

**Proposal on Enhancing Technology Adoption**  
**to**  
**Uplift Competitiveness of Hong Kong Retail Industry**

**Prepared by**

**Hong Kong Retail Management Association**  
**and**  
**Hong Kong Productivity Council**

**July 2016**

**Proposal on  
Enhancing Technology Adoption to Uplift Competitiveness of Hong  
Kong Retail Industry**

**Executive Summary**

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**INTRODUCTION**

1. This proposal is jointly prepared by the Hong Kong Retail Management Association (HKRMA) and the Hong Kong Productivity Council (HKPC). It aims to inform the Government the current technology landscape of Hong Kong retailers and to present recommendations to speed up their technology adoption to uplift the industry's long term competitiveness.

**HONG KONG RETAIL INDUSTRY - AN OVERVIEW**

2. Retail industry is a key pillar of the Hong Kong economy. In 2015, it encompassed over 65,000 establishments and employed about 270,000 people. In 2015 alone, it served about 59.3 million visitors while providing daily necessities to 7.3 million Hong Kong people.
3. Renowned as an international shopping paradise, Hong Kong enjoys longstanding competitive advantages for its brick-and-mortar retailing. It experienced robust retail growth since the introduction of Individual Visit Scheme (IVS) in 2003 until the slowdown in 2014 that sparked off a continuous downward trend till now.
4. The retail outlook will remain bleak. For the first five months of 2016, the overall visitor arrivals dipped by 8.4%; while the total retail sales value decreased by 10.8%, which has been falling for 15 consecutive months since March 2015.

## **E-COMMERCE – OPPORTUNITIES & CHALLENGES FOR HONG KONG RETAILERS**

### Opportunities

5. Hong Kong retailers enjoy unrivaled competitive advantages including absence of sales tax, availability of a wide variety of merchandise at competitive prices, safety and convenience in shopping, good knowledge about the Mainland and international consumers, respectable reputation in product sourcing, honesty trading, quality service and hospitable culture, as well as a sophisticated retail infrastructure supported by best industry practices.
6. With its proximity and inseparable ties with the Mainland, Hong Kong is in a privileged position for its retailers to tap into the bountiful business potentials offered by the Mainland's huge and growing internet population, and unbeatable consumer trend of buying high quality overseas products via online platforms.

### Challenges

7. The industry's competitiveness has been fast eroding due to external and internal challenges, namely including skyrocketing operating cost, fierce international competition, dwindling Mainland visitors and their spending, as well as rapid rising trend of online shopping.
8. Hong Kong retailers, big or small, are all along attuned to brick-and-mortar selling in domestic market. Most of them are not prepared and even show inhibition to adopt technology due to lack of knowledge, talents, and finance resources.
9. To develop omni-channel retailing, Hong Kong retailers have to overcome a lot of challenges particularly the huge technology gap, absence of an e-tailing ecosystem, and the rising trend of Free Trade Agreements (FTAs) between the Mainland and many countries.
10. Major international e-players now set up warehouses in countries enjoying FTAs with the Mainland such as South Korea and Japan. For example,

Alibaba has already set up a number of overseas warehouses and entered into strategic partnership with local postal services and/or logistics companies. This is an immediate threat to Hong Kong's status as an international shopping hub.

11. In addition, Hong Kong does not have a sizeable market that can substantiate the development of an e-Commerce operating standard, thus limiting our own initiative. Also our retailers are unable to scale up operation and invest in innovation and technology like our Mainland competitors who are supported by giant corporations like Alibaba and Tencent.
12. Our development of e-tailing is very much constrained by Hong Kong's existing bottlenecks in logistics facilities, warehousing and shortage of space and manpower for future expansion, whereby our nearby competitors enjoy great advantages in these aspects.

## **INTERNATIONAL EXPERIENCE**

13. International benchmarking studies showed that countries like China, Singapore and South Korea, the key to their success in staying competitive in e-tailing is the creation of a holistic e-Commerce ecosystem dictated by a long term technology adoption plan committing both by the public and private sectors.
14. To foster a strong commitment among various stakeholders, the governments of these countries have evidently taken the lead in areas like strengthening government-to-government relations, policy formulation, promotion of industry engagement and support, provision of funding and subsidies to enhance business enablement, promulgation of public awareness and education, as well as development of talent pool.

## **ADOPTION GAP IN RETAIL TECHNOLOGIES**

15. Hong Kong retailers must adopt technology virtually in every area of their operation. It would cover inter-activity in store and online, product life

cycle management, customer relationship management (CRM), product information online and on shelves, content and digital marketing, e-payment system, logistics and more.

16. In regard to e-Commerce, Hong Kong retailers are required to enhance their IT infrastructure without further delay and speed up the deployment of various O2O solutions that are already well adopted in the Mainland and other major markets.
17. For Hong Kong retailers who are interested in the Mainland market, they have to develop their operation and IT architecture into a multi-channel, multi-distribution hub, and multi-supply chain business model.
18. While for those who eye on other international markets, they have to develop a business model encompassing multi-language B2C channels, multi-B2B2C agents, multi-regional distribution hub, and multi-international e-payment system.
19. The eminent challenge especially for SME retailers to overcome the technology gap is their lack of knowledge on the latest technology and best practices, as well as inaccessibility to cost effective and easy-to-adopt platforms.

## **RECOMMENDATIONS**

20. To speed up technology adoption in order to sharpen industry edge for sustaining growth, we would like to propose the following recommendations which would involve the commitment and joint efforts of the Government and industry stakeholders.

### **Government-led Measures**

#### *Devise an Overarching Plan*

21. At the forefront, we call for the Government to take the lead to devise a long term overarching plan and invigorate immediate measures to uplift Hong Kong branding through technology adoption and review of FTA

arrangements with the Mainland and other countries.

### *Set up a Top-notch e-Commerce Platform as Hong Kong Branding*

22. The ultimate goal is to build up a top-notch, neutral e-Commerce platform that embraces all attractions Hong Kong can offer to the world. This platform will serve as a virtual Hong Kong brand aiming to help draw international visitors, generate online retail business opportunities, facilitate buying and selling of products and services, and enhance the overall image of Hong Kong.
23. In doing so, the Government may give special attention to maximize effectiveness in ways to strengthen technology standardization and application, nurture talents, attract local and foreign investments, promote new industries in the value chain, and create positive ripple effects to related industries.

### *Strengthen Government-to-Government Negotiation on Free Trade Agreements (FTAs)*

24. The Government should review its CEPA arrangement with the Mainland and benchmark various Free Trade Agreements (FTA) that the latter has made with other countries with a view to fight for greater preferential treatments for Hong Kong retailers, for example, allowing products from countries under FTAs to enjoy same treatment when entering the Mainland through Hong Kong.
25. At the same time, the Government should explore collaboration opportunities with other countries on speeding up custom clearance and preferential taxation arrangement for Hong Kong based e-Commerce transactions.

### **Government Support and Enterprise-led Programmes**

26. Alongside its own initiatives, the Government should use funding to support enterprises to develop and implement a series of programmes, covering technology deployment, cross-industry co-operation, education and training, information and knowledge sharing, and pilot schemes on

technology adoption.

27. In light of such, we propose the Government to lend focused support to 5 specific initiatives under 3 main areas, including (a) industry development; (b) human capital development; and (c) government support and incentive programmes.

#### Industry Development

28. For industry development, we would like to see the Government's support in the following 3 initiatives, including:

Initiative 1: To cross-link Hong Kong customers with a larger customer base to facilitate standardization for long term sustainability;

Initiative 2: To encourage enterprises to develop more affordable solutions and enable mass deployment among SMEs; and

Initiative 3: To facilitate sharing of best practices of retail technology adoption among key and SME retailers.

#### Human Capital Development

29. For human capital development, we would like to see the Government's support in the following initiative:

Initiative 4: To promote public awareness of e-Commerce and application of latest technologies, and nurture a new talent pool.

30. It is proposed that the Government should set up a one-stop solution center, aiming to provide retailers especially SMEs with necessary assistance in technology adoption, education and learning in a cost effective manner.

31. Entities like HKPC, VTC and Employee Retraining Board, industry associations are encouraged to provide information hubs, demonstration centers, and tailored courses to groom and network technology talents including frontline practitioners.

32. Education institutes at tertiary level should spearhead to develop degree programmes in retail technology to nurture a new generation of experts in the long run.

#### Government Support and Incentive Programme

33. In regard to Government Support and Incentive Programme, we urge the Government to support the following initiative:

Initiative 5: To provide funding in the launch of Government-led and supplier incentive projects to encourage multi-stakeholder cooperation.

34. It is proposed to launch both Government-led projects and supplier incentive schemes so as to speed up implementation of meaningful pilot projects and facilitate multi-party collaboration.

#### Promote Synergy Among Stakeholders

35. As Hong Kong retail industry is characterized by an established cluster of stakeholders, such as statutory bodies, NGOs, education institutes, and players of varied sizes, the Government should initiate alignment with them, and promote synergy in the course of driving technology adoption.

#### Government's Thematic Funding & Set up of Task Forces

36. The Government can set aside a portion of existing government funding schemes that are aimed to encourage private investment in R&D and applied technology for the promotion of technology adoption in retail e-Commerce.

37. To drive the recommendations deliberated above, the Government may set up task forces to look into key aspects and spearhead the execution of the proposed programmes.

## **CONCLUSION**

38. To combat for the fierce battle of survival and prepare for much greater challenges in the 21<sup>st</sup> century, Hong Kong retail industry must catch up with the new waves of technologies without delay. We sincerely urge the Government to take heed of our recommendations and take action immediately within 2016.

- END -

# **Proposal on Enhancing Technology Adoption to Uplift Competitiveness of Hong Kong Retail Industry**

**July 2016**

## **I. PURPOSE**

1. This paper aims to achieve a two-fold purpose. Firstly, it outlines the latest technology adoption in the Hong Kong retail industry, with highlights on major gaps and difficulties that have been inhibiting retailers to capitalize on the exponential business growth arising from global e-Commerce and omni-channel retailing. Secondly, it puts forward recommendations to the Government on ways to speed up technology adoption in order to sustain the long term competitiveness of the retail industry.

## **II. COLLABORATORS ON THE PROPOSAL**

2. This paper is collaborated by Hong Kong Retail Management Association (HKRMA) and Hong Kong Productivity Council (HKPC). Please refer to *Appendix A* and *Appendix B* for background of the two organizations, and their work on retail technology.

## **III. HONG KONG RETAIL INDUSTRY - OVERVIEW**

3. Retail industry is a key pillar of Hong Kong economy. In 2015, it encompassed more than 65,000 establishments with a majority were SMEs, employing about 270,000 people.
4. The retail industry together with import/export trade and wholesale, accommodation and food services created about 1 million jobs for Hong Kong people.
5. Though the retail industry contributes about 4% of Hong Kong's GDP, it

plays an important role in providing the daily necessities of 7.3 million Hong Kong people and serving about 59.3 million tourists in 2015.

6. The retail industry experienced a period of robust growth since the introduction of Individual Visit Scheme (IVS) in 2003, with retail sales value recorded a 176% growth during 2003 to 2015.
7. However, it started to decline in 2014 due to external economic uncertainties, slowdown of China economy, and particularly the conspicuous drop in mainland tourists and spending. For the first five months of 2016, the overall visitor arrivals dipped by 8.4% compared with the same period in 2015.
8. The retail outlook is bleak and the downward trend is likely to continue. For the first five months of 2016, the total retail sales value decreased by 10.8% compared with the same period in 2015, which has been falling for 15 consecutive months since March 2015.

#### **IV. BOOMING INTERNATIONAL E-COMMERCE - CHALLENGES & OPPORTUNITIES FOR HONG KONG RETAIL INDUSTRY**

##### Hong Kong's Fast Eroding Competitiveness

9. As a renowned shopping paradise, Hong Kong has been enjoying competitive advantages over decades for its brick-and-mortar retailing. However, its unique appeals such as absence of sales tax, wide range of quality goods and services at competitive prices, convenience in shopping, and hospitable culture have been rapidly eroding in recent years.
10. Internally, the industry's competitiveness is dampened tremendously by skyrocketing operating cost including high rent, tight labor supply, rising compliance cost, and exchange rate differentials; while a persistent lacking of warehousing and logistics facilities, as well as new shopping space impede further development.
11. Externally, the industry suffers greatly from a number of unfavorable factors including tarnished international image as a shopping hub due to a

series of negative domestic episodes since 2014, dismay global economic outlook, cut-throat competitions from nearby regions/countries for Mainland tourists, and unpreparedness for the irrevocable trend of online shopping.

### Business Paradigm Shift - Urgency in Technology Adoption

12. Hong Kong retailers have been evidently slow in responding to the global trend of online business. Most of them are inhibited to move from traditional brick-and-mortar business model to go online due to a general lack of knowledge, talents, and finance resources.
13. The fast developing omni-channel retailing has changed the market drastically. Customers are now more tech-savvy and better informed due to digital boom, popularity of technology and mobile devices. Hong Kong retailers are facing heightened demands to provide multi-dimension quality services and products, seamless customer experience and much faster delivery.
14. This phenomenal trend implies that Hong Kong retailers must adopt technology virtually in every area of their operation including interactivity in store and online, product life cycle management, customer relationship management (CRM), product information online and on shelves, content and digital marketing, e-payment system, logistics and more.
15. However, a great majority of Hong Kong retailers are SMEs who are all along attuned to brick-and-mortar selling. With dwindling business prospect, they find it even much harder to set up their own e-Commerce platform or leverage B2C platforms such as Tao Bao due to high cost and lack of knowledge.
16. There is a great urgency for concerted effort from the Government and industry stakeholders to invigorate immediate measures in technology adoption to help retailers, big and small, to stay competitive and tap the bountiful e-Commerce opportunities.

## China Market – Opportunities & Challenges

### Opportunities

17. There is a huge, growing internet population in China. It is estimated that China's internet population has reached 649 million, representing a penetration rate of only 47.9%. If it grows on par with developed economies at about 90%, another 569 million customers will be added (Source: China Internet Network Information Center Statistical Report, 2015).
18. Business opportunities arising from online shopping are growing at an exponential rate. It was reported that 70% of the Chinese population shops online at least once per week, and 55% of China's smartphone users have made a mobile payment, as opposed to just 12% in the US (Source: International Retailing, 2015).
19. More and more Mainland customers are looking for high quality goods from overseas via online platforms, which they refer as "Haitao" (海淘 i.e. 海外淘寶物). This form of shopping is appealing as they can pay Import Tariff on Luggage and Personal Shipment (行李及郵遞品進口稅 or 行郵稅) at a much lower rate of about 12% inclusive of value-added tax (VAT) and consumption tax.
20. Hong Kong enjoys advantages of a sound and strong retail business infrastructure, as well as upholding of honesty trading and quality service. With good understanding and connections with both China and the West, Hong Kong retailers can play a greater role as "middleman" in sourcing quality-assured products from around the world for Mainland customers.

### Challenges

21. Hong Kong retailers, no matter big chains or SMEs, find it extremely difficult to compete with Mainland competitors, who are substantially financed by private equity and giant corporations like Alibaba and Tencent etc, in scaling up their operation and devising long term growth strategy. They are not just scalable (as they have the incentive (big market), vision and funds to invest), but agile as well as they invest to innovate and adopt

new ideas.

22. Hong Kong retailers are facing a huge technology gap when compared to their Mainland counterparts, who are more advanced and sophisticated in the use of likewise technology devices such as WeChat, other numerous applications in regard to their operation, and online and mobile payment. Their forward visions make them invest well in advance (e.g. Tencent investing to understand behavior of the digital natives to design the next generation of games and social media platform).
23. Hong Kong does not have a big enough market to support or incentivize the development of an e-Commerce operating standard, and we invariably have to adopt standards in different markets.
24. Hong Kong may be tax efficient and competitive on its own, but the Central Government's initiatives to boost domestic consumption have posed a huge threat to Hong Kong's retail sales and its growth prospect.
25. China's Free Trade Agreements (FTAs) with many countries allow Mainland consumers to easily purchase high-quality goods directly from overseas retailers. This rapidly rising trend is particularly unfavorable for Hong Kong retail industry, as more foreign products are now bypassing Hong Kong to go directly into the Mainland market.
26. Major e-players such as Alibaba have started setting up warehouses in countries that have FTA arrangements with China, for example, South Korea and Japan. In addition, these key e-players proactively enter into strategic partnership with different countries' postal services and/or logistics companies, aiming to strengthen their product delivery services to overseas markets. This is an immediate threat to Hong Kong's status as an international shopping hub.
27. The FTAs will also give exemptions on certain product registration such as for cosmetics importing into China. On the contrary, Hong Kong retailers often encounter disadvantages in terms of licensing for operations in the Mainland.
28. In the long run, all countries are likely to impose tax on cross border

e-Commerce. Therefore, there is a risk for our retailers unless Hong Kong itself further strengthens the CEPA arrangement with the Mainland.

29. Hong Kong logistics may be efficient, but it is incomparable, in terms of storage facility availability, manpower availability, storage costs, manpower costs and fulfillment time, to the Free Trade Zones in Mainland cities. Swift fulfillment time is an important element of shopping experience in which Hong Kong retailers find hard to match with their Mainland competitors and it requires big investments to compete.

## **V. INTERNATIONAL TRENDS**

30. A benchmarking study has been conducted on international best practices and government supporting schemes in China, Singapore and South Korea in regard to omni-channel retailing, and promotion of R&D and technology enablement. Please refer to *Appendix C* for details of the study.

31. Despite each country has its own strategy and tactics on technology deployment, their shared experiences shed good insights to Hong Kong, especially in respect to their government policy and funding schemes, enhancement of industry environment, and business enablement in the course of bringing their e-Commerce to a higher level.

32. In addition, their advanced experience convinced that Hong Kong has to strengthen its Government-to-Government relationships; further promote its Government-to-Enterprise and SME enablement; educate the public on new shopping trends and technology; encourage private sector initiative; and uplift talent development by formalizing omni-channel retailing as an academic discipline.

## **VI. WHAT RETAIL TECHNOLOGIES ARE AVAILABLE IN THE MARKET**

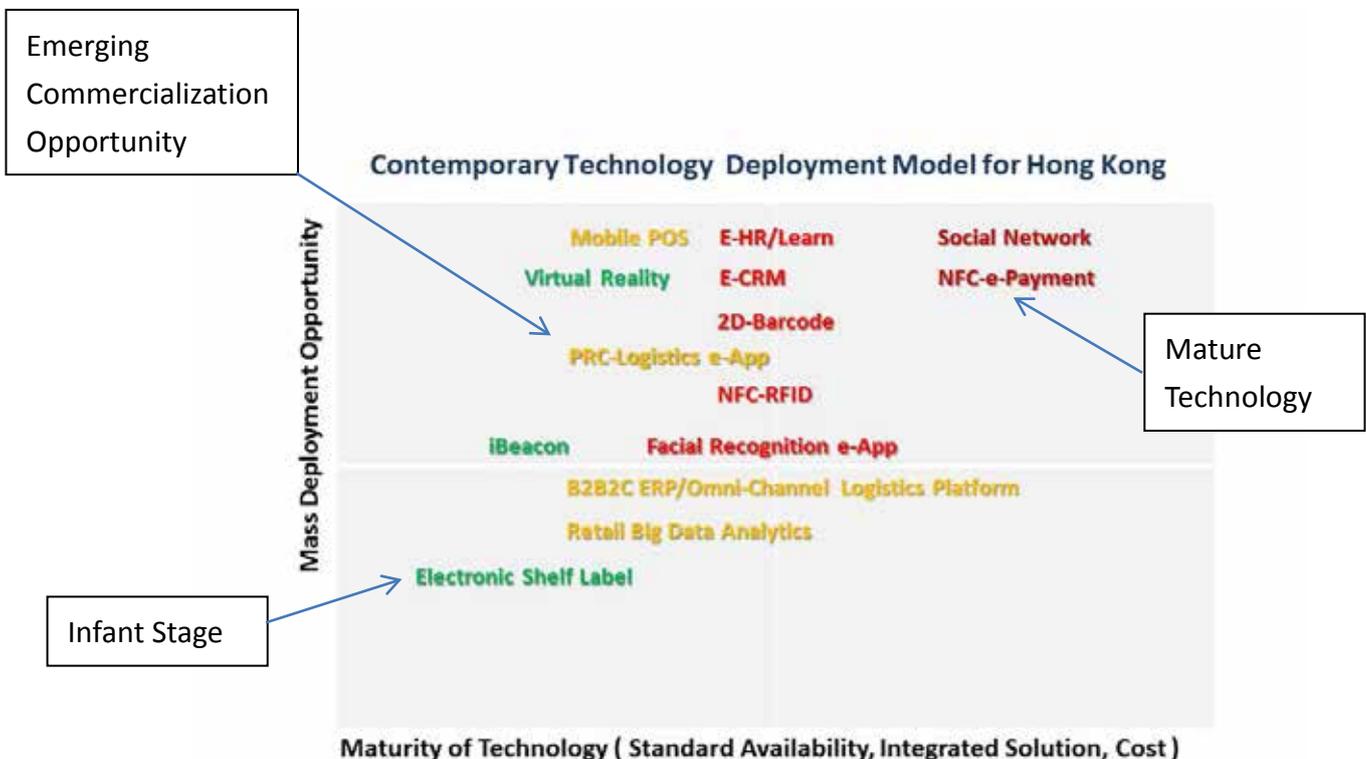
33. Nowadays, consumer journey to purchases keeps evolving in daily life. A consumer can get product information from digital media or identify an interesting product by himself/herself on mobile e-platforms. While

ordering the item directly via e-platforms, he/she can try and experience all different alternatives in the physical shops before making the final decision.

34. Hong Kong retailers have been doing well via the physical stores without addressing the on-line channels. However, it remains uncertain if they can maintain the good health and growth of their businesses in the long run, given the impacts of reducing Mainland visitor arrivals.

35. As such, we need to examine all the necessary modern retail technologies (for details please refer to *Appendix D*) to be involved in the whole consumer journey including online channels and physical retail shops, and that will help enterprises grasp the inter-connected O2O business opportunities in the global market.

36. We have classified and prioritized technologies according to the “Maturity of the Technology” and the “Mass Deployment Opportunity”, and proposed the possible deployment model for technology adoption in Hong Kong as shown in the following diagram.



## Retail Technology Adoption Tactics for Hong Kong

37. For technologies at their early adoption stage, we recommend to focus on R&D investment, aiming at developing affordable and low-cost solutions for enterprises such as the electronic shelf label initiative. Though Virtual Reality is at the infant stage currently, because of a lot of IT investments are pouring into this area and consumers have great interest in trying a brand new buying experience, we anticipate it may take less than a year to have some wide scale commercialization projects realized.
38. For technologies with emerging commercialization opportunities such as B2B2C ERP/Omni-Channel Logistics Platform, we recommend commercial R&D enablement for best practices integration. It would provide a one-stop solution to SMEs for a large-scale deployment, bringing greater benefits to the community at large. At the same time, education institutes and retailers can collaborate on a more aggressive plan on expert development and resources deployment in order to catch up with the global competition.
39. For mature technologies such as NFC e-payment applications, omni-channel connectivity, multi-link gateway, and security and certification tactics, it can be promoted to the industry for adoption.

## **VII. HONG KONG RETAIL TECHNOLOGIES ADOPTION GAP**

### China Market

40. For the Mainland market, we anticipate that their business and IT architecture will be developed into a multi-channel, multi-distribution hub, and multi-supply chain business landscape.
41. It is expected that many retailers would like to open multiple e-Shops in e-Malls (such as Taobao.com, JD.com, Wechat) and set up a company-owned Sales Portal or Mobile App. Each retailer needs to pass its merchandise information to the e-Mall and maintain a complete set of customer life-cycle information in its own CRM System. They will be able to leverage on the social media, track and map online and offline

customers and adopt artificial intelligence tools to generate more sales.

42. Once the order is placed by the customer, the retailer needs to handle the order in its internal e-Order handling system (such as KingDee or Magento system) and reserve the item.
43. If needed, the retailer has to go through more complicated procedures for inbound customs and tax clearance. The system of the retailer or its service provider should get connected to the region/city based inbound customs clearing system so that the transaction can be authorized. After that, the retailer/e-Mall operator can inform the designated bonded warehouse to pick the item and arrange the dispatch by courier.
44. At the same time, the courier service provider should update the delivery status onto a Logistics Information Hub (Gateway). All authorized players in the whole e-Commerce value chain, including the customers, can track their purchase delivery status.

#### International Market

45. For enterprises exploring the international market, we anticipate the international business architecture will be developed into a multi-language B2C channel network, multi-B2B2C agency network, multi-regional distribution hub and multi-international e-payment business landscape.
46. As such, we should develop a global view to cover major traditional and new markets including North America, South America, Europe, Russia, Australia, Middle East and South East Asia, as well as any parts of the world where there are Chinese communities.

#### Integrated IT System

47. In the above mentioned cases, IT is one of the most essential elements for integrating traditional Enterprise Resource Planning system with multi-country leading shopping malls, regional logistics hubs, customs and clearing systems, as well as for deploying the whole system with Cloud solutions. The integrated system will support on-demand growth and changing business landscape in future.

48. However, we can hardly find a successful case in Hong Kong that can deploy the above IT infrastructure, except for those e-payment and social media technologies being deployed by leading retailers, with standard specifications provided by multiple suppliers at high prices. Whereas for other technologies, adoption gaps exist for different reasons, such as lacking of technical standard, high entry cost, cyber security concern or unavailability of integrated solutions.

49. In particular, the deployment of e-Commerce O2O solutions involves various integrated solutions, covering the e-Commerce portal, mobile front-end solutions, e-payment gateway, e-Commerce ordering, multi-warehouse inventory, bonded warehouse, Government taxation declaration and settlement, logistics and courier service gateway and tracking areas, etc. These solutions, as mainly developed in the Mainland over the past 2 to 3 years, can only be provided and supported by just a few suppliers.

## **VIII. HONG KONG SME RETAILERS ASSISTANCE NEEDED IN ADOPTING RETAIL TECHNOLOGIES**

50. With the downturn in domestic retail market, Hong Kong retailers, especially the SMEs, have reached an important inflection point, at which they should assess the potentials arising from global O2O e-Commerce business, embrace changes and break from traditional business model.

51. This new business landscape poses a great sense of urgency for retailers to re-engineer their business and IT processes in order to stay competitive in the new wave of business competition. By mastering new technologies of omni-channel retailing, they can grow business via new market channels, expand customer base, achieve geographical expansion and attain higher employment rate.

52. It will also facilitate the re-training of frontline staff and draw new entrants from universities and secondary schools who can handle the new contexts in omni-channel retailing such as from visual merchandise display to data analytics. Our workforce will be rejuvenated and

upgraded through this industry evolution.

53. A successful transformation of Hong Kong retailers from brick-and-mortar to omni-channel retailing will create positive ripple effects and spur business growth of related industries including banking and finance, insurance, advertising and media, logistics, professional services and more.

54. Nevertheless, Hong Kong retailers require a full array of assistance as they are facing a number of challenges in technology adoption, including:

- a) The new technologies require large upfront investment, which in turn would restrict market adoption and deter retailers from exploring new technology options.
- b) Best practices and market standards are inaccessible; even leading Hong Kong players have not fully deployed the new technologies.
- c) The e-Commerce solutions require high integration effort by experienced business and technology suppliers. This integration does not only involve IT components, but also digital marketing, IT solutions, custom clearance service, and logistics facilities.
- d) There is a huge education and learning gap among Government officials, retailers, suppliers of IT and logistics, educators, and the related workforce in regard to the latest business landscape, O2O e-Commerce business and IT components.

## **IX. RECOMMENDATIONS**

### Goal

55. Amidst the irrevocable trend of omni-channel retailing and its exponential growth in the Mainland, there is a great urgency for Hong Kong to build up its own e-Commerce platform so as to preserve our identity, unique advantages, and autonomy in the long run.

56. It will take time to build up such an e-platform for Hong Kong as a whole. To achieve this, it calls for interim and long term measures from the Government and stakeholders. In this regard, we would like to put

forward the following recommendations which would involve endeavors and collaborative support from the Government and industry stakeholders.

### **Government-led Measures**

#### **Devise an Overarching Plan**

57. As shown by countries that we have studied, the Government's commitment is critical to the success of building up an ecosystem conducive to the prosperity of omni-channel retailing. We urge the Government, with the assistance of industry stakeholders, to take the lead to devise an overarching plan with actionable measures on technology adoption for the retail industry.

#### **Set up a Top-notch e-Commerce Platform as Hong Kong Branding**

58. The Government should spearhead the building of a top-notch neutral e-Commerce platform "Hong Kong Goes Life". This platform will serve as a Hong Kong brand to the world, as well as a show window of its e-living style as a smart city.

59. Overseas visitors will then have the choice of visiting a physical Hong Kong (which up to now has been limited by its physical infrastructure) or a virtual Hong Kong that goes beyond limits; whereby they can enjoy the full range of Hong Kong's reputable quality products and services online.

60. The Government can invest resources to attract online traffic to this platform as it has been doing for physical visitors. And online customers will be protected by Hong Kong laws and regulations as well as the service of the Consumer Council.

61. Comparable to an airport development project, the e-infrastructure building programme for this e-platform is a long term endeavor. It should encompass all winning and forward looking retail technologies for the evolving business environment and future lifestyle, including virtual reality digital media, latest e-payment applications, global logistics courier gateways, and customer life cycle management applications.

62. In developing this e-Commerce platform, we can attract relevant talents from around the world so that Hong Kong could gradually build and nurture a local talent pool, which is essential for gearing up the entire evolution of e-Commerce in Hong Kong.
63. It will also attract business investments and overseas companies to leverage on the advantages of using Hong Kong as a gateway to penetrate the Mainland market. Subsequently, it will strengthen Hong Kong's technology level, upgrade our talent pool, and encourage ongoing investments.
64. It will inject growth impetus to private sectors and bring benefits not only to retailers and IT suppliers, but also multiple industry players across a wide array of industries, ranging from tourism, banking and finance, to logistics, manufacturing and trading.
65. More importantly, it will create employment and development opportunities for our younger generation as they can now find prospect in a new industry that they can easily relate and adapt to than with the traditional and established industries.

#### Strengthen Government-to-Government Negotiation on Free Trade Agreements (FTAs)

66. The Government should proactively review the CEPA arrangement with the Mainland and benchmark its FTAs with other countries with a view to fight for greater preferential treatments for Hong Kong retailers, for example, allowing products from countries under FTAs to enjoy same treatment when entering the Mainland market through Hong Kong.
67. The Government should explore collaboration opportunities with other countries on fast clearing of customs and preferential taxation arrangement for Hong Kong based e-Commerce transactions.

#### Government Support and Enterprise-led Programmes

68. In addition to its own initiatives, the Government should use funding to support enterprises to develop and implement a series of programmes,

covering technology deployment, cross-industry co-operation, education and training, information and knowledge sharing, and pilot schemes on technology adoption.

69. We propose the Government to render support to five strategic initiatives under three main areas including (a) Industry Development; (b) Human Capital Development; and (c) Government Support and Incentive Programmes; as deliberated in the following paragraphs.

### **Industry Development**

70. For industry development, we would like to see the Government's support in the following three initiatives.

#### **70.1 Initiative 1 – Cross-link HK customers with a larger customer base to facilitate standardization for long term sustainability**

Strategically, it is important to expand our customer base to nearby countries and regions including the Mainland and South East Asia. With the use of a common mega platform with Hong Kong's brand identity, costs incurred will be reduced in the process of customer acquisition and retention for all Hong Kong retailers.

To achieve this expansion and standardization, we propose a holistic Hong Kong e-Commerce project consisted of specific sub-programmes including:

- (a) Branding Development Programme
- (b) Quality Assurance Scheme
- (c) Product Source Certification Scheme
- (d) Software Quality and Security Certification Scheme
- (e) Logistics Supply Chain Certification Scheme
- (f) Branding Support Scheme
- (g) Customer Base Building Scheme
- (h) HK Postal Code Programme

**70.2 Initiative 2 - Government can take the lead in encouraging enterprises to develop more affordable solutions and enabling mass deployment**

By encouraging the industry to lead pilot projects and build integrated solutions, all SMEs will have an option to adopt any of these one-stop solutions in their business at a nominal cost or through a reasonable profit-sharing-scheme.

This initiative would cover two programmes, including:

- (a) SME e-Commerce Adoption Programme;
- (b) Logistics Sharing Platform

**70.3 Initiative 3 - Facilitate Hong Kong key retailers to use modern retail technology and share the best practices with the community through an early adoption scheme**

This initiative calls for the Government to provide funding resources, which are open for application by retailers (not restricted to SMEs) in a bid to promote faster information exchange and cross-industry collaboration.

Specifically we propose a “Retail Technology Early Adoption Scheme” which will facilitate key retailers to adopt modern retail technology and share the best practices with the community.

**Human Capital Development**

**71. Initiative 4 – Promote public awareness of e-Commerce and application of latest technologies, and nurture a new talent pool**

It is proposed to set up a one-stop solution center which would provide education, demonstration and experience learning for SMEs and practitioners on e-Commerce solutions. The Government may appoint a designated body to provide likewise supporting services to the SMEs. In addition, the Government may encourage other statutory bodies and NGOs, such as Hong Kong Productivity Council, VTC, Employee Retraining Board and industry associations to offer information hubs,

demonstration centers, and continuous learning opportunities for both SME owners and practitioners.

To nurture a new generation of retail technology talents, the Government should encourage universities to develop training courses and degree programmes that will enable students to have hands-on experience during study so that they will commit to the industry upon graduation.

Under this initiative, we propose the following programmes:

- (a) Technology Start-Up Test-Bed Support Programme
- (b) SME Education Programme
- (c) e-Commerce Employee Re-Training Programme
- (d) Foreign e-Commerce Talent Recruitment Programme

### **Government Support and Incentive Programme**

#### **72. Initiative 5 - Provide funding resources to launch Government-led and supplier incentive projects to encourage multi-stakeholder cooperation**

It is proposed that the Government can launch and subsidize Hub-and-spoke engagement pilot project(s), enabling leading players to build and practice best combination of resources.

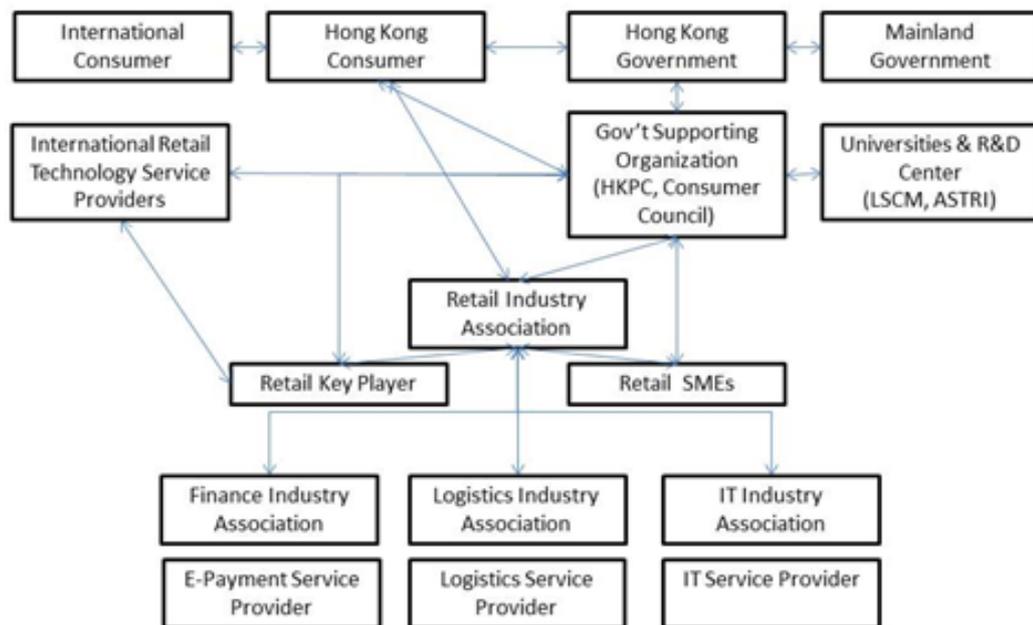
These pilot projects should cover various aspects, such as advertising and marketing, consumer engagement, international consumer portal, B2B2C trading, financial e-payment, international logistics supply chain and SME enablement, etc.

Under this initiative, we propose the “e-Commerce Theme-Based Funding Scheme” which is aimed to encourage the Government, and NGOs such as Hong Kong Tourism Board, Hong Kong Trade Development Council, Hong Kong Productivity Council, and leading industry associations (e.g. Retail, Trading, Manufacturing, IT and Logistics) to form collaboration bodies with suppliers to build integrated solutions for SMEs at an affordable cost as well as to pioneer pilot projects.

73. For details on the above recommendations and its respective programmes, please refer to *Appendix E*.

**Promote Synergy Among Stakeholders**

74. We believe all stakeholders should work together and play their parts in making the retail technology more accessible for wider adoption in Hong Kong. The following diagram shows the inter-connectiveness among stakeholders.



## The Government and Statutory Supporting Bodies

75. The Government can take the lead in connecting and establishing cross-boundary legal and co-operation frameworks, especially with the Mainland government. In addition, it can allocate resources to subsidize the retail technology deployment programmes, as well as to establish the postal code infrastructure.
76. Supporting bodies such as NGOs can help the Government to build the integration platforms, execute the various programmes, and provide information, education and training to SMEs. The universities and respective R&D centers can take up a leading role to develop affordable solutions on new technologies for enterprises.

## Retail Industry Associations and Players

77. Retail industry associations can serve as leading conveners for the technology deployment programmes. They can mobilize the industry players to support the one-stop integration solution initiatives. While the key retail players are encouraged to become the early adopters to support and participate in the core technology deployment programmes.
78. Other supporting industry associations are encouraged to develop an integrated platform to encompass the key processes related to retail/O2O/e-Commerce across the entire supply chain. They can provide their core expertise and service support to the Government's subsidized programmes.

## Government's Thematic Funding & Set Up of Task Forces

79. Further to the prevailing Government's funding schemes to encourage private investment in R&D and applied technology, we urge the Government to earmark a portion of these funds for our proposed recommendations in this paper. This thematic funding approach can speedily help Hong Kong retailers to build up a new business engine within a year and enable SMEs in particular to swiftly tapping into new markets.

80. In addition, we recommend setting up a number of task forces to look into topical issues and lead the execution of the programmes. These task forces may include the following:

Task Force	Purpose
HK e-Commerce Branding Programme / Steering Committee	To co-ordinate the contribution from multiple stakeholders in driving the execution of the e-Commerce strategic plan
HK e-Commerce Theme-Based Pilot Project Task Force	To drive the integrated e-Commerce thematic funding programmes
HK e-Commerce Education and Learning Task Force	To drive the talent development programme for the enterprises

## X. CONCLUSION

81. The challenges to the retail industry are likely to be intensified as all regions are moving at a very fast pace towards new retail business models with emphasis on next wave of technologies. Hong Kong should start the work immediately without further delay.

82. We urge that the Government should take the lead in building the e-Commerce platform “Hong Kong Goes Life”, and connect it with multiple countries so as to protect and promote our own identity, uniqueness and autonomy in the long run.

83. Working in parallel, the Government should enable retailers to develop and implement their own e-Commerce initiatives with funding support under a wide variety of thematic programmes.

84. For advancing in technology and offering new approaches to address the heightening challenges to the industry, we strongly recommend the Government to adopt our proposed recommendations and take immediate action within 2016.

-END-

### **About Hong Kong Retail Management Association**

The Hong Kong Retail Management Association (HKRMA) was founded in 1983 by a group of visionary retailers with a long-term mission to present a unified voice for Hong Kong's retail industry. For 33 years the Association has played a vital role in addressing the many issues affecting retailers and by promoting our retail industry through awards, education and training.

Today, the HKRMA is the major retail association in Hong Kong. Our members represent more than 7,800 retail outlets employing over half of the local retail workforce. Members organizations cover various types of retail businesses ranging from beauty products and cosmetics to catering and food, supermarkets, department stores, convenience stores, drug stores, watches and jewellery, fashion and accessories, furniture and home accessories, electronic and electrical appliances, telecommunications, retail (services), and specialty stores, as well as suppliers, wholesalers and industry related service organizations.

The HKRMA is one of the founding members of the Federation of Asia-Pacific Retailers Associations (FAPRA) established in 1989. Currently, members of FAPRA cover 17 countries/regions in the Asia Pacific with each being represented by the key retail association.

#### **A. Our Mission**

1. To present a unified voice on behalf of the retail industry with regard to policy and advocating on issues that affect retailers.
2. To exchange and share information on common issues.
3. To raise the status and professionalism of retailing through education and training.

#### **B. Our Representation**

The HKRMA is recognized as the leading organization representing retail and the body to be consulted on industry related issues. The Association also makes regular submissions to the Government on behalf of its members on issues that affect the retail industry and continues to initiate discussions with members on major policies to ensure that their interests are being heard.

## **C. Our Work on Retail Technology**

### **1. Retail Technology Adoption Assistance Scheme for Manpower Demand Management (“ReTAAS”)**

The Retail Technology Adoption Assistance Scheme for Manpower Demand Management (“ReTAAS”) is one of the Government’s initiatives to help the retail industry to adopt relevant information and communications technology (ICT) that help manage manpower demand.

HKRMA has been actively promoting ReTAAS since its launch in December 2014. This \$50 million funding will be provided to retailers on a matching basis; the Government will cover a maximum of 50% of the total approved project cost.

As one of the vetting members, HKRMA has been encouraging our members, especially SMEs, to apply for this Scheme to adopt ICT in their business operations.

### **2. On-going efforts in promoting the adoption of retail technology**

HKRMA has been organizing a wide range of business matching activities for retail technology service providers and members.

Since 2010, through the successful application of the Government’s SME Development Fund, HKRMA has helped over 3,600 SME retailers and some 17,000 retail practitioners to grow their businesses. Retail technology has been one of the key themes of a series of workshops catered for the needs of SMEs.

HKRMA also educates members and fellow retailers on the latest market trend on e-commerce and omni-channel retail through our annual Retail Conference. Since 2014, the theme on “omni-channel retailing” has been one of the key topics at the Retail Conference, which is well-attended by over 800 retailers and guests each year.

### **About Hong Kong Productivity Council**

The Hong Kong Productivity Council (HKPC) is a multi-disciplinary organization established by statute in 1967 to promote productivity excellence through the provision of integrated support across the value chain of Hong Kong firms, in order to achieve a more effective utilization of resources, to enhance the value-added content of products and services, and to increase international competitiveness.

HKPC and its subsidiaries' consulting and technical professionals provide a multitude of services in technology transfer, consultancy, training and other support services in the areas of manufacturing technology, information technology, environmental technology and management systems. These services are designed to help industry move up the value chain. The operation of HKPC is supported by fee income from its services and government subventions.

#### **A. Our Vision, Mission and Values**

1. Vision: Be the best solution partner
2. Mission: Enhance business productivity and competitiveness
3. Values: Improvement, Innovation, Integration, Integrity, Partnership, Passion, People, Performance

#### **B. Our Representation**

HKPC is governed by a Council comprising a Chairman and 22 members. This Council represents managerial, labour, academic and professional interests, as well as related government departments.

#### **C. Our Work on Retail Service and Technology**

##### **1. Retail Technology Adoption Assistance Scheme for Manpower Demand Management (“ReTAAS”)**

HKPC assisted Commerce and Economic Development Bureau (CEDB) in developing the ReTAAS, which provides retail enterprises with funding support to adopt information and communications technology (ICT) for manpower demand management purposes. HKPC is the secretariat of ReTAAS and partners with retail stakeholders including HKRMA, to promote and implement the

Scheme since its launch in December 2014.

## **2. ESP Programme of Dedicated Fund on Branding, Upgrading and Domestic Sales (“BUD”)**

As commissioned by the CEDB, HKPC assisted in the programme development and has been providing secretariat support for the Enterprise Support Programme of the “Dedicated Fund on Branding, Upgrading and Domestic Sales” (the BUD Fund) since its inception in 2012. To help Hong Kong enterprises grasp the opportunities arising from the National 12th Five-Year Plan, the BUD Fund assists Hong Kong enterprises in undertaking projects to enhance their capabilities and promote domestic sales in the Mainland market.

## **3. Consultancy on Technology Strategy and Adoption in the Retail Sector**

HKPC offers integrated solutions on technology strategy and adoption to the leading retailers in Hong Kong. Areas of expertise cover business and market intelligence, e-commerce, e-learning, information security, mobile solutions and business information system.

## **4. Enhancing the Service Quality and Capability of the SMEs in the Retail Sector**

HKPC has assisted Hong Kong Tourism Board in developing and implementing the Quality Tourism Services (QTS) Scheme to promote the service quality of the retail and restaurant sector since 1999. The Scheme serves over 1,250 brands representing around 8,300 outlets in the retail and restaurant sector.

All along HKPC has been providing support and services to major associations, including HKRMA and Quality Tourism Services Association (QTSA) on business operation, training and service quality. Under various SME support programmes, HKPC has provided training and consultancy services on various areas, such as service enhancement, coaching, research and publication, and development of e-learning platform.

Aiming to enhance enterprises’ accessibility to development resources, HKPC has established the SMEOne platform to provide SMEs with integrated supporting services, as well as the Productivity Training Institute (PTI) to offer various training programmes and seminars to stakeholders including the retail SMEs in Hong Kong.

**Benchmark Study of Singapore, South Korea and Mainland China**

We believe that the success of a country’s e-Commerce / Retail Industry will be affected by a number of factors including Enterprise Business Vision, Favourable Government Environment & Legal Framework, Private Business Financial Investment Efficiency, Talent Manpower Availability, Branding & Marketing, Contemporary Technology Deployment, Integrated Global Business Productivity & Efficiency, Product Availability, Information Flow and Handling Capacity, Product Flow Efficiency and Handling Capacity, Monetary e-Fund Transfer Infrastructure and Capacity, Insurance Coverage and Customer Service & Engagement.

A benchmarking study has been conducted for the following four countries / cities based on the above factors:-

	Mainland China	Singapore	South Korea	Hong Kong
<b>Enterprise Business Vision</b>	<ul style="list-style-type: none"> <li>➤ Local domestics / inbound market concentration and emerging outbound /export market.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Regional market in its neighborhood and aggressively exploring the Mainland inbound and outbound market.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Local Market Concentration</li> </ul>	<ul style="list-style-type: none"> <li>➤ Small local market and exploring the global and Mainland market.</li> </ul>
<b>Favourable Government Environment &amp; Legal Framework</b>	<ul style="list-style-type: none"> <li>➤ Private enterprise lead.</li> <li>➤ Government set-up Free-Trade-Zone and logistics facilities to enable business expansion to e-Commerce.</li> <li>➤ Renew of inbound cross boundary taxation on 8 Apr 2016 defer the inbound market.</li> <li>➤ Abuse of financial instruments under more tight control.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Aggressively taking a leading position in expanding e-Commerce business and turning logistics competition into strategic alliances (e.g. with Alibaba)</li> <li>➤ Specific funding programmes from SPRINT and SIRS (Please see Appendix C) for development of new technology / e-Commerce for SMEs and for tech transfer of R&amp;D results</li> </ul>	<ul style="list-style-type: none"> <li>➤ Specific funding from SMBA and KOTEC for competitive technology innovation.</li> </ul>	<ul style="list-style-type: none"> <li>➤ No vision in the role of e-Commerce as a pillar industry to the Hong Kong economy growth</li> <li>➤ No consolidated strategic and business view from enterprises on what Government can help on e-Commerce.</li> <li>➤ Lack of financial settlement framework to favor small amount e-payment from merchant to consumer, or consumer to consumer.</li> </ul>

	Mainland China	Singapore	South Korea	Hong Kong
	<ul style="list-style-type: none"> <li>➤ Government-led taxation reimbursement program or investment assistance programme from multiple local municipal governments</li> </ul>			<ul style="list-style-type: none"> <li>➤ Lack of thematic funding programme on e-Commerce .</li> <li>➤ New Innovative Technology funding programme was introduced in 2016 but more coordinated components are necessary.</li> <li>➤ Funding support or other assistance programme can be more effective if they are designed to address specific needs and gaps.</li> </ul>
<b>Private Business Financial Investment Efficiency</b>	<ul style="list-style-type: none"> <li>➤ Very efficient private investment with certain failure rate.</li> <li>➤ Keen competition among private enterprises in the Red Ocean market</li> </ul>	<ul style="list-style-type: none"> <li>➤ Affected by Mainland China market competition.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Global players entered the domestic market and shared the pie.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Conservative position with a lot of hurdles to be solved.</li> <li>➤ HK Enterprises need to develop their own business model to avoid competition in the Red Ocean market. they most often cannot operate exactly the same as the Mainland competitors because of cross border nature of business and have different type of license requirements</li> <li>➤ Integration of best practices from the winning players takes time to develop.</li> </ul>
<b>Talent Manpower Availability</b>	<ul style="list-style-type: none"> <li>➤ Acquisition of necessary skill sets through on-the-job training in the past few years in multiple disciplines.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Good business alliance and operation managers in logistics area.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Skillsets transferred to local employees from global players.</li> </ul>	<ul style="list-style-type: none"> <li>➤ The required skillsets are not present generally in Hong Kong, but in enterprises in Mainland China with HK investment.</li> <li>➤ Hong Kong is working on the QF framework only.</li> </ul>

	Mainland China	Singapore	South Korea	Hong Kong
<b>Branding &amp; Marketing</b>	➤ Adverse image from global viewpoint.	➤ Domestic coverage only.	➤ Domestic coverage only.	➤ Hong Kong's positive brand impact not yet extended to the e-Commerce industry
<b>Contemporary Technology Deployment,</b>	➤ Aggressive private enterprise investment favors a fast adoption of the contemporary technology.	➤ No specific advance technology was deployed in large scale by Singapore Enterprises	➤ Global players did apply new technologies in the major investment projects.	<ul style="list-style-type: none"> <li>➤ Slow adopters even in large enterprises.</li> <li>➤ High expectation from consumers on the enterprises in comparing with other neighboring cities best practices but there is a large gap at the moment.</li> </ul>
<b>Integrated Global Business Productivity &amp; Efficiency,</b>	<ul style="list-style-type: none"> <li>➤ Tightly integrated Social Media, Marketing &amp; Promotion Web/Mobile Platforms, e-Payment, Customer Service, Inventory Warehouse and Courier Services, within Mainland China.</li> <li>➤ Satellite warehouse / DC capability built by some enterprises to reach out to global market or handle inbound transportation back to Mainland.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Spent effort to catch up with the best practices from Mainland China.</li> <li>➤ Business has traditional competitive advantage in covering the ASEAN South East Asia region.</li> </ul>	➤ Domestic competence integrated business was built.	➤ Hong Kong Retailer, Financial Sector and Hong Kong Logistics Players have not built the business efficiency across the whole business chain both for Outbound from China-HK-Global or Inbound from Global-HK-China or Global-Virtual HK - Global.
<b>Product Availability,</b>	<ul style="list-style-type: none"> <li>➤ Mainland enterprises need a lot of global buyers to locate good products from the world. But they are developing the capability.</li> <li>➤ The current HaiTao model by causal foreign visitors around the world is an inefficient</li> </ul>	➤ Singapore players need to expand their customer base to Mainland China, so that their sourced product around the world can be distributed in Singapore and Mainland China markets under a more viable business model.	➤ A large domestic market attracts good quality product come into Korea.	➤ Hong Kong enterprises have traditional strong sourcing network and can provide good quality product to the end consumers. The question is how to leverage their power.

	Mainland China	Singapore	South Korea	Hong Kong
	model but a practical way for the immature market.			
<b>Information Flow and Handling Capacity,</b>	<ul style="list-style-type: none"> <li>➤ Government regulations induce a number of special endorsed players. The capability or experience to connect with all these information gateways rest in those enterprises that have a long working experience with the Government bodies.</li> </ul>	-	-	<ul style="list-style-type: none"> <li>➤ Hong Kong players need to extend their connection network with the traditional companies that have well-established work relationship with the Mainland government</li> <li>➤ Hong Kong Government can take lead to facilitate the connection work, and make a more transparent and an easier way for enterprises to get connected to all these information gateways.</li> </ul>
<b>Product Flow Efficiency and Handling Capacity,</b>	<ul style="list-style-type: none"> <li>➤ Mainland Players have made significant investments over the past few years to extend their physical network globally, involving strategic partnerships with logistic companies and heavy investments in local warehouses</li> </ul>	<ul style="list-style-type: none"> <li>➤ Traditional Competition but Hong Kong still has competitive advantage in the Global network.</li> </ul> <p>However, Singapore is relatively in a better geographical location in the South East Asia market.</p>	<ul style="list-style-type: none"> <li>➤ Lower sensitivity towards global competition.</li> </ul> <p>However, the export of Korean Goods to Mainland China via Northern East cities are the dominant business practices.</p>	<ul style="list-style-type: none"> <li>➤ The advent of the internet, Cross border e-commerce and the opening up of international trade will continue to undermine the role of “Middle man” which Hong Kong has played. Retailers without its own brands are vulnerable</li> <li>➤ Hong Kong enterprises shall leverage our existing strong global physical network and protect our leading position from the coming competitors before it is too late.</li> <li>➤ New e-Commerce model and the associated changes in supply chain will come inevitably.</li> </ul>

	Mainland China	Singapore	South Korea	Hong Kong
<b>Monetary e-Fund Transfer Infrastructure and Capacity,</b>	<ul style="list-style-type: none"> <li>➤ Very mature and Mainland China is exporting the technology to the world.</li> <li>➤ Technology includes both micro payment and e-payment gateway to handle relatively larger amount B2B payment as well.</li> </ul>	<ul style="list-style-type: none"> <li>➤ No special initiative but following the global players' deployment trend such as Apple Pay, and Android Pay</li> </ul>	<ul style="list-style-type: none"> <li>➤ No special initiative but following the global players' deployment trend such as Apple Pay, and Android Pay</li> </ul>	<ul style="list-style-type: none"> <li>➤ The Mainland's e-Payment technology is influencing the world and its export to other countries. It is a good opportunity to become a global player in future.</li> <li>➤ Hong Kong needs to be the 1<sup>st</sup> player to embed this payment instrument into our long lasting, secure and trusted financial control system.</li> <li>➤ Good opportunity to negotiate? with international credit card companies like VISA/AE which charge very high interchange fees</li> </ul>
<b>Insurance Coverage</b>	<ul style="list-style-type: none"> <li>➤ When an e-Commerce transaction is executed, the e-Payment is on hold by an intermediate financial institute (e.g. Alipay). The actual payment will only be released when the consumer endorses it after receiving the goods in order.</li> </ul>	-	-	<ul style="list-style-type: none"> <li>➤ This type of e-Commerce protection rule for consumer is a good foundation for Hong Kong enterprises to get business around the world, and enhance our image to all global consumers.</li> </ul>
<b>Customer Service &amp; Engagement</b>	<ul style="list-style-type: none"> <li>➤ New technology to serve customer from remote sites and create more pleasant customer experience</li> <li>➤ Big Data analysis skill deployed</li> </ul>	<ul style="list-style-type: none"> <li>➤ Local Singapore customers also get access to the Mainland's-Commerce sites.</li> </ul>	-	<ul style="list-style-type: none"> <li>➤ HK service providers could not provide the required technology at an affordable price yet.</li> <li>➤ Big Data not widely adopted</li> </ul>

Besides, the present e-Commerce status and government support from individual country is collected for reference.

## C1 - Singapore

### **Industry Overview**

Singapore's cosmopolitan retail sector shapes the environment in which Singaporeans live, work and play. In 2013, it generated S\$42.5 billion in operating receipts. According to a study by CB Richard Ellis, Singapore is among the world's top 20 cities to have a significant proportion of international retailers in their retail sectors. Besides the many international brand names that have established their presence locally, Singapore also boasts a plethora of local brands and product offerings.<sup>1</sup>

Technology and globalization are changing the way consumers shop. Given Singapore's small domestic market, retailers must keep up with the latest trends, innovate and explore new markets to achieve sustainable growth and success.

The retail sector contributed S\$42.5B of operating receipts in 2013.

<b>Facts &amp; Figures (2013)</b>	
Total Number of Establishments	▲ 21,534
Operating Receipts	▲ S\$42.5B
Operating Expenditure	▲ S\$40.6B
Operating Surplus	▼ S\$2.4B
Value Added	▲ S\$6.2B
Profitability Ratio	▼ 5.7%

▼ decrease from previous year ▲ increase from previous year

Source: Singapore Department of Statistics (SingStat)

<sup>1</sup> SPRING Singapore - <http://www.spring.gov.sg/Developing-Industries/RT/Pages/retail.aspx>

## E-commerce in Singapore

E-Commerce activities in Singapore are growing and the size of Singapore's online retail market is expected to reach S\$4.4 billion by the end of 2015 (four times the size of the market in 2010). That said, there appears to be still room for growth in Singapore when we consider the experience of other economies. The global average of online sales as a proportion of total retail sales in 2014 was slightly under 6%, while online sales in more mature e-Commerce markets like China, the United Kingdom and the United States of America account for 10%, 13% and 6.5% of total retail sales respectively.<sup>2</sup>

### Examples of entry of online businesses in Singapore

	<b>Firm</b>	<b>Industry</b>
2009	Reebonz	Luxury products and services
2010	Qoo10 Clozette Luxola Groupon Deal.com.sg	B2C Marketplace C2C Marketplace Beauty and cosmetics Marketplace for daily deals Marketplace for daily deals
2011	NoQ Store Bellabox VanityTrove	Books Cosmetics/Groceries Beauty
2012	Kwerkee Zalora Carousell Food Panda	Home and lifestyle Fashion marketplace C2C Marketplace Food
2013	Taobao HipVan Omigo	B2C and C2C marketplace Home furnishing, fashion accessories B2C Marketplace
2014	Rakuten Lazada	B2C Marketplace B2C Marketplace

<sup>2</sup> E-Commerce in Singapore - How it affects the nature of competition and what it means for competition policy, COMPETITION COMMISSION OF SINGAPORE

### **E-payment<sup>3</sup>**

- **Domestic and Preferred Card Schemes**
  - **Credit cards are the preferred method of online payment at 74%.**
  - **Visa has the majority share of the credit card market in Singapore with 57.2%.**
  
- **Alternative Payment Methods**
  - **eNETS:** a product of NETS, a Singaporean consortium owned by Singapore's largest banks. eNETS provides services that allow merchants to accept card payments and direct debit via internet banking payments from their customers. eNETS direct debit payment is available to Singaporean consumers with DBS/POSB, OCBC, UOB or Citibank Internet Banking accounts.
  - **PayPal:** an online payments and money transfer service that allows you to send money via e-mail, phone, text message or Skype. Founded in 1998, PayPal offers products to both individuals and businesses alike, including online vendors, auction websites and corporate users.
  - **Bank Transfer / Cash-on-Delivery and Direct Debits**

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<sup>3</sup> <http://www.thepayers.com/payment-methods/singapore/16>

## Technology Deployment

Many retail stores are investing in modern day technology to help boost their productivity and offer a truly engaging omni-channel retail experience to its customers. Retail businesses in Singapore are spending nearly one to two percent of their annual revenue on retail system implementation.<sup>4</sup>

In the Retail Productivity Plan of SPRING Singapore, 10 ways are suggested to boost retail productivity by the usage of technology<sup>5</sup>:

1. Innovate new Retail concepts	Creative store concepts and dynamic store formats can elevate the in-store experience and bring new and increased repeat business
2. Pilot automated Retail formats	Enjoy valuable brand exposure in high-traffic locations, optimise resource allocation and increase your sales per square foot.
3. Increase brand awareness With digital marketing	Build a strong brand, engage your target audience with social media campaigns and build overall brand loyalty.
4. Build e-commerce capabilities	Broaden your consumer base via online sales channels. You can consider ready-made e-commerce marketplaces or launch your own e-store.
5. Ensure service Excellence	Improving your service culture can lead to faster response times, happier customers and higher loyalty to your brand.
6. Innovate strong products	Create strong product offerings through in-house product development, research and development, and intellectual property (IP) management to help you stay relevant in the constantly evolving retail sector.
7. Invest in manpower-saving Technologies	Technologies such as self checkout machines, mobile point-of-sales (mPOS) and Radio Frequency Identification (RFID) can lead to significant manpower savings, efficient operations and improved profitability in the long-run.
8. Optimise workflow	Streamline work processes to minimise waste and keep operating costs low.
9. Share logistics Resources	Participate in shared logistics and warehousing services to reduce costs and grow your profits.

<sup>4</sup> Singapore retailers turn to technology to boost productivity, 15 May 15, Singapore Business Review

<sup>5</sup> [Retail Productivity Plan brochure, SPRING Singapore](#)

10. Build a deep-skilled Workforce	Resign jobs to upgrade rank-and-file job roles to specialised ones. This will help your company adapt to growing shoppers' expectations and emerging market opportunities.
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**Supporting Agency**

**SPRING Singapore**

SPRING Singapore is an agency under the Ministry of Trade and Industry responsible for helping Singapore enterprises grow and building trust in Singapore products and services. As the enterprise development agency, SPRING works with partners to help enterprises in financing, capability and management development, technology and innovation, and access to markets. As the national standards and accreditation body, SPRING develops and promotes an internationally-recognised standards and quality assurance infrastructure. SPRING also oversees the safety of general consumer goods in Singapore.

**Singapore Institute of Retail Studies**

The Singapore Institute of Retail Studies (SIRS) is a Continuing Education & Training (CET) institute of Nanyang Polytechnic (NYP). SIRS is the first CET centre set up in January 2006 as a collaborative project between the Singapore Workforce Development Agency (WDA) and NYP. SIRS has been conferred the National CET Institute (NCI) status – the pinnacle status for CET centres, since January 2011. The primary mission of SIRS is to provide quality and market driven holistic training solutions through the national Workforce Skills Qualifications (WSQ) programmes in Retail, Service Excellence, Productivity and Business Management to enhance the skills and employability of the Retail and Service workforce in Singapore.

**Retail Innovation Center for Enterprises**

SIRS' Retail Innovation Centre for Enterprises (RICE) aims to seed innovation and technology adoption among retailers to increase productivity through automation and technology.

As retailing becomes more competitive and complex in today's business environment, leveraging new technologies can help enhance business performance and sustain growth in the future.

### **Retail Centre of Excellence**

Singapore Management University and National University of Singapore will be collaborating with DFS Venture Singapore, the Singapore Economic Development Board (EDB) and SPRING Singapore to launch the new Retail Centre of Excellence to develop key areas of focus, such as consumer insights and analytics, and partner with local educational institutions to design a specialised retail programme; and also undertake research collaborations and provide internships for fast track industry integration and career opportunities

### **Supporting Programme/ Funding Scheme**

- **Major Funding Schemes**

- **Innovation & Capability Vouchers (ICV)**

Tap on vouchers valued at S\$5,000 to help you appoint experts to conduct capability studies and implement solutions to improve your business efficiency.

- **Capability Development Grant (CDG)**

Get support for your omni-channel and e-Commerce strategies, branding efforts, technology innovations, productivity improvements, product development, market access, HR capabilities and more. The CDG defrays up to 70% of qualifying project costs for grant support of S\$30,000 or less.

## C2 - South Korea

### **Industry Overview**

In 2013, South Korea is ranked fifth in Asia for total retail sales (in US dollar terms), at US\$284 billion, behind China, Japan, India and Indonesia. Sales forecast is to reach US\$378 billion by 2018.

Online retailing and home shopping have been growing in popularity, affecting the sales and market share of traditional retailing channels.<sup>6</sup>

According to latest data from Statistics Korea, the retail sales amounted to 32,281 billion won in October 2015, which increased by 6.5 percent from October 2014<sup>7</sup>.

- The online shopping transaction value recorded 4,769 billion won in October 2015, which rose by 20.6 percent from October 2014.
- In October 2015, the online shopping occupied 14.8 percent of the total retail sales.

Classification	2014 (Billion Won)	2014 (Billion Won)	2015 (Billion Won)	Year on Year
		Oct	Oct	
Retail sales (A)	359,746	30,299	32,281	6.5%
Online Shopping (B)	45,302	3,954	4,769	20.6%
Mobile Shopping	14,870	1,435	2,286	59.3%
Share (B/A)	12.6%	13.0%	14.8%	-

Number of establishments in Wholesales and Retail Sector (2014): 998,904

<sup>6</sup> 2015-16 Outlook for the Retail and Consumer Product Sector in Asia, PwCHK

<sup>7</sup> Statistics Korea <http://kostat.go.kr/portal/eng/pressReleases/3/5/index.board>

## **Trend of Customer Behavior**

South Korean consumers are typically well-educated and well-informed. The national literacy rate is 98%. The country also has the world's best IT infrastructure, with exceptionally wide use of high-speed Internet and smartphones. Consumers tend to be tech-savvy, and this has strongly influenced the way they shop. Many use social media to search for information about potential purchases and to share their own product reviews. A 2012 survey by Embrain Trend Monitor found that 79% of customers check user reviews before making purchases, and 74% said they have written evaluations and reviews. These technology-minded consumers are well-positioned to judge the value of products, and also to find the best prices for the best products.<sup>8</sup>

## **Characteristics of the Korean Market**

### 1) Global Brands<sup>9</sup>

According to The Korea Chamber of Commerce & Industry, South Korea is growing rapidly as a global market, and many international brands have chosen Korea as a destination to expand in Asia.

### 2) High Growth in E-Commerce and Mobile

As the world's leading information society, South Korea has the best IT and communication infrastructure. They have the world's fastest internet connection speed, and rank first in e-Government as well as second in the Information and Communication Technologies (ICT) Development Index.

### 3) Susceptibility to Trends and Pop Culture

Korean consumers are highly sensitive to fashion trends and fads. We can see examples of this through the influence of pop culture on the social fabric of South Korea and the power of the bandwagon effect in the way people copy one another when it comes to the next big thing.

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<sup>8</sup> [Spotlight on South Korea Understanding the South Korean Consumer](#)

<sup>9</sup> [A Quick Guide to the South Korean Market, btrax](#)

## E-commerce in Korea<sup>10</sup>

According to a 2013 report by A.T. Kearney, South Korea ranks as the 5th most attractive market for e-Commerce globally and 3rd within Asia. South Korea's e-Commerce market offers considerable promise for new brands to reach the 2nd most connected population in the world (ICT Development Index, 2013). In Q2 2013, South Korea had the world's fastest internet, which when combined with their consumers' willingness to embrace new technology, has resulted in the country ranking 2nd globally in smartphone penetration rates (Statista, 2013). Consumers are also open to using their credit cards online, with an estimate that over 75% of all internet users had made a purchase via the web by 2014 (Google Consumer Barometer Report, 2014). South Korea also sees social commerce trending amongst younger users while cross border transactions grew to 47% in 2013, proving South Korea is a significant opportunity for e-Commerce players. South Korea's e-Commerce space is comprised of several local sites, with international retailers gaining popularity as well. In 2009, eBay led the pack after acquiring local marketplaces Auction and Gmarket. Groupon followed in 2013 with the closing of their local operations and opted instead to buy Ticket Monster. While not a direct e-Commerce retailer, Naver Shopping (Google's equivalent in Korea) is also a key site for facilitating e-Commerce activity, as it consolidates all product reviews and offers price comparisons for consumers and paid search options to retailers.

Player	Description
Naver	Leading web portal that offers price comparisons and product reviews
Daum	Web portal that offers email, forums, messaging service, news and shopping
Gmarket	Local general products retailer (owned by eBay)
11st	Local general products retailer
Auction	Local general products retailer (owned by eBay)
Wemakeprice	Local general products retailer and internet advertiser
TMON	Local ticket and daily deal eCommerce company
Lotte	Multinational food and shopping corporation
Coupang	Local general products retailer

### Key eCommerce Players

<sup>10</sup> SOUTH KOREA 10 eCommerce Facts, 2015 Singapore Post Limited

## **E-payment<sup>11</sup>**

- **Domestic and Preferred Card Schemes**

The Korean market is highly penetrated by electronic payments:

- There are over 100 million cards.
- An average of 4 cards per household.
- Total card volume is almost USD 600 billion in purchases.
- Some 76% of retail payments are made with cards, a far higher proportion than in the US.

The familiar Western payments concept of “issuers, acquirers, and interchange” doesn’t exist in South Korea. Each merchant fills out a separate application and is individually approved by each issuer to accept its cards.

There are some 13 card processors that enroll merchants for card acceptance. Merchants are provided with direct connectivity to each of the major issuers. Sales agents work for the 13 or so card processors to sign up the merchants, install POS equipment, and provide fairly standard services.

Visa, MasterCard and Amex are the most widely accepted credit card types for cross-border ecommerce transactions. In addition to Visa and MasterCard, there are several other card brands operating in Korea – BC Card, Lotte Card, and T-Money.

- **Alternative Payment Methods**

- Money Transfers involves several modes of non-cash payments; this may be in the form of wire transfer, electronic fund transfer or online bank transfer.
- E-Money payment enables users to purchase goods or services online using their “virtual wallet”. Money can be loaded to the user’s e-money account from several sources such as credit card and online bank transfer. E-money can be accessed and stored in a mobile device or an online account.
- Other payment methods include mobile payments and cash payment. Mobile payment in South Korea is dominated by NFC (Near Field Communication) technology that is used to do contactless payments, transfer funds and exchange information. The NFC enabled device is linked to the user’s account or e-wallet account where payment or banking details are stored.

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<sup>11</sup> <http://www.thepayers.com/payment-methods/republicofkorea/23>

- T-money: a rechargeable series of cards and other "smart" devices used for paying transportation fares in and around Seoul and other areas of South Korea. T-money can also be used in lieu of cash or credit cards in some convenience stores and other businesses.

### **Supporting Agency**

- **Small and Medium Business Administration (SMBA)**

Small and Medium Business Administration (SMBA) is one of a small and medium industry organizations in South Korea and is run under the Ministry of Trade, Industry and Energy. It is in the vanguard of a pan-national SME era, developing and delivering a broad range of practical and productive SME policy initiatives. SMBA is endeavoring to develop and implement custom-tailored policies and services, responding to the on-site needs of SMEs.

The major policy tool categories aimed at booming and blooming SMEs are start-ups, venture business, high potential enterprise, shared growth, export, business environment, technology, micro enterprise and traditional market.

- **Korea Technology Finance Corporation (KOTEC)**

KOTEC was founded in 1989 by the Korean Government as a non-profit credit guarantee institution under the special enactment, "Financial Assistance to New Technology Businesses Act" which went through a full-scale revision and was newly titled "Korea Technology Finance Corporation Act." in 2002.

KOTEC is now a specialized institution in providing full scale supports to SMEs and venture businesses with competitive technology, innovation, and other knowledge-based business contents at all growth stages. The mission of KOTEC is to take a lead in converting Korean economy to be creative and innovative.

### **Supporting Programme/ Funding Scheme**

- **SMBA SME Policies - Technology**

Major technologies related SME Policies of SMBA:

#### **Enhancing the capacity of SMEs for technological innovation**

SMBA is carrying out a programme to develop technologically innovative SMEs as part of its representative R&D programme of promoting first-mover and creative investment in promising technologies to enhance the key capacity of SMEs that are playing a key role in the Korean economy.

## C3 - Mainland China

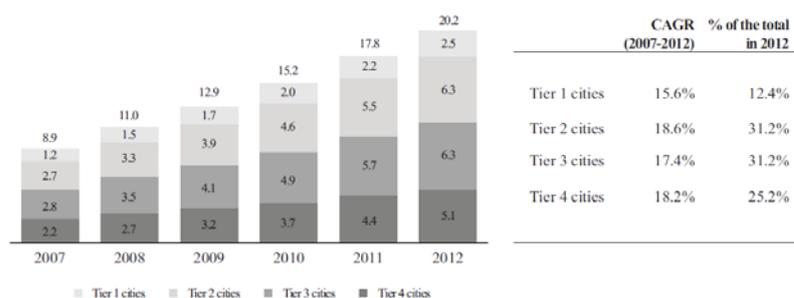
### Industry Overview

China is now the world's second largest retail market. Total retail sales of consumer goods doubled to 20.2 trillion yuan in 2012 from 11.0 trillion yuan in 2008. Furthermore, China is expected to surpass the United States to become the world's largest consumer market within five years.

The country's retail market is evolving as quickly as it grows. With higher incomes and increasing affluence, consumers are demanding better quality and unique products and services. Also, new technologies are revolutionising the way retailers are running their businesses.

*Retail Sales by City Tiers*

Unit: RMB trillion



Source: Savills

Facts & Figures	
Retail sales - Urban Area(2014)	HKD\$ 26889.0B
Retail sales - Rural Area(2014)	HKD\$ 4279.5B
E-commerce sales (2014)	HKD\$ 3313.9B

Source: National Bureau of Statistics of China

## **Trend of Customer Behavior<sup>12</sup>**

### **O2O Redefined**

O2O services have accelerated from a developmental phase to a commercially viable business model across China's largest cities in 2015. With bigger and faster logistics networks and more dynamic service models, O2O services are expected to elevate to new industries, spread to more cities and regions, and will offer more dynamic and personalized services in 2016.

### **Interactive Now**

Video has become the most popularly consumed online media in China with as much as 83% of internet users watching videos on desktops and an additional 73% viewing videos on tablets in 2015 according to Mintel.

Chinese consumers are gradually developing an appetite for watching videos online, leading to a willingness to pay for high-quality and uninterrupted content. 38% China's consumers have already paid for online video streaming and 31% would be interested in giving it a try in 2015.

### **Conscious Health**

As brands and institutions strive to keep health threats such as air pollution and food safety issues under control, China's consumers have begun to take a more proactive approach towards health in 2015.

30% of consumers use mobile or tablet apps to track their activity levels in 2015 while approximately one in 10 consumers has used wearable devices to track sleep quality, heart rate, and blood pressure. Furthermore, 74% of consumers show an interest in using wearable devices to manage their health in the future.

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<sup>12</sup> [China Consumer Trends in 2016, Mintel](#)

## e-Commerce in China

The 2016 China e-Commerce market has become the largest in the world and is projected to total \$1.6 trillion in approximately two years. Below are some general statistics on the Chinese e-Commerce Market:<sup>13</sup>

- Over 40% of the total global e-Commerce spend came from China in 2015
- Approximately \$14.3 billion was spent on 2015's "Singles Day", the one day Chinese digital shopping holiday
- The total number of digital shoppers in the country reached 468 million last year
- Online wallets are the top payment method of choice, with 33% of Chinese shoppers utilizing the technology to complete transactions

### China Top 15 B2C e-Commerce Companies in Q3 2015<sup>14</sup>

Company (Chinese name)	Company (English Name)	Website
1. 淘宝	Taobao	<a href="http://world.taobao.com/">http://world.taobao.com/</a>
2. 天猫	Tmall	<a href="https://www.tmall.com/">https://www.tmall.com/</a>
3. 京东商城	Jingdong	<a href="http://www.jd.com/">http://www.jd.com/</a>
4. 阿里巴巴 1688	Alibaba1688	<a href="http://www.1688.com/">http://www.1688.com/</a>
5. 苏宁易购	Suning	<a href="http://www.suning.com/">http://www.suning.com/</a>
6. 美团团购	Meituan	<a href="http://hk.meituan.com/">http://hk.meituan.com/</a>
7. 亚马逊中国	Amazon China	<a href="http://www.amazon.cn/">http://www.amazon.cn/</a>
8. 大众点评	Dianping	<a href="http://www.dianping.com/citylist">http://www.dianping.com/citylist</a>
9. 百度糯米	Nuomi	<a href="http://www.nuomi.com/">http://www.nuomi.com/</a>
10. 国美在线	Gome	<a href="http://www.gome.com.cn">http://www.gome.com.cn</a>
11. 1号店	Yihaodian	<a href="http://www.yhd.com">http://www.yhd.com</a>
12. 唯品会	Vipshop	<a href="http://www.vip.com/">http://www.vip.com/</a>
13. 蘑菇街	Mogujie	<a href="http://www.mogujie.com">http://www.mogujie.com</a>
14. 返利网	Fanli	<a href="http://www.fanli.com">http://www.fanli.com</a>
15. 聚美优品	Jumei	<a href="http://www.jumei.com">http://www.jumei.com</a>

<sup>13</sup> [2015 eCommerce Summary, PFSweb, Inc.](#)

<sup>14</sup> [China Top 100 E-Commerce Companies in Q3 2015, China Internet Magazine](#)

## **E-payment<sup>15</sup>**

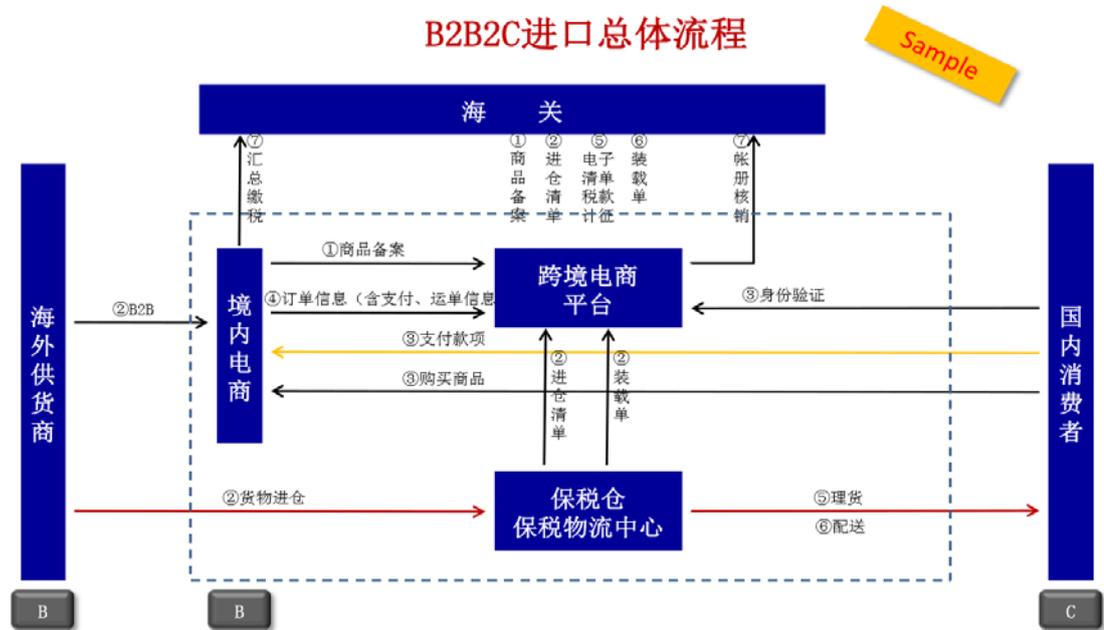
- **Domestic and Preferred Credit Card Schemes**
  - China UnionPay is used by 54.1% of credit card holders in China.
- **Alternative Payment Methods for online payment**
  - Alipay - Buyers and sellers on Alibaba Group websites use Alipay to make and receive payments online.
  - Tenpay - Tencent's Tenpay is Alipay's main competitor in the payments industry. Tenpay can be used to send/receive payments, withdraw money from bank accounts, charge mobiles, deposit money in game accounts and buy air tickets.
  - Online Bank Transfer – Union Pay - With over 3.5 billion cards issued, UnionPay is one of the world's leading payment card brands.
  - PayPal: eBay Inc.'s payment provider may lack major usage in the Chinese market, but it is the top foreign competitor, being the most common payment solution for companies purchasing products internationally.
  - WeChat pay: WeChat payments are supported by a large number of industries in China and include Cab fare, Brick & Mortar stores, online merchants, WeChat listings, and vending machines.

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<sup>15</sup> <http://www.thepayers.com/payment-methods/china/14>

## Mainland China In-Bound Cross Boundary Essential Business Flows

### 跨境电商进口备货模式——流程详图



## Mainland China Famous e-Commerce Platforms



### Modern Retail Technologies

One of the greatest challenges in the retail industry today is the pace of technological change, and the ways in which new technologies are fundamentally changing how people communicate, research, collaborate with each other, and choose goods and services. The technologies that are emerging and deployed by players in the global market are explored.

Three areas of retail technology are as follows:

#### A. Retail Technology in the Shop

Once we enter a store, advanced technology may be at work in ways most shoppers might not even realize.

##### 1. Electronic Shelf Label

The shelf-edge tags would use Wi-Fi to identify each customer by their mobile phone, and possibly reduce prices for those with loyalty cards or certain logged past purchases. It would also allow the store to adjust prices at peak times to encourage shoppers to get goods cheaper during non-peak times.



##### 2. NFC e-Payment

With contactless cards, a small radio frequency antenna and microchip inside the card allow a transaction to be processed without having to enter a personal identification number (PIN) or sign a receipt.



We pay for small purchases by waving your card in front of a merchant's contactless terminal.

##### 3. NFC ePayment (Bionetics)

Ecommerce security can particularly benefit from biometrics. Canadian MasterCard holders will be able to pay for online purchases on their smartphones via a selfie or fingerprint. Visa has introduced a specification that can authenticate EMV chip card transactions using multiple forms of biometrics.



#### 4. **B2B2C ERP / Omni-Channel Logistics Platform**

With that early effort, Kimberly-Clark pioneered the concept of collaborative distribution, also known as shared or collaborative supply chains, a practice that is now sweeping Europe. In a shared supply chain, two or more companies use the same distribution facility and transportation services to serve mutual customers. This practice reduces costs for manufacturers and provides more frequent replenishment for retailers.

#### 5. **E-HR and e-Learning Platform**

Front line sales can master the latest product information on their handheld devices, and introduce the new product with detail functional features to their customer. Back office staff can distribute consistent promotional messages to all front line offices instantly and efficiently.

### **B. Retail Technology in managing the hybrid O2O business mode**

#### 1. **Beacons**

Beacons are a low-cost piece of hardware — small enough to attach to a wall or countertop — that use battery-friendly, low-energy Bluetooth connections to transmit messages or prompts directly to a smartphone or tablet. Beacons serve up information on frequent store visitors, such as purchase histories and personal preferences, to help a sales associate deliver high-touch service to their most valuable customers.



#### 2. **Facial Recognition e-App (e.g. IoT-connected digital signage)**

In the early years digital signage was often nothing more than a rotation of static images running on a large screen. Digital signage and the Internet of Things are a perfect match in many ways and have helped fuel each other's adoption and growth. Devices such as digital signs, tablets and kiosks that are driven by a powerful visual communications software platform have the ability to leverage data coming from multiple sources to drive the content



that is being shown.

### 3. Using Social Network for marketing and sales channel

People trust websites that their friends trust, and are interested in knowing what their "friends" have been up to. The social media channel helps businesses drive sales through social network, and customers can just click the “buy” call-to-action button to purchase a product directly from a business.



## C. Retail Technology in e-Commerce

### 1. Virtual Reality

**Virtual reality** or **virtual realities (VR)**, also known as **immersive multimedia** or **computer-simulated reality**, is a computer technology that replicates an environment, real or imagined, and simulates a user's physical presence and environment to allow for user interaction. Virtual realities artificially create sensory experience, which can include sight, touch, hearing, and smell.

According to the article published by China/Tech by SCMP on 18 Apr 2016, more than a dozen Chinese virtual-reality (VR) start-ups raised fresh funding of at least 10 million yuan each in Mar 2016 as venture capitalists continue to flock to this nascent market.

The Nanfang Daily also reported on Monday that 60 listed Chinese domestic companies have entered the VR industry since July 2015 through investments in content developers and device makers.

The VR consumer market will explode within a year in China, according to a white paper released by the Ministry of Industry and Information Technology (MIIT) last week. The market size of China's VR industry will triple in year 2016 to 5.66 billion yuan from 1.54 billion yuan last year, according to the white paper. It also estimates the industry revenue is on track to cross 55 billion yuan by 2020.

According to MIIT, China will issue a series of regulations on content production, terminal displays and soft platform development this year.

With technology major Huawei announcing its entry into VR, Huawei launched its own VR headset, called Huawei VR, to rival Samsung's Gear VR. Huawei VR will be compatible with the company's latest smartphone, including the P9 and P9 Plus, and the Mate 8. In addition, Alibaba Taobao also announced their Buy+ campaign in Apr 2016.

The number of people using VR content in China will exceed 1.4 million this year, according to estimates by iResearch, which expects this figure to more than double in year 2017.

## **2. Retail Big Data Analytics**

The primary goal of big data analytics is to help companies make more informed business decisions by enabling data scientists, predictive modelers and other analytics professionals to analyze large volumes of transaction data, as well as other forms of data that may be untapped by conventional business intelligence (BI) programs. Some highlighted technology will be introduced below.

## **3. E-Customer Relationship System - Customer Life Cycle / Membership Management System**

Customer relationship management (CRM) is a term that refers to practices, strategies and technologies that companies use to manage and analyze customer interactions and data throughout the customer lifecycle, with the goal of improving business relationships with customers, assisting in customer retention and driving sales growth. CRM systems are designed to compile information on customers across different channels -- or points of contact between the customer and the company -- which could include the company's website, telephone, live chat, direct mail, marketing materials and social media. CRM systems can also give customer-facing staff detailed information on customers' personal information, purchase history, buying preferences and concerns.

## **4. e-Payment**

### **a. Pay By Touch**

It has had success in rolling out a biometric system that lets customers pay with a swipe of their finger. PayPal has introduced PayPal Mobile, which lets users send and



receive money via cell phone text messaging.

b. Contactless payments

These let customers charge items to their accounts by simply waving a card or device near a reader. It is a technology well-suited to purchases that are quick and simple, such as gas, convenience store merchandise or vending machine items. The contactless infrastructure is built on the existing payment network. It's a fairly straightforward process to enhance a terminal to accept a contactless payment as well as a mag stripe payment.



c. Security

Some new online payment technologies are focusing on security issues. For example, Secure-eBill service lets buyers use their online checking accounts for internet purchases in the same manner that they would pay a utility bill online. Taking a different approach, a Secure-USB device that employs hardware-implemented encryption technology can be used for secure online transactions.



**5. Omni-Channel**

a. Gaining marketing intelligence

The omni-channel and its streamlining of the retail enterprise can provide marketers with considerably more usable data on customers than has been previously available.



b. A digital device which can capture both demographic and individual-shopper information, transforms digital displays into intelligent, situation-aware content systems, such as digital signage. At the heart of this customer-intelligence system is Anonymous Viewer Analytics (AVA). This technology uses small optical sensors connected to a digital sign to relay a video stream to consumers.

c. Innovative Digital Devices

Digital signage in its many forms is a powerful means of directing branding and product messages to customers.

New technology is transforming kiosks from limited, self-service directories into full service shopping assistants that provide online access, identify shopper behavior, and make it easy for customers to pay for items.

New technology for vending machines transforms them into intelligent, stand-alone systems with a multitude of new features—HD digital signs, interactive touch screen controls, even cashless payment mechanisms—for an engaging shopping experience.

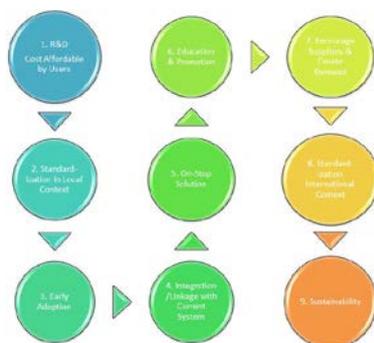
## 6. Order, Delivery and Supply Chain

### a. Logistics e-App

e-Commerce involves multiple distribution center, multiple courier service providers and cross boundary customs clearing service providers. An instant update of the inventory status across multiple distribution center and on-line tracking of the delivery status of a parcel shall be mastered by the e-platform providers, courier service providers and customers as well.

## D. Technology Readiness Assessment

We have to adopt a staged approach and go through a 9-step process in order to assess the potentials of deploying a number of new technologies, including:-



- 1. R&D / Cost Affordable by Users
- 2. Standardization in Local Context
- 3. Early Adoption by Market Leader Deployment Experience
- 4. Integration /Linkage with Current System
- 5. On-Stop Solution for SMEs

- 6. Education & Promotion
- 7. Encourage Suppliers & Create Demand
- 8. Standardization in International Context
- 9. Sustainability

As such, an assessment on the following 13 retail technologies in Hong Kong has been conducted according to 4 core stages:-

	Solution	Cost Affordability	Standard Availability	Market Leader Deployment Experience	Supplier Ready
1	Beacons	Y			
2.	Electronic Shelf Label				
3.	Mobile POS				
4.	PRC Logistics e-App				
5.	B2B2C Logistics Platform				Y
6	Virtual Reality	Y			Y
7.	Retail Big Data Analytics				
8.	e-HR/e-Learn	Y		Y	Y
9.	e-CRM	Y			Y
10.	2D-BarCode	Y	Y	Y	Y
11.	NFC-RFID	Y		Y	
12.	Facial Recognition e-App	Y		Y	
13.	Social Network	Y	Y	Y	Y
14.	NFC e-Payment	Y	Y	Y	Y

The findings showed that most technologies remained unaffordable by enterprises and there was a lack of standards. Also, the technologies were not fully deployed by the leading retail enterprises due to the unavailability of prominent suppliers and ready-made solutions.

### Recommendations on Programmes

#### I. Government-led Measures

##### Overarching Plan to Build Up HK Omni-Channel Retailing Ecosystem

1. It is essential for the Government to have an overarching plan to develop Hong Kong's omni-channel retailing ecosystem. We urge the Government to take the lead and formulate actionable measures to enhance technology adoption for the retail industry.

##### “Hong Kong Goes Life” – A Top-notch e-Commerce Platform

2. The Government should spearhead the building a top-notch e-Commerce platform for Hong Kong. This long-term e-infrastructure building programme, namely “Hong Kong Goes Life” e-Commerce platform, will serve as a Hong Kong brand to the world, and as a show window of its e-living style as a smart city.

##### Government-to-Government Negotiation - FTA Arrangements

3. In addition, the Government can proactively review the CEPA arrangement with the Mainland and benchmark the free trade agreements (FTA) between the Mainland and other countries. Products from countries under FTA can enjoy same treatment when entering the Mainland market through HK.
4. The Government can explore collaboration opportunities with other countries on fast clearing of customs and taxation arrangement for HK-based e-Commerce transactions.
5. The following programmes are suggested:
  - a) HK and Mainland FTA
    - A proactive programme for Hong Kong enterprises to compete and get the best benefits out of the e-Commerce market in the Mainland through FTA.

- b) FTA between HK and Other Countries
  - A strategic programme to build the competitive advantages and strengthen the marketing positioning of Hong Kong in the future as global e-Commerce market expands.

## **II. Government Support and Enterprise-led Programmes**

It is proposed the Government can render support in the following 3 directions with 5 initiatives supported by respective programmes:

### **A. Industry Development**

#### **1. Initiative 1 - To cross-link HK customers with a larger customer base to facilitate standardization for long term sustainability**

##### Hong Kong e-Commerce: Sub-Programmes

To achieve this initiative, we propose a few sub-programmes under the banner of Hong Kong e-Commerce, including:

- a) Branding Development Programme
  - Define customer value, message and hence the logo
- b) Quality Assurance Scheme
  - Define the standard criteria and control mechanism for the quality assurance scheme
- c) Product Source Certification Scheme
  - Define the quality requirements of the product source and execute control mechanism
- d) Software Quality and Security Certification Scheme
  - Define the software quality requirements, cyber security requirements, certification criteria and execute control mechanism
- e) Logistics Supply Chain Certification Scheme
  - Define the logistics supply chain requirements, certification criteria and execute control mechanism

f) Branding Support Scheme

- Define funding criteria for applications by enterprises to promote brand recognition of HK in e-Commerce business

g) Customer Base Building Scheme

- Encourage Cross-link HK customer with a larger customer base to facilitate standardization of process or IT technologies for long-term sustainability

h) HK Postal Code Programme

- A foundation infrastructure building programme on postal code design to facilitate the growth of e-Commerce business and smooth adoption of e-Commerce technologies in tandem with global e-Commerce landscape.

**2. Initiative 2 – To encourage the development of more affordable solutions for SMEs enabling mass deployment**

The Government is suggested to:

- a) Provide funding resources to support multi-party collaboration programmes and encourage suppliers to offer innovative solutions to the retailers;

- b) Encourage SMEs to adopt new technologies and solutions at affordable costs, and that will facilitate wider adoption in the industry

- c) Launch programmes including:

● *SME e-Commerce Adoption Programme*

- Provide SMEs with matching funds to promote the use of the developed theme-based e-Commerce solutions.

● *Logistics Sharing Platform*

- Provide a shared e-Commerce platform for SMEs on which they can rent the facilities and enjoy the benefits of using an integrated system encompassing e-Commerce, supply chain and customs clearance on top of Cloud-based systems.

**3. Initiative 3 – To facilitate HK key retailers to use contemporary retail technology and share the best practices with the community by an early adoption scheme**

The initiative would cover the following proposed programme:

- *Retail Technology Early Adoption Scheme*
  - a) The Scheme would facilitate the adoption of modern retail technology by HK key retailers (not restricted to SMEs) whom would share the best practices with the community by an early adoption scheme.
  - b) The IP right of the product/service developed can be shared among the early adopter and the technology provider. In certain cases, the IP right shall be shared to the public.

**B. Human Capital Development**

**Initiative 4 – To promote public awareness of e-Commerce and application of latest technologies, and nurture a new talent pool**

- a) It is proposed to set up an education, demonstration and experience learning center for SMEs and students with demonstration of the benefits and operation of the e-Commerce solutions available in the market.
- b) The center operator needs to co-operate and work with multiple e-Commerce platforms and maintain a test-bed environment for SMEs to experience the e-Commerce systems.
- c) The proposed programmes would cover the following:
  - *Technology Start-Up Test-Bed Support Programme*
    - Maintain a test-bed platform by the technology knowledge hub operator, and provide new technology innovators with current e-Commerce platforms to integrate/test their new products/solutions.

- *SME Education Programme*
  - Provide SMEs with subsidies or free training programmes to enhance their awareness of the technology adoption and deployment in retail business.
  
- *e-Commerce Employee Re-Training Programme*
  - Provide subsidies or free training programme for individuals / students who want to up-skill themselves for future jobs related to e-Commerce, such as Sales, Marketing, Customer Service, Logistics, Data Analysis and IT.
  
- *Foreign e-Commerce Talent Recruitment Programme*
  - Provide incentive scheme for both enterprises and foreign experts, and encourage the foreign e-Commerce experts to work in Hong Kong to uplift the overall standard of the industries.

### **C. Government Support and Incentive Programme**

#### **Initiative 5 - To provide funding resources to launch Government-led and supplier incentive projects to encourage multi-stakeholder cooperation**

This would cover the following programme:

- *e-Commerce Theme-Based Funding Scheme*
  - Encourage leading associations or NGOs to form collaboration bodies with suppliers to build integrated solutions for SMEs at an affordable cost.