GS1 Hong Kong

The Global Language of Business
Connecting Supply Chain with Innovations

Hong Kong Internet of Things Centre of Excellence
香港物聯網科技應用中心

Smarter Business · Better Life
智能商貿 · 美好生活

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What is Internet of Things ?
甚麼是物聯網？

The term “Internet of Things” (IoT) was first coined in 1999 by the Auto-ID Center at the Massachusetts Institute of Technology (MIT) which was launched in collaboration with GS1 to conduct a research project on the notion that objects equipped with RFID tags could be better inventoried by computer. The concept involved integrating the Internet with RFID technology such that it can automatically identify any object along the supply chain.

IoT refers to any smart interconnected devices (e.g. RFID, sensors, etc.) adopted by businesses to obtain more visibility of the identification, location, and condition of products, assets, transactions, or even people. The ultimate goal is to be able to trace pedigree and to drive more effective, timely business decisions or to improve customer interactions.

「物聯網」概念由美國麻省理學院自動識別中心首創，於 1999 年作為一個研究計劃的開端。這概念包括整合互聯網與識別技術，使之能夠自動識別供應鏈中的任何物件。

「物聯網」指企業或組織所採用的任何智慧互連設備（例如無線射頻識別、感測器等），以獲得產品識別、定位，以及產品、資產、交易、甚至人的狀況的可視性，最終目標是能夠追溯背景，推動更有效和及時的業務決策或改善客戶互動。

The Showroom of Real-life IoT Applications
生活化物聯網應用展覽廳

The Internet of Things Centre of Excellence (IoT Centre) was established in April 2013 by GS1 Hong Kong with support from the Innovation and Technology Commission of the HKSAR Government together with the strong pool of industry partners which championed IoT.

With an aim to drive continuous development and improve competitiveness in different industries, the IoT Centre serves as an Industry Support Platform that enables the development of IoT business and the delivery of Radio Frequency Identification (RFID)/ IoT-related services. The new IoT Centre is now located in Wanchai and its design is based on the concept of embedding the latest state-of-the-art IoT technologies with the objective to inspire innovations and sparkle IoT deployments.

The IoT Centre aims to be:

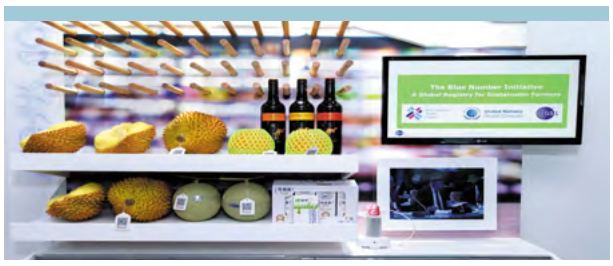
1. **An iconic RFID/IoT tech showroom**
2. **An industry support platform**
3. **A hub of RFID/IoT technologies**

香港貨品編碼協會於 2013 年創設香港物聯網科技應用中心（「物聯網中心」），並獲得香港特別行政區創新科技署及一眾業界伙伴的支持。

為支持不同行業持續發展，以及增強各行業的競爭力，物聯網中心充當行業支援平台，促進物聯網業務的發展，及無線射頻識別／物聯網相關服務。物聯網中心現遷至灣仔，設計加入最先進的物聯網技術，旨在啟發並促進物聯網的技術創新及應用。

香港物聯網科技應用中心目標成為：

1. 香港標誌性的無線射頻識別及物聯網科技展廳
2. 支援資訊科技業界的平台
3. 無線射頻識別及物聯網技術的樞紐



Touch & Feel To Inspire & Innovate
親身體驗 啟發創新

The IoT Centre consists of six thematic zones, in which visitors can touch and experience the power of IoT technologies in various industries with an aim to inspire innovative IoT applications which lead to Smarter Business • Better Life.

物聯網中心內共分為六個主題區域，讓參觀人士親身體驗物聯網科技於各行業的影響力，從而啟發各參觀者創造用戶為本的物聯網應用，達至智能商貿 • 美好生活。

Six Thematic Zones
六個主題區域

Smart Retail & Omni-channel
智慧零售及全渠道零售

Revealing how IoT technologies create a seamless consumer journey and facilitate a successful omni-channel strategy. It also demonstrates how business decision makers can create consumer insight based on the Big Data derived from consumer interactions.
展示物聯網科技如何創造暢通無阻的消費體驗，並有助制定成功的全渠道策略。展區亦展示企業決策者如何能夠從與消費者互動而得到的大數據來分析消費者行為。

Smart Logistics
智慧物流

Demonstrating how RFID and IoT technologies can create business values by enabling supply chain visibility and also facilitating e-commerce fulfillment efficiency.
展示 RFID 及物聯網技術如何透過提升供應鏈的透明度，以及改善電子商貿配送的效率，創造商業價值。

Smart Healthcare
智慧醫療護理

Illustrating how IoT technologies ensure patient safety and quality service by enabling traceability and also boosting of operational efficiency by healthcare modernisation.
展示物聯網技術如何透過先進的醫護程序，提高可追溯性及運作效率，確保病人安全及提供高質素的治療和護理服務。

Smart Food Safety
智慧食品安全

Showing how IoT technologies and RFID track the real-time information of food to ensure safety.
展示物聯網技術如何通過提高食品產地和質量等資訊的透明度，以保障消費者安全。

Smart Consumer Trust
智慧消費信心

Displaying how IoT technologies assure consumer safety and build consumer trust by realising origin authenticity and visibility.
展示物聯網技術如何可做到產品驗證及提升供應鏈的透明度，提高消費者的信心。

Smart City
智慧城市

Exhibiting the pioneering archive of the award winning innovative IoT applications designed in Hong Kong.
展出本地獲獎的創新物聯網應用項目。

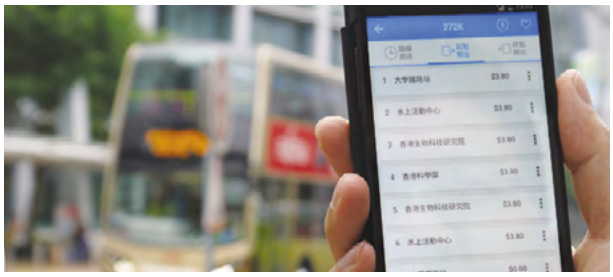
Award Winning Cases Showcase
獲獎項目展示

Axon Labs Ltd.
HKBus+ 香港巴士通

Internet of Things Application gold award
物聯網應用金獎

Grand Award 大獎
HONG KONG ICT AWARDS 2015 香港資訊及通訊科技獎

Gold Award 金獎
HONG KONG ICT AWARDS 2015 香港資訊及通訊科技獎



HKBus+ is an information platform offering comprehensive public transportation information in Hong Kong, covering franchised buses, mini-buses, MTR, ferries and trams. It combines the open data released by the HKSAR government as well as data collected from the Internet to offer the most comprehensive and up-to-date information to the users.

The app provides many useful and convenient functions, including intelligent search, point-to-point route search, nearby stops and stations, get-off reminder, transit suggestions, taxi fare estimation, and various personalised functions. The app will also notify the users via push messages about the latest updates of public transportation services and abnormal traffic conditions. At present, the system will periodically retrieve traffic information of the three cross-harbour tunnels from the Transport Department and present the information to the users, in order to help them choose the most suitable mode of public transport to cross the harbour at the time.

香港巴士通是一個覆蓋全香港各種交通工具的資訊平台，提供專營巴士，港鐵、專線小巴、電車、山頂纜車及渡海小輪的路線及站點資訊。此應用程式結合香港政府資料一線通發佈的數據集，以及利用電腦程式自動從各公共交通公司網站收集得到的最新資料，為用戶提供最全面最新的資訊服務。

香港巴士通提供多種方便易用的功能，包括智能搜尋、點到點路線搜尋、附近車站搜尋、落車提示、轉乘建議、的士車資計算、以及多種個人化的功能。該公司亦定時更新各路線的資訊，以及收集各種即時消息，向用戶發佈，讓他們得知最新的路面情況。現時系統每十分鐘會自動獲取由運輸署發佈的三條過海隧道的行車情況，供用戶參考以決定如果選擇交通工具。

Chow Tai Fook 周大福珠寶金行有限公司
ICS RFID-technology Deployment (IRD)
存貨控制系統 RFID 技術應用項目

RFID Implementation Excellence and RFID Application Innovation gold award
卓越無線射頻識別技術運用及創意無線射頻識別技術應用金獎

HK IoT AWARDS 香港物聯網大獎

Chow Tai Fook has adopted a RFID-enabled inventory control system (ICS) developed in-house, featuring the use of RFID-enabled price tags; logistic trays, mHand and Smart Tray backed by an Internet of Things platform. Designed as a real-time, web-based and generic item level cloud system, it focuses mainly on three areas: logistics management, retail stock taking and sales operations. First of all, the RFID-enabled price tag of each product contains a unique product ID with the respective product information so as to enhance product traceability in all stages of the business flow and facilitate the use of the other

周大福的存貨控制系統（ICS）屬自家研發，它結合了無線射頻識別（RFID）科技，採用 RFID 價錢標籤，並獲物聯網平台支援，能使用物流盤、mHand 和智能盤這三種智能工具。它是一套即時、以互聯網為基礎，並追蹤至單品層面的雲端系統，主要針對零售的三大層面——物流管理、零售盤點和銷售運作。首先，

three devices which are all integrated with the ICS system for data collection and processing purposes to achieve defined objectives. The logistics tray is a scale-like device that can read product codes in lots of tens when they are placed on the tray versus the traditional way of shooting barcode one by one.

The mHand, a portable handheld RFID device, serves as a scanner to read the codes of the products that are displayed inside the counters and showcases through the glasses saving the trouble of having each and every piece taken out and put back. Both enable a fast, convenient and accurate stock take process in the daily operations, thus a more efficient stock taking and effective inventory control for enhanced supply chain management. The application of smart tray is at shop level that facilitates customer servicing. With a built-in sensor, the tray displays product information of the jewellery pieces placed on it and can access other products' information and stock data in any shop instantly with a few touches of the buttons.

每項產品的 RFID 價錢標籤均包含獨一的產品識別碼，內藏產品相關資訊，提升了產品在商業流程各個階段的可追蹤性。用家亦能使用上述與 ICS 整合的三種工具來收集和處理數據，以達到特定目的。物流盤是一種類似磅秤的工具，能一次過讀取盤上一批十件產品的條碼，相比傳統的逐件掃描快捷。

mHand 是手提式的 RFID 裝置。此項掃描器能讀取玻璃櫃內的產品條碼，無須逐件取出再放回。它們均令日常的點貨流程更為快捷、方便和準確，提升了點貨的效率和庫存管理的成效，最終加強了供應鏈管理的能力。智能盤在舖面使用，能促進顧客服務。它內置感應器，能展示盤內珠寶的產品資訊，只需幾個按鍵，更能立即查閱其他產品資訊以及任何分店的庫存數據。

Fukui Shell Nucleus Factory Ltd.
福井製核所有限公司
IoT-enabling Technologies for the Pearl Industry
珍珠業界的物聯網啟動技術

Silver Award 銀獎
Hong Kong ICT Awards 2015 香港資訊及通訊科技獎

Internet of Things Application silver award
物聯網應用銀獎

Following over a decade of research, development and perseverance, pearls can now take advantage of modern technologies to become part of the Internet-of-Things. These technologies draw the relationship between humans and natural gems much closer than before, thereby transforming the way pearls are perceived. Metakaku™, the pearl industry's innovative technological enabler, imparts a unique identity to each pearl. When incorporating other technologies, the applications of Metakaku™ expand. These applications include identifying the origin and authenticating each pearl. Using the cloud storage technology as the foundation for the locally-developed Global Pearl Database, the pearl industry participants and the public can learn more about the stories of the pearls that have used the Metakaku™ technology.

經歷了十多年的研發和等待，珍珠可利用現代科技成為物聯網的一份子。珍珠業界可利用科技作革新及改善，把人類和自然瑰寶的關係拉近。Metakaku ™ 是一個賦與每顆珍珠一個獨立身份的珍珠業界創新技術。與其他科技相互操作，Metakaku ™ 可作更廣泛的用途。這些用途包括追溯珍珠來源及證明珍珠的真確性。採用雲端儲存技術建立的環球珍珠資料庫，可讓身在世界不同地方的珍珠業界參與者及公眾了解任何有關採用了 Metakaku ™ 技術的養殖珍珠資料。

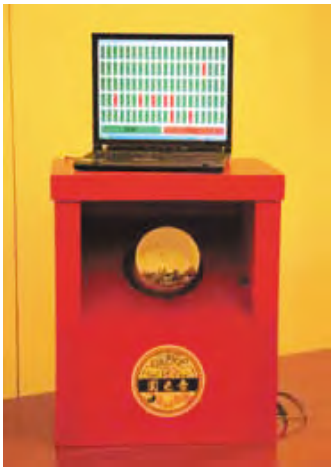
Sik Sik Yuen 嗇色園
e-charm Management System
電子籤筒管理系統

Most Innovative Use of EPC/RFID silver award
最佳無線射頻識別技術創意應用銀獎

More than four million visitors come to the temple every year, with the Chinese Lunar New Year period being particularly busy as local worshippers visit in search of blessings and to practice fortune telling using Chinese fortune telling sticks. Most worshippers, who come to the temple for fortune telling, borrow one of the 150 sets of fortune telling sticks made available by the temple. In the past, to ensure each bamboo holder contained a complete set of sticks, 10 temple staff were assigned to manually check through the 150 sets of fortune telling sticks, with each inspection taking about five minutes to be completed.

Sik Sik Yuen decided to build an RFID-based system for checking the sets of fortune telling sticks quickly prior to being lent out to worshippers. The e-Charm Management System used durable, waterproof and heatproof passive UHF RFID tags that were small enough to be implanted into each stick, and specially designed bamboo stick holders with built-in RFID readers and antennas. In addition, a device was developed to shake the sets of sticks while they were being scanned by the reader, in order to ensure an accurate count. Lastly, custom software was written to display the results of the scan, including any missing or duplicate sticks.

To ensure the system was respectful of tradition and religious needs, the RFID tags were implanted invisibly. Each stick was split to allow the insertion of the tag, then glued back together and polished. The bamboo stick holders were also carefully designed to maintain their traditional appearance with appropriate Chinese illustrations, and the RFID reader and antennas hidden in invisible partitions within each container.



每年黃大仙祠吸引逾400萬名遊人，農曆新年期間更是水洩不通，本地善信紛紛前來求籤祈福。大部分來求籤的善信，都會借用廟內的150套籤筒。過往，為確保每套籤筒齊備所有竹籤，廟方會聘用10人對150套竹筒進行人手檢查，每檢查一套約需5分鐘。

嗇色園決定建立一套建基於無線射頻識別（RFID）的系統，以便在借予善信前快速檢查竹籤。電子籤筒系統採用耐用、防水和耐熱的被動式超高頻RFID標籤，它體積細小，能內嵌到竹籤之內。特製的籤筒亦內置RFID讀取器和接收天線。此外還有一項裝置，會在讀取器掃描竹籤之時搖勻竹籤，確保數算準確。最後，一套特製的軟件程式會展示掃描結果，包括任何遺失或重複的竹籤。

為尊重傳統和信仰需要，RFID標籤均以肉眼看不到的方式植入。每條竹籤均分割開來，植入標籤，再以膠水重新粘合和修飾。籤筒亦是精心設計，維持傳統外觀，配以合宜的中式圖案，RFID讀取器和接收天線均隱藏於竹筒內無法看見的隔層。

GS1 Hong Kong's solutions using IoT technologies
與物聯網相關的香港貨品編碼協會解決方案

A trusted source of quality product information for brand awareness and integrity
提供可靠產品品質資訊 保障品牌誠信

Designed for supply chain stakeholders, BarcodePlus offers a one-stop solution for management practices including Product Data Management, Product Quality Certificate Management, Consumer Loyalty Programme Management, Product Authentication, etc, enabling businesses to enhance product data visibility for stronger brand awareness and integrity.
專為供應鏈業者而設的 BarcodePlus，為用戶提供一站式管理方案，提供產品資料管理、產品品質認證管理、顧客忠誠度計劃管理及產品驗證等功能，藉以提高產品資訊透明度，從而加強品牌的知名度與誠信度。

Enabling real-time visibility of goods and information flow from point of manufacturing to point of destination
實現由製造源頭至目的地的貨品及資訊流實時透明度

As a web-based application compatible with various technologies including Radio Frequency Identification (RFID), barcode, Global Positioning System (GPS), sensors, ezTRACK ™ runs various solutions that allow enterprises to instantly access business critical product information related to work-in-progress status, product inventory data, delivery schedules, etc.
作為一個以網絡為基礎的應用程式，「蹤橫網™」能兼容不同技術，如無線射頻識別（RFID）、條碼、全球定位系統（GPS）、感應器等，結合多個實時追蹤解決方案，讓企業能即時獲取與關鍵性作業包括生產進度、產品庫存數據、付運編制及更多產品資料。

An industry-wide B2B e-commerce platform
適用於各行業的商業對商業電子商貿平台

Facilitating electronic transaction messaging via Electronic Data Interchange (EDI) and Web to support electronic ordering, invoicing and shipment notices, ezTRADE is a standard-based e-commerce platform. Supporting the exchange of business message, ezTRADE enables efficient and accurate transmission of commercials documents to trading partners along the supply chain using EDI messaging formats. Over 600,000 transaction documents are handled via this community-based e-business platform every month for more efficient and accurate electronic procurement.
「通商易」 是一個以標準為基礎的電子商貿平台，促進透過電子數據聯通及互聯網而進行之電子交易訊息交換，以支援電子採購、製作發票及付運通知的流程。「通商易」透過推動及支援電子商業訊息交換，讓企業能根據電子數據聯通的標準以有效及準確的方式在供應鏈上與貿易夥伴以電子方式交換商業文件。這個針對社區需要而設的電子商業平台每個月處理逾 600,000 件交易文件，成功提高了電子採購流程的效率及準確性。

Enabling supply chain e-pedigree visibility
有效提升供應鏈電子履歷的透明度

Value+ Product Authentication Solution aims to assist brand owners, distributors / resellers and retailers to combat counterfeiting and diversion as well as enable companies to increase brand integrity and bolster consumer confidence. In addition, the solution provides companies an effective channel to capture useful customer data and launch customised loyalty programmes, which ultimately will strengthen relationships with current customers and establish relationships with new customers.
Value+ 產品驗證服務目的是協助品牌持有人、分銷商 / 經銷商及零售商打擊偽冒產品，防預產品遭非法售賣及提升品牌信譽，藉以加強消費者的信心。此外，企業可透過此方案提供的有效渠道擷取及分析有關消費者的數據，並針對他們的需要設計出個人化的市場推廣策略，最終得以有效加強與消費者的聯繫並接觸潛在的顧客。

About GS1 Hong Kong

Founded by the Hong Kong General Chamber of Commerce in 1989, GS1 Hong Kong is the local chapter of GS1®, a not-for-profit, standards organisation that develops and drives adoption of easy-to-implement global standards for business to uniquely identify, accurately capture and automatically share vital information about products, locations and assets. Headquartered in Brussels, Belgium, GS1 has over 110 national chapters in 150 countries.

Currently, GS1 Hong Kong has over 7,000 corporate members covering close to 20 industries. Its mission is to enable Hong Kong enterprises to improve the efficiency, safety, and visibility of supply chains across multiple sectors and facilitates commerce connectivity through the provision of global standards and a full spectrum of standards-based solutions and services. GS1 Hong Kong engages with communities of trading partners, industry organisations, government, and technology providers to understand and respond to their business needs through the adoption and implementation of global standards.

關於香港貨品編碼協會

香港貨品編碼協會於 1989 年由香港總商會成立，是 GS1® 環球組織的香港分會，也是一間提供標準的非牟利機構，一直致力研發和推動方便採納的全球標準，讓企業可獨有識別、準確擷取及自動分享產品、位置及資產的重要信息。GS1 總部位於比利時的首都布魯塞爾，擁有超過 110 個成員組織，遍及全球 150 個國家。

香港貨品編碼協會目前有逾 7,000 名企業會員，涵蓋約 20 種行業。憑藉全球供應鏈標準和以標準為本的解決方案及服務，協會為跨越多個行業的本地企業提升供應鏈的效率、安全性和透明度，並推動商業之間的連繫。透過採用及實施全球標準，香港貨品編碼協會與各貿易夥伴、行業機構、政府及資訊科技公司建立緊密的關係，助他們了解行業需要並作出回應。

Schedule your visit NOW!
立即預約參觀！

Opening Hours（by reservation） 開放時間（敬請預約）

Monday – Friday	星期一至五	9:30am – 5:30pm
Saturday, Sunday & Public Holiday	星期六、日及公眾假期	Closed 休息

Address 地址

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