推行亦非常成功，為便利店帶來連繫顧客的新增渠道。此計劃讓顧客以八達通作登記，當顧客用登記了的八達通購買貨品後，印花便會自動儲存在手機應用程式中。自2016年推出這個電子化的會員計劃後，OK便利店已成功累積超過一百二十萬名「OK齊齊印」會員。

集團亦同時為各領先的電子商貿網站提供貨物提取服務，當中包括阿里巴巴的淘寶網及「指點」Fingshopping.com，成為企業另一收入來源。「指點」網購平台結合了安全的付款方法，並利用OK便利店強大的零售網絡提供貨物提取及提供售後服務。

「指點」主要銷售美容及保健產品，涵蓋超過1,500個品牌，25,000款貨品，在網上，貨品條碼繼續發揮著重要作用，能確認發送貨品，並保障「最後一哩運送」準確無誤。在2017年，「指點」獲GS1 HK嘉許，成為「十大電子商貿網站大獎」之一。

GS1’s barcode standard enables us to validate millions of items for delivery along the supply chain.

GS1條碼標準助我們驗證供應鏈上百萬款貨品的送貨安排。
Maintaining the Highest of Standards throughout the Supply Chain
在供應鏈上維持最高標準

Originated from Switzerland, Nestlé, with a nearly 100-year-long presence in Hong Kong, is one of the great fixtures of the local food industry, selling everything from fresh, canned and powdered milk through to ice cream, cereals and soya products.

源自瑞士的雀巢在香港擁有超過100年歷史，在本地食品行業的地位舉足輕重，售賣各樣不同的食品。無論是新鮮、罐藏奶或奶粉，以至是雪糕、穀類或豆類製品，應有盡有。

Nestlé Hong Kong was a founding member of GS1 Hong Kong in 1989.

雀巢香港是GS1 HK於1989年成立時的其中一名創辦成員。

A major factor in GS1 Hong Kong’s success, says Grace Ho, General Manager of Nestlé Hong Kong Limited, is the thoroughness of its standards. “When it comes to business, standardisation and standardised practices are very important. When we and our suppliers have a common language, then it enhances efficiency and communication, for the production and movement of goods and materials, from procurement and warehousing through to invoicing and distribution.”

“GS1’s standards have strict internal guidelines for industry,” says Ho. This is nowhere more true than in Nestlé’s sector, food, where safety is the number one priority. “GS1’s food safety scheme, using global traceability standards accredited by food safety bodies, play a vital role,” she says.

雀巢香港有限公司總經理何潤儀認為，GS1 HK成功要訣在於其標準的完整性。何潤儀續說：「標準化及標準的方法對營商者來說非常重要，若我們與各供應商都有個共同的語言，就可以大大提升效率及促進溝通，讓貨品的生產、運輸、採購和倉存，以至是發票和分銷等工序，都變得順暢。」

“We’ve been endorsed by GS1 HK’s Consumer Caring Scheme since 2012. Its emphasis on how to utilise technology and value-added consumer strategies to improve service levels is a testimony to our commitment to quality,” says Ho.

何潤儀強調，GS1標準為業界帶來嚴格的指引，而這對雀巢香港尤其重要，因業界首重食品安全。「GS1 HK的『優質食品源頭追溯計劃』對我們的食品安全擔當著重要角色，因計劃運用全球追溯標準及參照了食品安全組織認可的食品安全標準。」

她補充：「我們自2012年起參加GS1 HK的『貼心企業嘉許計劃』。此計劃著重推廣企業如何善用科技，為消費者帶來更佳服務，與雀巢香港對品質的堅持和承諾理念不謀而合。」

GS1 HK香港食品及飲品行業諮詢委員會於2018年8月成立，何潤儀亦成為了委員會的首屆主席，進一步深化GS1 HK與雀巢的合作。委員會旨在推廣食品源頭追溯、提
Nestlé’s collaboration with GS1 Hong Kong further increased in August 2018 when Ho became the first chairperson of GS1 HK’s new Hong Kong Food & Beverage Industry Advisory Board, a body set up to promote the importance of traceability and transparency in the food and beverage supply chain so as to enhance food safety.

“This is a very good platform for sharing experiences. It also offers an opportunity to discuss and propose policies to the government for measures that can support industry in Hong Kong,” says Ho.

As well as fostering dialogue with the government, the board also aims at advancing effective online-to-offline (O2O) channels that facilitate trade and strengthening the food and beverage industry supply-chain ecosystem through the adoption of global standards and driving innovation and technology development.

Ho points out that while barcodes are essential for retailers and producers, they are also becoming increasingly useful for consumers. “Consumers want fast, convenient shopping, but they also want to know more and more about what they’re buying,” says Ho.

Across the Greater Bay Area, for example, Nestlé is finding Chinese users who are very interested in finding out more about Hong Kong products they’re considering buying. “Now, GS1’s barcode allows people to get hold of very detailed information about Nestlé Hong Kong products just by scanning those products barcodes with their mobile phones via WeChat,” says Ho.

In the coming years, Ho also sees GS1 Hong Kong playing a role in the overall development of the Greater Bay Area through the use of its barcode and other standards as shared mechanisms for companies across the region to strengthen their supply chains and networks of suppliers and customers, fostering the area’s growth.

升食品供應鏈透明度的重要性，從而加強食品安全。

何潤儀指出：「這是一個分享經驗的理想平台。我們也可藉機加強與政府溝通，向政府提出對業界有利的建議。」

除了是與政府溝通的平台，委員會亦旨在鼓勵業界採納全球標準及創新科技，去優化線上線下(O2O)渠道、推動貿易便利化，並強化飲食行業供應鏈生態。

何潤儀認為條碼不但有助零售商及生產商，消費者亦能獲益，她說：「消費者不但期望購物快捷方便，亦想更深入瞭解他們購買的產品。」

大灣區是其中一個很好的例子，雀巢發現中國消費者在考慮購買香港貨品前，均想知道自己產品資料。何潤儀表示 GS1 HK在此亦可幫助到他們：「現在顧客只需透過手機內微信應用程式，掃描 GS1 的產品條碼，就可以掌握關於雀巢產品的詳細資料。」

未來幾年，何潤儀相信 GS1 HK 在大灣區的整體發展有着其重要性。GS1 能以條碼及其他標準建構共享機制，讓不同地區的公司強化供應鏈及其網絡，連繫供應商及顧客，促進區內商業發展。

“GS1’s barcode allows people to get hold of very detailed information about Nestlé Hong Kong products by scanning those products barcodes via WeChat. 顧客透過微信掃描 GS1 的產品條碼，就可以掌握關於雀巢產品的詳細資料。”
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2019年度董事局

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Li & Fung
President, I.F. Logistics
利豐集團總裁及執行董事
利豐物流總裁

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梁啟元博士
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DHL全球貨運物流亞太區
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C&C Joint Printing Co (HK) Ltd.
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總裁
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Chief Executive Officer  
Lever Style  
利勢集團  
首席執行官

Ms Grace Ho  
何潤儀女士  
General Manager  
Nestlé Hong Kong Limited  
雀巢香港有限公司  
總經理

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史密夫先生  
Managing Director  
Pivotal Advisors Limited  
柏璽顧問公司  
董事總經理

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太古可口可樂香港有限公司  
董事兼總經理

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謝邱安儀女士  
Chairman & CEO  
Tse Sui Luen Jewellery (International) Ltd  
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ProVista Group  
保力集團  
主席及行政總裁

Ms Anna Lin  
林潔貞女士  
Chief Executive  
GS1 Hong Kong  
香港貨品編碼協會  
總裁

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鮑皓華律師  
Sole Proprietor  
Bodnar Horvath  
鮑皓華律師行  
獨資執業者

Ex-Officio Member  
當然委員

Company Secretary  
公司秘書

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Throughout the 30 Years

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