

LSCM MARKET INTELLIGENCE REPORT

A Market Intelligence Study on Enabling Technologies for
Industries related to Logistics & Supply Chain Management



Hong Kong R&D Centre for Logistics and
Supply Chain Management Enabling Technologies
香港物流及供應鏈管理應用技術研發中心



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BACKGROUND



BACKGROUND

INTRODUCTION

Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies (LSCM R&D Centre) is established with funding support from the Innovation and Technology Commission of the HKSAR Government and is commissioned to provide a one-stop shop for technology transfer and commercialization through the following roles:

- Conduct industry-oriented research
- Provide technology and market intelligence
- Provide a platform for exchange of intellectual property/technology
- Promote technology development, transfer and knowledge dissemination
- Facilitate intellectual property commercialization

Since inception, the LSCM R&D Centre was given the mission to foster the development of core competencies in applied R&D in logistics and supply chain related technologies and facilitate adoption of these technologies by industries in Hong Kong and mainland China. Our long-term goal is to strengthen Hong Kong's economic competitiveness and maintain its position as a world-class leading logistics hub in the PRD region.

This Project, titled **"A Market Intelligence Study on Enabling Technologies for Industries related to Logistics & Supply Chain Management"** is to empower the logistics and supply chain community in Hong Kong and PRD region with market and technology intelligence for industry users to locate and adopt new technologies, for technology vendors to identify market needs so as to develop relevant applications and for R&D parties to gain inspiration from global technology landscape and to identify prevailing technology gaps for further R&D.

This Publication, namely "LSCM Market Intelligence Report (Issue 7) – November 2009" is to share findings from on-site company visit exercise targeting two industry sectors in PRD. In addition to technology and market challenges based on interviews with those from logistics and retail fields, we also present the updates on China's RFID industry development and survey results from local RFID solutions providers in this report. This Issue 7 is the last regular report to publish out of the project "Market Intelligence Study", all past releases are available for free download at www.lscm.hk/mi.



BACKGROUND

PROJECT TEAM

It has been our mission to provide market intelligence and we place emphasis on enabling technologies which are essential for us to carry on our commitment and dedication to technology development. To support the study, the Project Team has pulled in expertise from the LSCM R&D Centre as well as professionals from the industry in Hong Kong and mainland China to take a combination of approaches to gather industry problems, technology needs and technology development gaps in Hong Kong and PRD while keeping a close watch on technologies, policies and standards developments in China.

To gather extensive market intelligence from logistics and supply chain community in Hong Kong and PRD, the Project Team is proud to partnering with the **Hong Kong Productivity Council and Research Center for Modern Logistics Technology and Management of Lingnan (University) College, Sun Yat-Sen University** to carry out the collaborative work in the region. They are experienced in conducting surveys and have good industry network to support our broad-based market study. In addition, the Project Team is working in close collaboration with the **HKU School of Business** in the preparation of findings and insightful analysis out of this market study. This consultancy support includes sharing and discussion of reference materials, advice on writing approach, research expertise and efficient feedback.

Hong Kong Productivity Council

Hong Kong Productivity Council (HKPC) is a public body established by legislation of Hong Kong with 40 years of history in serving manufacturing and related servicing industry. The mission of HKPC is to help Hong Kong enterprises to improve productivity and enhance value along the value chain in terms of consultancy service, training, technology transfer and other programs.

Role in the Project

- Advise on research methodology
- Carry out in-depth interviews with enterprises in Hong Kong
- Liaise with local industries and promote project results

Research Center for Modern Logistics Technology and Management Lingnan (University) College, Sun Yat-Sen University

Founded in July 2002, Research Center for Modern Logistics Technology and Management is a leading research institute of Sun Yat-sen University. The mission of the Center is to foster excellence in cutting-edge logistics research, education, and industrial collaboration in order to promote the development of modern logistics in China.

The Center is committed to research, education, and industrial collaboration of various aspects of logistics management. Logistics problems among the research domains of the Center include logistics system analysis and design, regional logistics strategy and planning, organizational logistics system design and optimization, distribution center design, transportation management and routing optimization, organizational supply chain management, management information systems in logistics and supply chain.



BACKGROUND

PROJECT TEAM

Role in the Project

- Carry out in-depth interviews with enterprises in PRD
- Liaise with industries in PRD and promote project results

School of Business, The University of Hong Kong

The HKU School of Business was established after its transformation from the Department of Management Studies in the Faculty of Social Sciences in 1995. Since then, the School of Business has rapidly expanded its variety of programs in terms of major and minor subjects, as well as enhances its intake of the best and the brightest local and non-local students. Apart from offering academic programmes, the Faculty of Business & Economics organizes its research and teaching development activities in clusters through research centres that draw on members within the Faculty and across campus. The research outputs delivered by the Faculty are highly recognized and treated as a leading source of innovative thinking for government and business in Hong Kong and the region.

Role in the Project

- Advise on research direction and provide perspectives in writing market intelligence reports

On the China Watch part, the Project Team has partnered with **RFID China Alliance** to have a close watch on the new developments in China. It has an extensive network that the project team members can leverage in gathering information about technology adoption, policy changes and development of national RFID standard in China.

RFID China Alliance

RFID China Alliance is the only non-profit industrial association on RFID in China. The Alliance, comprised of RFID chip, label, middleware, reader, and printer solution providers, was founded on Nov 5, 2005, under the leadership of the Ministry of Information Industry (MII) of the People's Republic of China. Its core responsibility is to promote RFID's industrial development in China, and provide up-to-date information on RFID Chinese governmental policy, latest technological developments while holding an open attitude on RFID standards and protocol.

Role in the Project

- Closely monitor the policy and standard developments in China
- Provide regular update on RFID adoption and application among industries in China



BACKGROUND

PROJECT TEAM

The following are core members of the Project:

Project Coordinator and Principal Investigator

Mr. Anthony KWOK
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Manager, Marketing,
LSCM R&D Centre



BACKGROUND

ACKNOWLEDGEMENTS

The Project Team would like to thank many organizations and individuals who have contributed to the development of this publication.

We would like to record our sincere appreciation for the following companies, which participated in in-depth interviews to share invaluable opinions with us. The report could not have been produced without their willingness to assist the Project Team in understanding the change in industry trends and technology needs.

Aeroprint (E&A) Limited
BISA Technologies (Hong Kong) Limited
E-Business Solutions Limited
Hong Kong Communications Company Limited
Hong Kong RFID Limited
Intermec Technologies Corporation
Megasoft Ltd
Million TECH Development Limited
NEC Hong Kong Limited
Psion Teklogix, Inc.
RFID System & Supplies Limited
Schmidt & Co., (Hong Kong) Limited
Sedna Systems Limited
Smerp Technology Limited
Unifysoft Limited
Velocity Solutions Limited
Vizilog Solutions Limited
X Computer Company



BACKGROUND

ACKNOWLEDGEMENTS

We would like to express our appreciation to the following industry support organizations, which helped us to promote the project activities and related results by all means.

Digital Trade and Transportation Network Limited
Federation of Hong Kong Industries - Transport and Logistics Services Council
GS1 Hong Kong
Guangdong and Hong Kong Feeder Association Limited
Guangdong RFID Technology Service Center
Hong Kong Association of Freight Forwarding And Logistics Ltd
Hong Kong CFS and Logistics Association Ltd
Hong Kong Electronics & Technologies Association
Hong Kong Logistics Association
Hong Kong Productivity Council
Hong Kong Science & Technology Parks Corporation
Hong Kong Shippers' Council
Hong Kong Trade Development Council
Hong Kong Wireless Development Centre
Hong Kong Wireless Technology Industry Association



BACKGROUND

ACKNOWLEDGEMENTS

Gratitude to the collaborating organizations and many research consultants from these organizations who, over the months, have played such an important role in this project:

Hong Kong

Hong Kong Productivity Council
Dr. Lawrence Cheung
School of Business, The University of Hong Kong
Dr. Benjamin Yen

Pearl River Delta

Research Center for Modern Logistics Technology and Management Lingnan (University) College, Sun Yat-Sen University
Prof. Chen Gongyu Dr. Zhang Hongbin

China

RFID China Alliance
Madam Zhang Qi Mr. David Ouyang

We are grateful to our Co-Investigators, **Dr. Benjamin Yen** and **Mr. William Chan** for imparting their value added time, expertise and feedback at all times. **Dr. Yen** is also thanked for his comments and suggestions for the improvement of some editorial parts of this project.

Acknowledgement is also due to our external consultant, **Ms. Grace Wong** who offered her efficient support and hard work to fully cope with the diversified requirements which facilitated the release of this report. We wish to record our heartfelt appreciation to Grace particularly for her contributions made throughout the project period.

Last, and most important, thanks to the colleagues of the LSCM R&D Centre-specifically Management Team, Industry and Technology Programs Team, Administration Team and PR & Corporate Communication Team for their dedication and unfailing support to this project.



Introduction

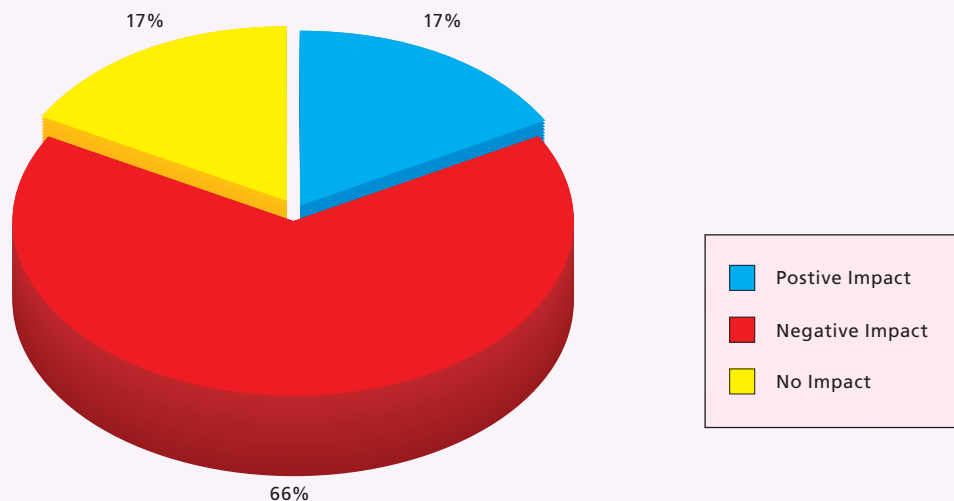
The world economy has been suffered from the financial tsunami badly starting from September 2008. In the first half of 2009, most industries were still in the haze of the global economic downturn. The economy is having a negative effect on the business of supply chain industry, so does the challenge for technology and solution providers though I.T. has always been a driver for supply chain efficiency. The Project Team has conducted a survey with 18 local RFID solutions providers between May and June this year to examine the impact of the financial tsunami towards the Hong Kong RFID solution providers. In addition to effect and countermeasure that they regarded in tough economic times, we also heard about their responses to the Wal-Mart's mandate and what they expect the growth of RFID business in Hong Kong.

1 Impact of the Financial Tsunami

a) Is your company business being affected by the current financial tsunami?

In this section, respondents were asked if the financial tsunami has made effect on their business. All 18 respondents provided opinions. 66% of respondents said that the financial tsunami is having negative impact on their business. 17% of respondents saw a positive impact on the contrary.

Is your company business being affected by the current financial tsunami?



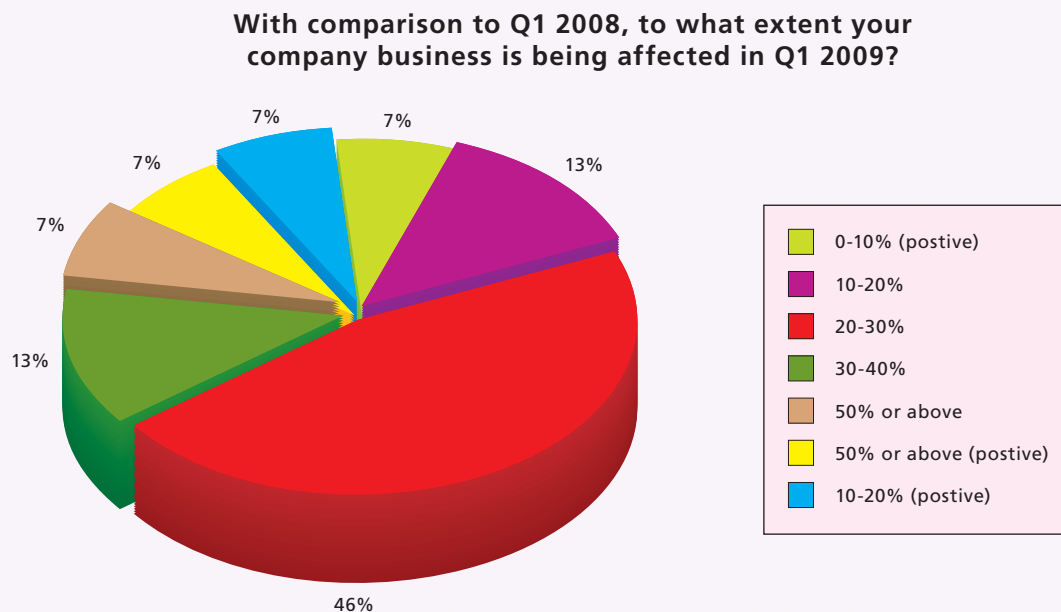


EDITOR'S COLUMN

RFID SOLUTION PROVIDER SURVEY

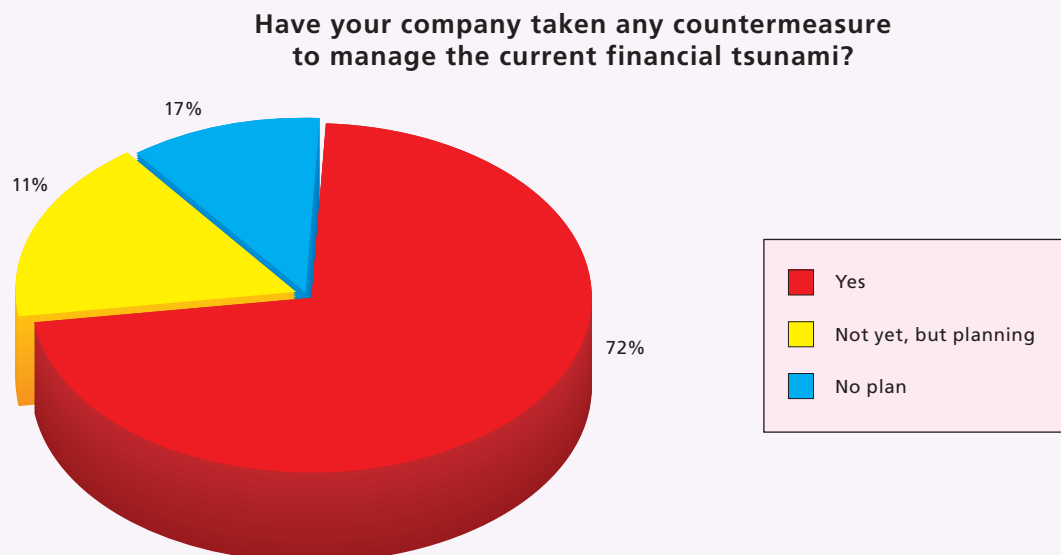
b) With comparison to Q1 2008, to what extent your company business is being affected in Q1 2009?

Respondents were further asked to compare their business of Q1 2009 to same period of previous year (Q1 2008), a total of 15 respondents responded to this question. Close to half of respondents (46%) said that their business were affected negatively to an extent of 20-30%, some others (20%) saw a higher percentage of negative impact. Still, 21% of respondents anticipated growth in business with comparison to Q1 of 2008.



c) Have your company taken any countermeasure to manage the current financial tsunami?

In this part, respondents were asked if they have taken any countermeasure to manage the current financial tsunami. All 18 respondents provided information. It was found that a majority of the surveyed companies (72%) have taken countermeasure. In contrast, fewer respondents were in planning stage, or without a plan to combat with economic crisis.





EDITOR'S COLUMN

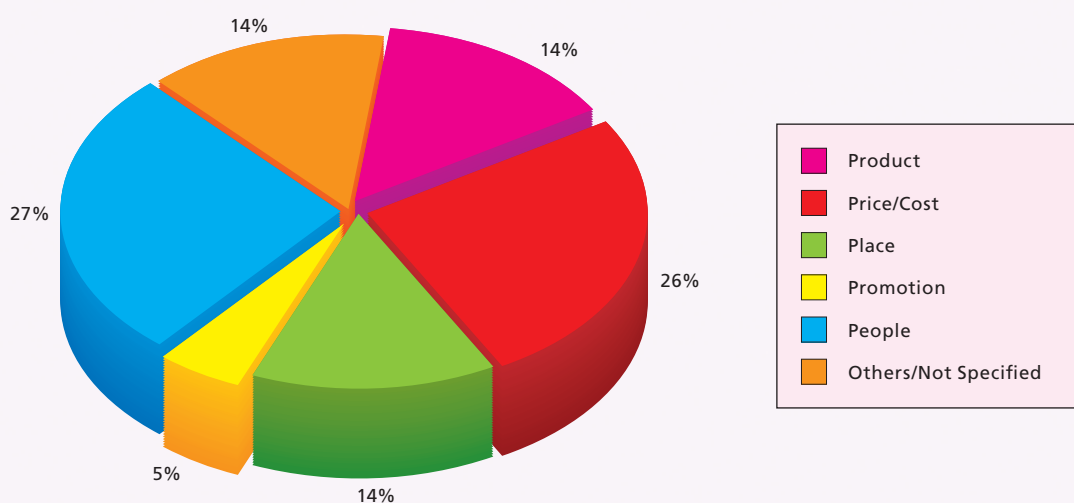
RFID SOLUTION PROVIDER SURVEY

d) Can you tell us what countermeasure that you have taken?

Asked what countermeasures would have taken, respondents were prompted to express various strategies surrounding their company activities. Based on all opinions we have further grouped the countermeasures into 6 areas: (i) Product related; (ii) Price/Cost related; (iii) Place (Market) related; (iv) Promotion related; (v) People related; and (vi) Others. The findings suggested that *Price/Cost* and *People related* initiatives were the two most popular countermeasures (26% and 27% respectively); it was followed by *Product* and *Place (Market) related* initiatives (14% each). Detailed findings and grouping of strategies were summarized in the following table.

Strategies	Relevant Countermeasures	%
People	Recruit technician Freeze head count/Layoff Employ more sales people	27%
Price/Cost	Cut cost on R&D Freeze pay rise Reduce cost & forecast	26%
Product	Increase the investment on product development Develop more solutions Develop off-the-shelf RFID	14%
Place	More government project Focus on strong market Create different revenue source	14%
Others (not specific enough)	Increase competitiveness Enhance future	14%
Promotion	More marketing	5%
Total		100%

Can you tell us what countermeasure that you have taken?





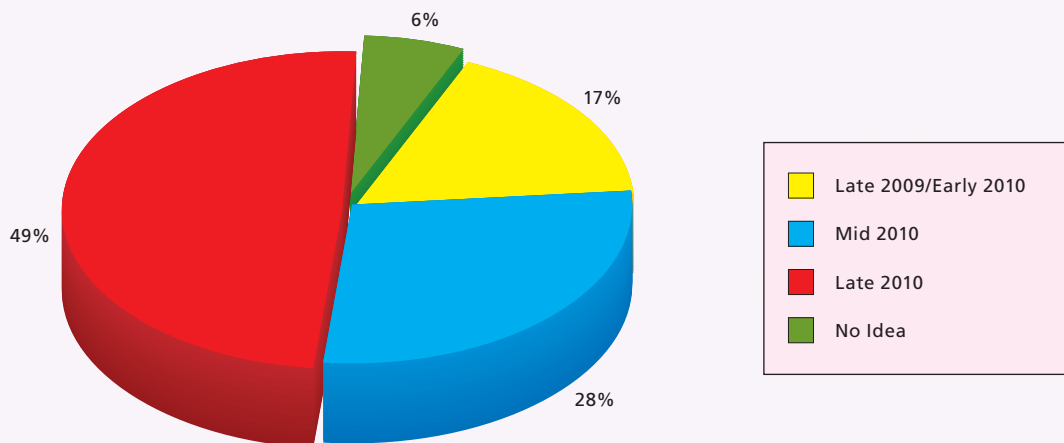
EDITOR'S COLUMN

RFID SOLUTION PROVIDER SURVEY

e) When do you think the financial tsunami would be over?

Respondents were asked by when they think the financial tsunami would be over. Half of respondents believed that it would be over by late 2010, 5 out of 18 respondents (28%) expected to see an end by mid 2010. Some others (17%) were optimistic and said it would be over by late 2009/early 2010. Some others (17%) were optimistic and said it would be over by late 2009/early 2010. Some others (17%) were optimistic and said it would be over by late 2009/early 2010.

When do you think the financial tsunami would be over?

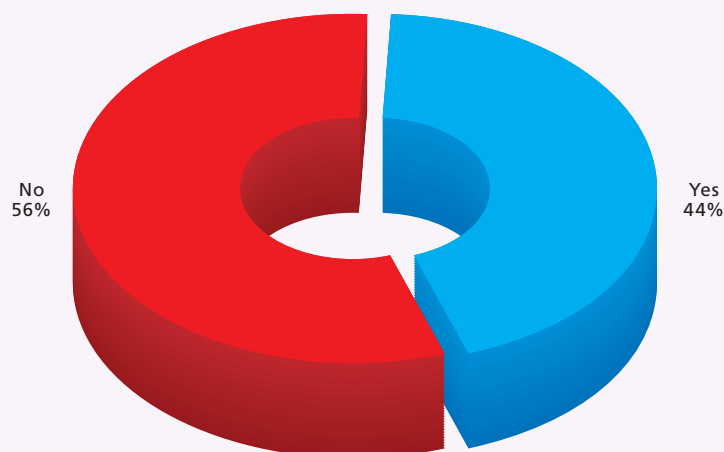


2 Impact of the Wal-Mart's Mandate

a) Have you supplied your RFID hardware/solution to any of the Wal-Mart's suppliers?

In this section, respondents were asked if they have supplied RFID hardware/solution to any of the Wal-Mart's suppliers. All 18 respondents provided information. It was found that 44% of respondents were currently serving the Wal-Mart's suppliers; whereas 56% of respondents were not doing so.

Have you supplied your RFID hardware/solution to any of the Wal-Mart's suppliers?





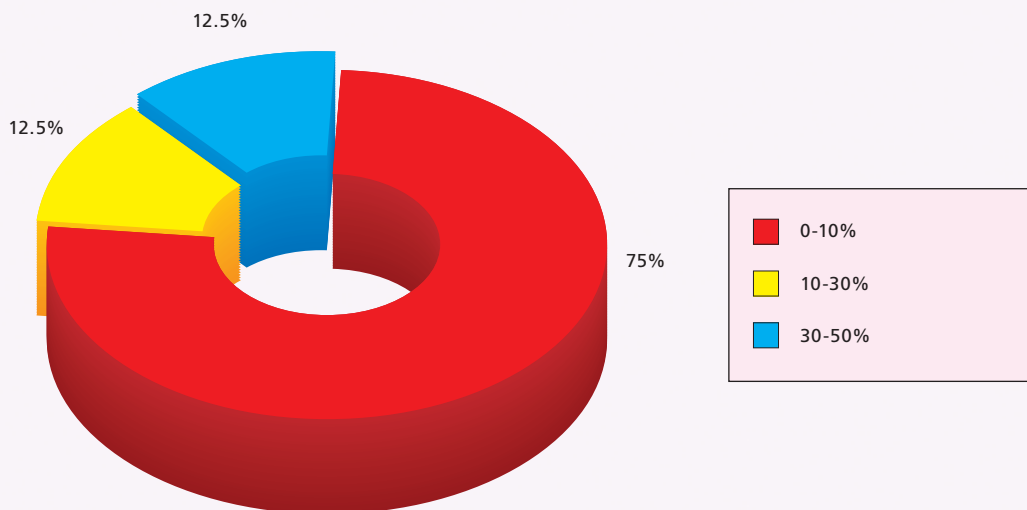
EDITOR'S COLUMN

RFID SOLUTION PROVIDER SURVEY

b) What is the ratio of Wal-Mart business to all business in your company?

Among the 8 respondents who have supplied RFID hardware/solution to Wal-Mart's suppliers, 6 out of 8 respondents said that the ratio of Wal-Mart business to all business was between 0-10% and the remaining 2 respondents expressed higher ratios, with 10-30% and 30-50% respectively.

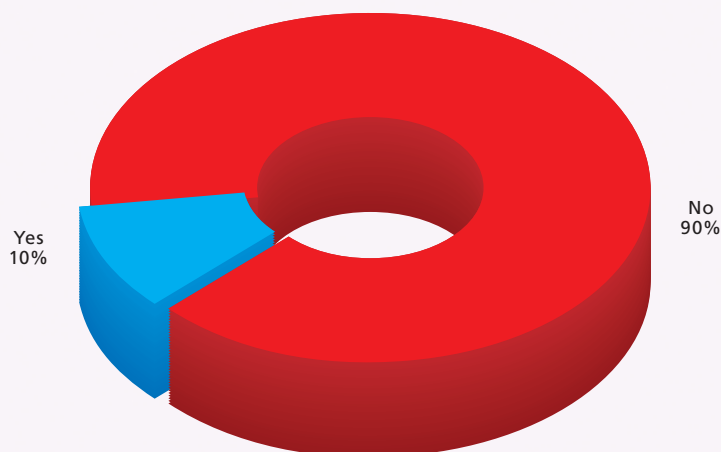
What is the ratio of Wal-Mart business to all business in your company?



c) Do you have any plan to become a RFID solution provider to Wal-Mart's suppliers in the short coming future?

For those 10 surveyed companies which are not currently serving Wal-Mart's suppliers, they were further prompted to give opinion if they have any plan to become a RFID solution provider to Wal-Mart's suppliers in the short coming future. Among the 10 respondents, the results suggested that only 1 respondent said they would plan to do so; whereas 9 out of 10 respondents (90%) answered that they do not have plan.

Do you have any plan to become a RFID solution provider to Wal-Mart's suppliers in the short coming future?



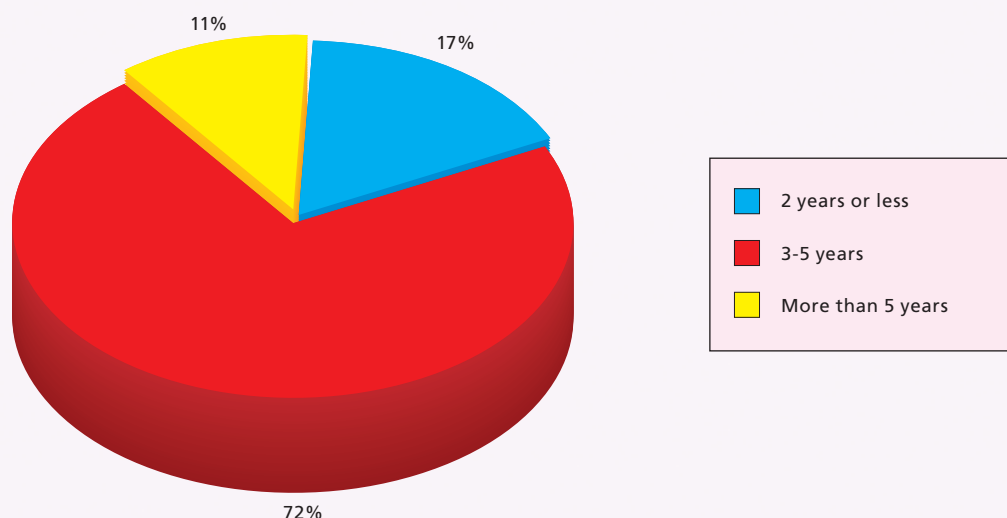


3 Analysis on the RFID Business in Hong Kong

a) How long have you been providing RFID hardware/solution?

In this part, we examined respondents' views on the RFID business in Hong Kong. All 18 respondents provided information. The findings suggested that 13 out of 18 respondents (72%) have 3-5 years of experience in providing RFID hardware/solution, it was followed by 2 years or less (3 out of 18 respondents, 17%).

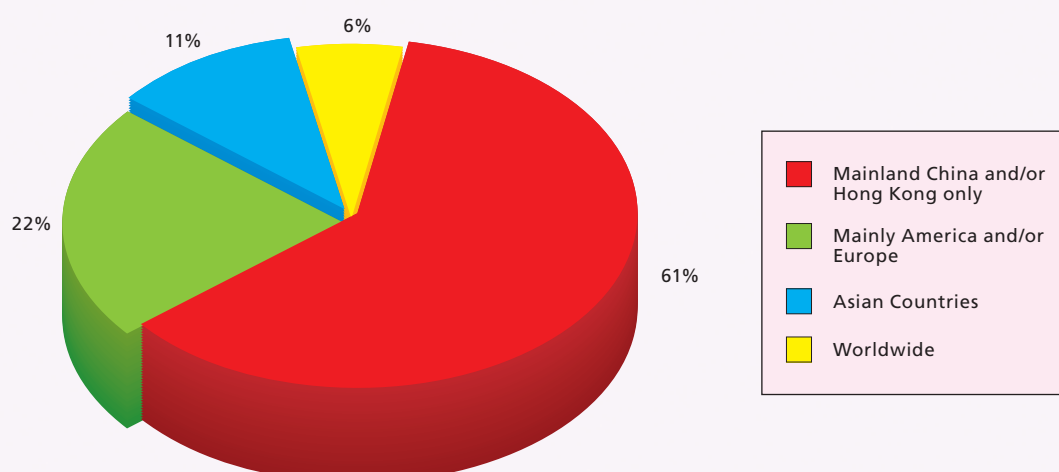
How long have you been providing RFID hardware/solution?



b) What is the geographical distribution of your RFID business?

In this part, we examined the geographical distribution of respondents' business. 11 out of 18 respondents (61%) indicated that their clients were located in mainland China and/or Hong Kong, followed by 4 out of 18 respondents with clients located in America and/or Europe (22%).

What is the geographical distribution of your RFID business?





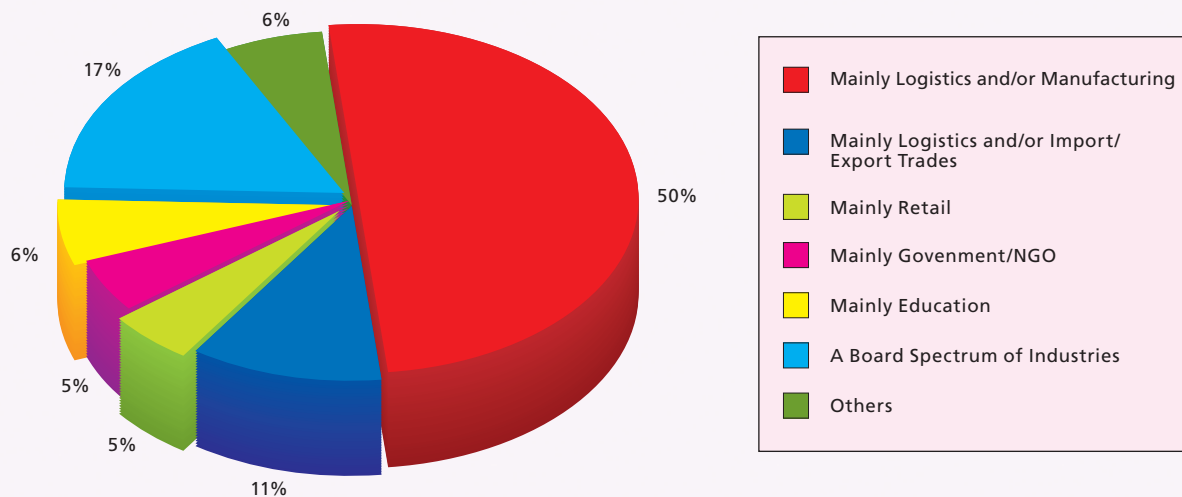
EDITOR'S COLUMN

RFID SOLUTION PROVIDER SURVEY

c) What is the current business distribution of your RFID business?

In this part, we examined the current business distribution of the respondents. All 18 respondents provided information; the findings suggested that the majority of respondents (50%) indicated their clients are from the logistics and/or manufacturing industry.

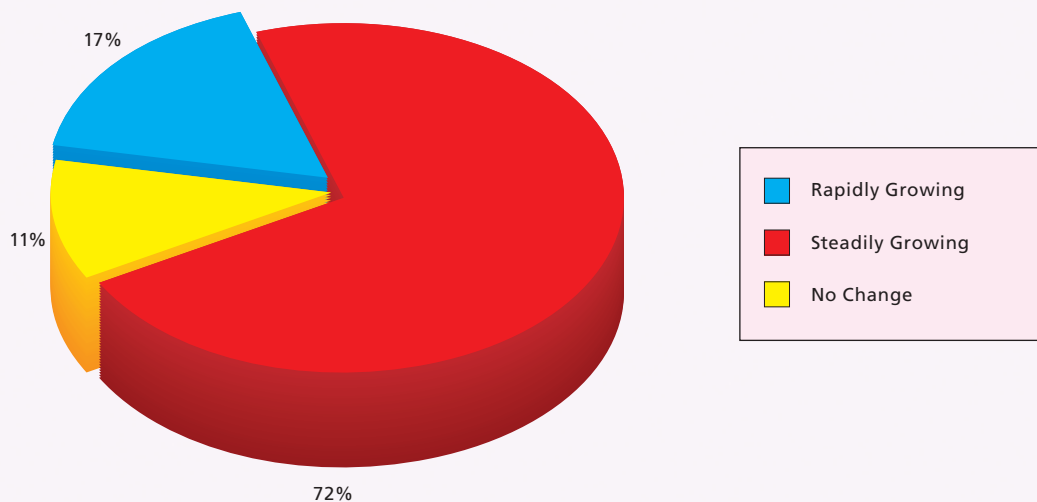
What is the current business distribution of your RFID business?



d) How is the growth of your RFID business?

In this part, growth of the respondents' RFID business was examined. 13 out of 18 respondents (72%) said that their business have been growing steadily; it was followed by rapidly growing (17%).

How is the growth of your RFID business?

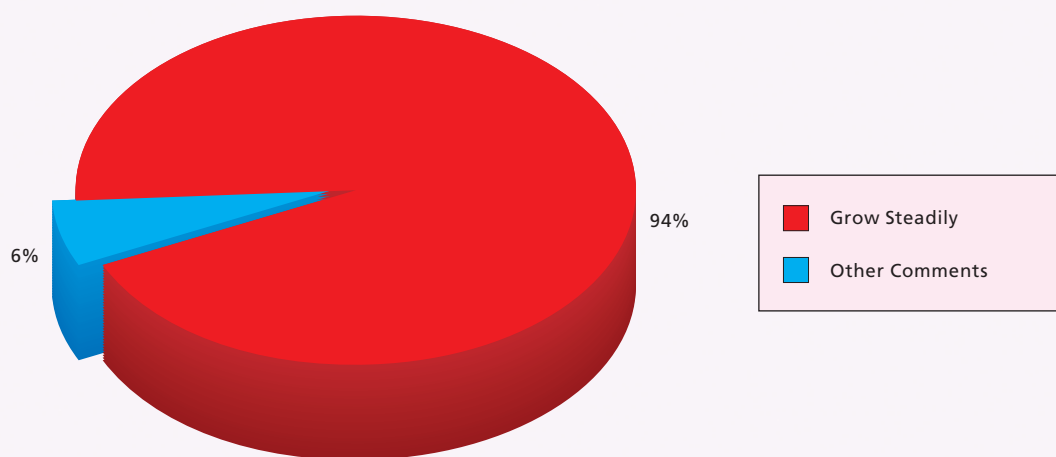




e) What do you think the future global RFID business will be?

In this part, respondents were asked about their views on the future global prospect of RFID. 17 out of 18 respondents (94%) believed that RFID business would grow steadily and 1 respondent emphasized that only breakthrough in technology and price would lead to a growth.

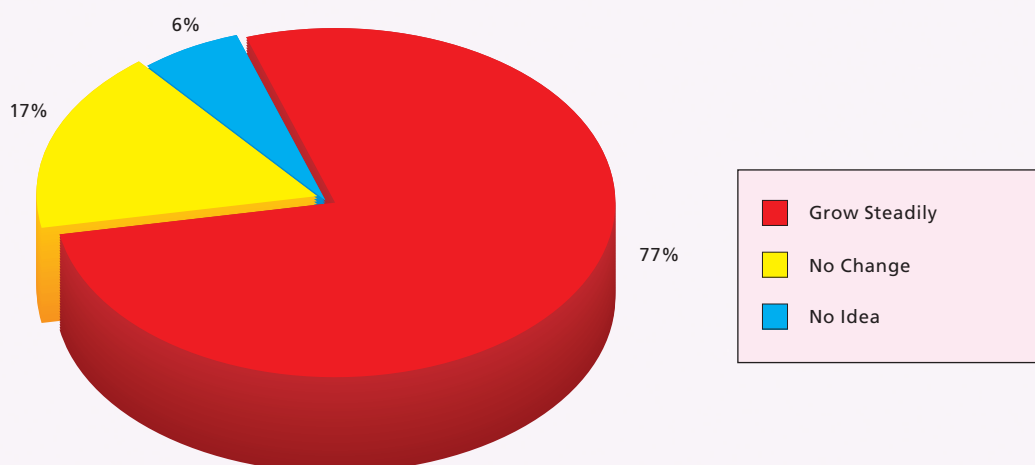
What do you think the future global RFID business will be?



f) What do you think the future RFID business in Hong Kong will be?

In this part, respondents were further asked about their views on the future RFID business in Hong Kong. Among all 18 respondents, 14 out of 18 respondents (77%) said that it would grow steadily.

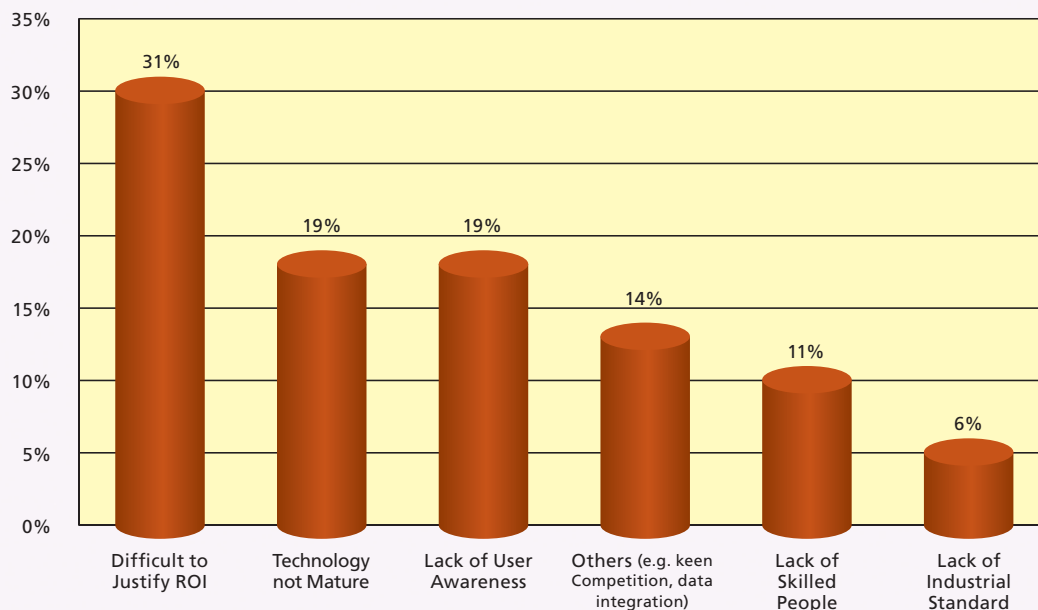
What do you think the future RFID business in Hong Kong will be?





g) As a RFID solution/hardware provider, what are the challenges you are facing?

In this section, respondents were asked the challenges they are facing as a RFID solution/hardware provider. 31% of respondents ranked *Difficult to Justify ROI* as the most popular challenge; it was followed by *Technology not Mature* and *Lack of User Awareness*, both accounted for 19%.



h) Ranking on industries according to the future prospective of RFID.

In this part, respondents were asked to rank the following industries according to the future prospective of RFID.

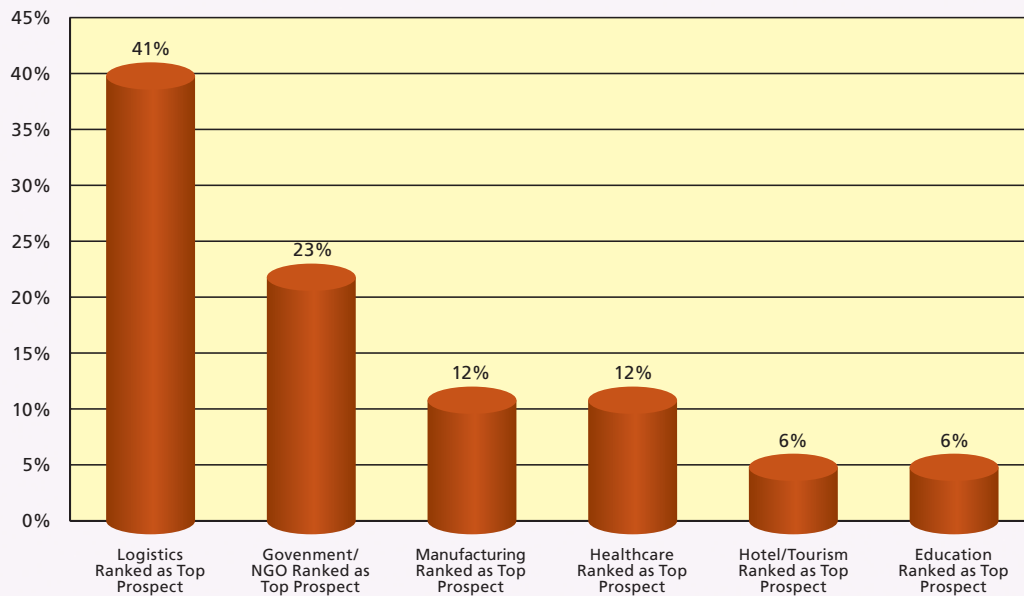
- 1) Logistics Service
- 2) Manufactures
- 3) Retailers
- 4) Importers/Exporters/Traders
- 5) Government/NGO
- 6) Healthcare/Medical/Pharmacy
- 7) Banking/Finance
- 8) Hotel/Tourism
- 9) Education
- 10) Others

17 respondents provided information. The findings suggested that 41% of respondents (7 out of 17) ranked Logistics as the most prospective industry; it was followed by Government/NGO (24%, 4 out of 17). It is noteworthy to find out that Hotel/Tourism and Education ranked as the least two prospective industries (6% each).



EDITOR'S COLUMN

RFID SOLUTION PROVIDER SURVEY



Summary of Findings

Having reviewed the impact of the financial tsunami on the Hong Kong RFID solution providers, it is apparent that most of the participants (66%) pointed out the financial tsunami imposed more negative than positive impacts on their business and almost half of them (46%) suffered to the extent of 20-30% in the business. Most of the participants are SME and have been in the industry for several years. Relatively they are more stable and knowledgeable about how to adapt to the changes in their business environment. The majority of them (72%) adopted some kinds of countermeasures during the economy downturn. We observed that Price/Cost and People related initiatives were the two most popular countermeasures surrounding their company activities. Nonetheless, their foci on countermeasures were quite diversified. Furthermore, most of the participants are pessimistic about the duration of financial tsunami, saying it will last until late 2010 which imply they are also preparing ahead.

While processing their views on the Wal-Mart mandate, it is worth noting that less than half of the participants (44%) are the RFID hardware/solution suppliers to Wal-Mart's suppliers. In terms of ratio to overall business, these Wal-Mart's suppliers only contribute little to their business. For those ten companies who are not serving Wal-Mart, 90% (9 out of 10 companies) do not have any plan to become a RFID solution provider to Wal-Mart's suppliers.

On the demand side, half of the participants' customers are manufacturing and logistics companies located in mainland China and Hong Kong. Most of the participants (72%) have a steady growth in their RFID business. Though they do not think the opportunities for global RFID business in the future are very promising, they are still very optimistic about the RFID business in Hong Kong in the next few years. Most of them also agreed that logistics, government and manufacturing are the three most promising areas for RFID application in the future.



EDITOR'S COLUMN

SPECIAL RFID TAG

This article presents the desk research results by the Project Team on the recent development of specially designed RFID tags. A total of 8 cases were selected from different places around the world including Japan, Singapore, Canada, Finland and US. Table 1 summarizes the 8 cases; the corresponding references and source of information are supplemented in Table 2.

Table 1: Summary of Cases - Recent Development of Special RFID Tag

Index	Country	Industry/Application	Description	Frequency
(a)	Japan	Aviation/Global Traceability for Aircraft Parts	World's First 64KByte High-Capacity FRAM RFID Tag	UHF
(b)	Canada	Energy/Ensuring Safety Refueling and Accurate Billing	RFID to Ensure Safe Refueling of Natural Gas Vehicles	LF
(c)	Canada	Farming/Tracking of Pigs	UHF Gen 2 RFID Pig Ear Tag	UHF
(d)	Japan	Garment/Work Uniform Management	Heat-sealable UHF-Band RFID Tag for Garment Management	UHF
(e)	Singapore	Medical/Patient Monitoring	UHF RFID with Sensor to Monitor Patients' Body Temperatures	UHF
(f)	US	People Management	World's Thinnest Active RFID Tag	UHF
(g)	Finland	Asset Management	RFID Tag on Metallic Surface	UHF
(h)	US	Privacy Protection	Consumer Controllable RFID Tag	LF/HF/UHF

Before we look into the 8 cases and various industrial applications, let us first provide our interpretation of special RFID tag with comparison to a generic RFID tag. Special RFID tags are different from generic RFID tags in a number of ways. It could be their purposes, form factors, features or a mixture of these attributes. Below elaborates each attribute and summarizes the difference between generic RFID tag and special RFID tag:

Purpose

A special RFID tag is a RFID tag specially designed to achieve a particular purpose. For instance, a specially designed water and dust proof plastic RFID tag with a pin to attach on pig's ear is designed for pig farms. Another example could be a consumer controllable tag that has a button for consumer to transmit signals only when it is pressed.

Form Factor

Unlike the generic RFID tag which only has 1 label format for all purposes, special RFID tags usually have their unique form factor to adapt the special environment. For example, small-sized thin waterproof plastic tags for garment; rice-grain-sized tag for corpse & glass-encapsulated tube-shape tags for trees.

Feature

Special RFID tags sometimes may have some special features such as internal power, sensor or high storage capacity to achieve certain objectives. For instance, a medical-graded battery-powered RFID tag with heat sensor is specially designed to attach to the abdomen of the patients to monitor body temperatures in the hospital.

	Generic RFID Tag	Special RFID Tag
Purpose	Generic purpose for all usage	Tailor-made to achieve one purpose
Form Factor	Label format	Various format
Feature	No internal power, No sensor	May have internal power, sensor and high capacity memory



EDITOR'S COLUMN

SPECIAL RFID TAG

Table 2: Highlights of Cases - Special RFID Tag

Index	Detailed Description
(a)	<p>World's First 64KByte High-Capacity FRAM RFID Tag 9 Jan 2008</p> <p>Most generic RFID label tags are just 96-128 bits in memory size which can only store simple info such as an ID number. In Jan 2008, Fujitsu Limited announced the development of the world's first 64KB UHF RFID tag with high-capacity Ferroelectric Random Access Memory (FRAM), featuring memory capacity sufficient to store large volumes of aircraft part and maintenance history data, while supporting a number of different radio frequencies to enable traceability worldwide.</p> <p>The new RFID tag does not only store part identification codes but also product and part maintenance history data. It enables traceability of various products and maintenance information for parts exchanged between companies and across nations around the world.</p> <p>Key features and specifications of Fujitsu's 64KB RFID tag can be found at: http://www.fujitsu.com/global/news/pr/archives/month/2008/20080109-01.html</p>
(b)	<p>RFID to Ensure Safe Refueling of Natural Gas Vehicles 1 Apr 2009</p> <p>Viridis, a Toronto based provider of vehicle-fuel dispensing systems for compressed natural gas (CNG) has developed an RFID-based system for ensuring safety and accurate billing when refueling CNG vehicles.</p> <p>Viridis' RFID-based system comprises Texas Instruments passive low-frequency (LF) ISO 11785-compliant tags and interrogators, a customized reader antenna designed into the fuel-dispensing nozzle assembly and specialized software to manage tag data. The RFID tag is to be attached, using a strong epoxy, near the vehicle's fueling valve, and within the tag's four-inch read range. Viridis software collects that tag data and controls the dispenser, so that it will only begin dispensing fuel when a valid RFID tag is read.</p> <p>The exact data encoded to that tag will be determined by the regulatory body in each country. Typically, the tag data would include the vehicle's serial number, the license plate number, the owner's name and the fuel cylinders' latest inspection date. To ensure that only valid tags and cylinders are accepted during refilling, the Viridis software encrypts the data when it is encoded to the tag.</p> <p>Full article by Mary Catherine O'Connor of RFID Journal can be viewed at: http://www.rfidjournal.com/article/view/4744</p>
(c)	<p>UHF Gen 2 RFID Pig Ear Tag 21 May 2009</p> <p>A Canada based RFID system company, GAO RFID Inc has designed a passive water & dust proof RFID tag for pig livestock tracking and operates in the 860 to 960MHz Gen 2 Class 1 frequency range. The pig ear tag is well suited for tracking of pigs and the monitoring of each animal's feeding, location, vaccination and health history. Because of its EPC compliance, the tag addresses applications that demand high anti-collision rates.</p> <p>This RFID pig ear tag shows robust performance over the entire UHF bandwidth, it operates reliably in dense reader environments, and provides up to 2 meter read range. This animal tag also offers a unique custom command set, which makes it easier to communicate with readers.</p> <p>The diameter of this pig ear tag is 49mm. It is an extended 96-bit EPC number, a 64-bit identifier, and 224 bits of user programmable memory. Data retention of this tag is up to 10 years. It is designed to function in tough environment for long period of time.</p> <p>Key features and specifications of GAO's specially designed RFID pig ear tag can be found at: http://www.gaorfid.com/index.php?main_page=product_info&cPath=122&products_id=808</p>



EDITOR'S COLUMN

SPECIAL RFID TAG

Table 2: Highlights of Cases - Special RFID Tag

Index	Detailed Description
(d)	<p>Heat-sealable UHF-Band RFID Tag for Garment Management 23 Apr 2009</p> <p>In Apr 2009, Fujitsu Limited and Fujitsu Frontech Limited announced the availability of a new and enhanced version of their UHF-Band RFID tag suitable for work uniform management and many other applications that require a waterproof feature. This new tag is waterproof and resistant to heat, pressure and chemicals. The operating temperature is between -20°C to 50°C while the tag can sustain between -40°C to 55°C without losing data. It can withstand the entire cleaning process of washing, drying, and ironing for at least 200 times.</p> <p>This new tag is 40% smaller, 50% lighter (only 1g), and more flexible than the previous tag model. The new tag permits heat-sealable attachment using thermal adhesives, a frequently requested feature from customers. The reduction of the number of steps involved in attaching the tag has lowered the initial deployment costs by roughly 40%.</p> <p>One of the key features of the new UHF-Band RFID tags is that they can be read from long-range distances. The intended uses include textile products: uniforms, work clothes, linens, mops, cargo bags, etc.; and businesses: hotels, amusement parks, hospitals, laundromats, etc.</p> <p>Key features and specifications of Fujitsu's highly durable UHF RFID tag can be found at: http://www.fujitsu.com/global/news/pr/archives/month/2009/20090423-01.html</p>
(e)	<p>UHF RFID with Sensor to Monitor Patients' Body Temperatures 28 Jan 2009</p> <p>One of Singapore's busiest health-care facilities, Tan Tock Seng Hospital had rolled out a radio frequency identification system in 2007 to locate patients within its facility when they are required for testing. This hospital expanded the system in Jan this year to include a 3cm-wide active UHF tag taped to a patient's abdomen, to monitor that individual's body temperature and detect serious infections without waking the patient.</p> <p>According to the deputy director of Tan Tock Seng Hospital's nursing service, the real-time patient tracking system had increased staff efficiency. It has improved inter-department communications, reduced bed turnover time and reduced patient waiting times.</p> <p>The extension of the tracking system, known as ThermoSensors, consists of a wireless temperature sensor which can monitor patients' body temperatures and track their locations at the same time. Temperature readings in ThermoSensors are measure automatically and information is continuously uploaded from the SmartNode interrogators to servers. Nurses are alerted immediately once a fever is detected.</p> <p>Full article by Dave Friedlos of RFID Journal can be viewed at: http://www.rfidjournal.com/article/view/4560</p>
(f)	<p>World's Thinnest Active RFID Tag 4 May 2009</p> <p>CenTrak, a US based provider of Real-Time Locations Systems (RTLS) for tracking equipment and people indoors, introduced a new Staff Badge (IT-740), the world's thinnest hybrid active RFID tag to the market in May 2009. The 3 millimeters thin Staff Badge allows users to layer a standard personnel badge on top of the tag, enabling them to be seamlessly integrated into staff uniforms and operations to provide complete staff location visibility.</p> <p>Features of the new IT-740 staff badge include, three programmable buttons, system controlled LED, hole mounts for portrait or landscape orientation, water resistance for easy cleaning, and ultra long battery-life.</p> <p>Press release and CenTrak's product information can be found at: http://www.centrak.com/PressRelease_04_05_2009.aspx</p>



EDITOR'S COLUMN

SPECIAL RFID TAG

Table 2: Highlights of Cases - Special RFID Tag

Index	Detailed Description
(g)	<p>RFID Tag on Metallic Surface 20 Apr 2009</p> <p>Confidex, a Finland based RFID technology company launched its latest RFID tag Confidex SteelWING in Apr 2009. The new passive UHF C1G2 special label is capable to function directly on metal surfaces with up to 10 meter read range. The light-weight tag has adhesive back plate and it can be directly attached on metal surface without any extra spacer material.</p> <p>SteelWING can also be attached to other materials and it can be operated with slightly reduced performance compared to metal surfaces. Wide-band Confidex SteelWING is equipped with NXP G2XM IC which has extended user memory and Confidex can deliver the SteelWINGS with pre-encoding or customer specific data label showing visually the encoded data in barcode or human readable form.</p> <p>Confidex SteelWING fits for various applications in many industries such as industrial returnable transit item tracking and I.T. asset management.</p> <p>Press release and Confidex's product information can be found at: http://www.confidex.fi/press_releases.html?&no_cache=1&news_id=1257</p>
(h)	<p>Consumer Controllable RFID Tag 28 Jan 2009</p> <p>A newly start-up New York based RFID technology company specialized in consumer product management, Zhenuine Corporation has developed a method for making RFID tags that communicate with a reader only when a person activates the tag by pressing a button on it. The system can be employed using passive tags operating at 125 kHz, 13.56 MHz or 860 to 960 MHz.</p> <p>According to the president of Zhenuine, the technology can be used on driver's licenses, passports or individual items to protect the consumer's privacy. Consumer of RFID tags do not have to worry about the leak of information from the tag now as information on the tags can't be read without their consent.</p> <p>The company has a patent pending for the mechanical switch on the tag, and currently has prototypes of tags operating at each of the above frequency bands. It has also patented a concept for creating an online registry at which consumers can search for the unique ID number encoded to a particular product's RFID tag, in order to determine whether that item is counterfeit. Shoppers could also utilize the site to register products they purchase. If they were then to resell a purchased item on an online auction or other site, a buyer would be able to request the unique ID number of that item's RFID tag, and look up in the registry whether the seller really owned that product.</p> <p>Full article by Mark Roberti of RFID Journal can be viewed at: http://www.rfidjournal.com/article/view/4556</p>



EDITOR'S COLUMN

SPECIAL RFID TAG

The research results revealed that RFID technology can be applied to various industries and in many different ways. It is worth noting that, in many cases, RFID tag must be specially designed for the application environment to deliver its maximal advantage, such as in the scenarios of the Fujitsu large memory size, high speed tag for aircraft parts, the Viridis vehicle-fuel dispensing system for compressed natural gas and the temperature sensor tag in Tan Tock Seng Hospital. There is an increasing demand from industries on special RFID tag design and we believe that the future special tags should consist of multiple features, such as:

- (i) Embedded with different sensors to measure different status of the objects
- (ii) Equipped with larger memory to record object pre-existing info and new status
- (iii) Have intelligence to give different response depending on the situation
- (iv) Implemented with high security protection to allow authorized access only
- (v) Survive in tough conditions and designed with self-destruction triggered by predefined conditions

On the application side, we will certainly see further development in the following areas:

- (i) Asset Management
- (ii) People Management
- (iii) Product Safety and Quality Management
- (iv) Product Identification
- (v) People Identification
- (vi) Status Monitoring

Two ongoing R&D projects by LSCM, namely "Package-specific RFID Tagging and Embedding Technology" and "RFID Tagging & Packaging Technology for Food Product" are listed below for your reference.

Package-specific RFID Tagging and Embedding Technology

In this project, we propose to design product specific RFID tags that are tuned and optimized for the packaging materials and different form factors, and explore the enabling technologies that will embed RFID tags inside product packages. The project will focus on case level packaging on paper and plastic packaging materials. This project will greatly facilitate the deployment of RFID technology in the packaging industry as well as other RFID applications in Hong Kong and PRD region.

RFID Tagging & Packaging Technology for Food Product

In this project, we are proposing solutions to address 3 different concerns: 1) Content specific RFID tags tailor-made and optimized for different food products; 2) Tamper-proof RFID labels to ensure product safety, authenticity with self-destructive mechanism; and 3) RFID antennas and inlays made from environmentally friendly materials. With the successful dissemination of the project, RFID technology is expected to bring a paradigm shift for food industry.

We hope that you will find this few pages update on the technology development and application of special RFID tag useful and informative. **RFID Hardware and Systems** has been our major R&D focus, people who are interested to learn more about relevant projects or would like to discuss special requirement on RFID tags can contact us by phone or visit www.lscm.hk.

EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

In the light of the background as introduced, one of the main roles of the LSCM R&D Centre includes empowering the logistics and supply chain community in Hong Kong and PRD with market and technology intelligence. The LSCM R&D Centre was awarded a 2-year project, titled **"A Market Intelligence Study on Enabling Technologies for Industries related to Logistics & Supply Chain Management"** in 2008 to focus its efforts on the study of enabling technology areas which are of the greatest industry concerns. Accordingly, the release of a suite of **LSCM Market Intelligence** Report that offers industry players with analytical results from in-depth interviews from a wide spectrum of industries is a major work that we have been undertaking. We have benefited from the views gathered through a series of on-site company visits, forums and meetings along with finding cause for both requirement and concern from local industries. To provide both research users and providers with a comprehensive view on RFID industry development, we also offer featured report on policy, standardization and the adoption & application of RFID Technology in relevant industries in China on a regular basis.

The LSCM R&D Centre had published **LSCM Market Intelligence Report (Issue 5)** in June 2009 to share findings which were based on information collected from 20 freight forwarding companies. In this current issue, we look at a new set of findings from 15 respondents from mainland China. Some consistent views between the two sets of data were noticed and summarized in **Section 8 of Broad Coverage**. For instance, they have been relying on traditional ways (*Email/Fax/Telephone*) to receive bookings and communicate with clients. The usages of *Web Portal (e-booking)*, *EDI* and *XML* were relatively low. In analysis of the application areas that they would consider enhancing, the rankings concluded from the two groups were coherent, they were: (1) *Transportation Process*; (2) *Warehousing & Distribution*; (3) *Purchasing/Supplier Relationship* and (4) *Customer Relationship*. While taking a close look to the 15 surveyed logistics companies in this Issue, they showed a high percentage of belief in recognizing I.T. as supply chain efficiency driver. 87% of them agreed that I.T. would help enhancing company's competitiveness. However, having discussed the current I.T. application status with them, only 10% of respondents regarded themselves in the stage of *"Full I.T. implementation with integration with both internal and external systems"*.

Undoubtedly, I.T. enables logistics practitioners to serve their clients better by means of improved operation efficiency and services. To achieve this objective, it is important for logistics practitioners to understand their customers' logistics requirements and business processes. In this issue, we included the analytical results based on information collected from 15 retailers from mainland China. In addition to operation needs and I.T. adoption levels based on interviews with those in this field, we introduced also three commonly used distribution methods and two collaborative strategies for retailers as reference (*Details refer to Section 8.2-8.4 of Broad Coverage*). Not surprisingly, the major consideration of retailers was related to understanding customers' needs and supply chain management. In terms of application areas and adoption rates, however, the adoption of supply chain management related I.T. applications by retailers was relatively low and more than half of respondents revealed that were not using *Information Platform* to collaborate with their



EXECUTIVE SUMMARY

business partners. When asked the most important motivating factors for technological upgrade, they said they would be motivated if *Service Level* (93%) and *Corporate Image* (92%) could be improved by such action. For now, their I.T. adoption levels are competent to support administrative activities like accounting and operation but relatively weak in the use of supply chain related applications (Table 8.4). Among the 15 surveyed retailers, there were 44% said that they would increase I.T. investment to cope with the customer demands. There seems to be uncertainty of the exact values that I.T. could contribute to businesses with retailers. From another perspective, this can be regarded an opportunity for logistics service providers to position themselves to fit in the gap and help retailers better manage their supply chain activities. The strategic positioning of logistics and retail sectors were elaborated in Section 8.3 for both groups to achieve higher levels of customer satisfaction.

The global financial tsunami has brought severe impact to the global economy and many countries have introduced economic stimulus packages to combat the challenges. The Chief Executive of the HKSAR Government, Mr. Donald Tsang announced in late 2008 the establishment of the Task Force on Economic Challenges in response to the global financial tsunami. Ten individuals from different sectors have joined the task force as members to timely evaluate the situation and discuss available options for the Government to address the challenges. As at June this year, various short and medium-term measures and policies have been announced including the six economic areas identified for further development, namely, testing and certification, medical services, innovation and technology, cultural and creative industries, environmental industry, and educational services. In mainland China, the National Development and Reform Commission (NDRC) and the Ministry of Industry and Information Technology (MIIT), together with other related departments promulgated in early 2009 the plan for restructuring and revitalizing the top ten industries, namely, steel, automobile, shipping, petrochemical, textile, light industries, non-ferrous metal, equipment manufacturing, electronic information and logistics. The article "Policy of China RFID Industry Development" published in the "*Global/China Watch*" section shares the key contents of two action plans formulated by the Standing Committee of the State Council for the electronic information industry and the logistics industry respectively. The Plan for Restructuring and Revitalizing the Electronic Information Industry serves the period 2009-2011, it emphasizes the importance of accelerating the construction of an information infrastructure, promoting innovation in the business and service model, consolidating the use of information technology in the economy and society in general, applying information technologies to transform traditional industries, using new applications to drive growth, integrating information technologies, accelerating the development and promotion of industrial solutions, supporting the development of products and systems for RFID, automotive electronics, mechanical electronics, medical electronics, industrial control and testing and the formulation of their standards. The Plan for Restructuring and Revitalizing the Logistics Industry serves also the same period 2009-2011 and one of the most important initiatives is to strengthen the development and application of new logistics technologies. The Plan indicated that automatic identification and tag technologies like barcodes, smart



EXECUTIVE SUMMARY

tags and RFID and electronic data interchange (EDI) technologies would be used extensively, visualization technologies, product tracking technologies and goods sorting technologies will be developed, and further investments will be made in RFID and mobile logistics information service technologies, standards research and development and applications. Moreover, such new transport technologies as Global Navigation Satellite System (GNSS), Geographic Information System (GIS), Vehicle Information and Communication System (VICS), Electronic Toll Collection (ETC), Intelligent Transport System (ITS) will be actively developed and used, and more research will be done to increase the security of logistics information systems (*Details refer to Section 1-3, "Policy of China RFID Industry Development" of Global/China Watch*).

In March 2009, we reported the performance of China's electronic information industry for the period January to September 2008 and discussed the characteristics of economic activities in China during the said period. According to the latest statistics as announced by the Performance Inspection and Coordination Bureau of MIIT for the period January to May 2009, the downward trend of China's electronic information industry has become more apparent this year and the industry in general remained at a low adjustment stage. Among various industries and sectors, the software industry and telecommunication industry have achieved double-digit year-on-year growths (*Details refer to Section 4, "Policy of China RFID Industry Development" of Global/China Watch*).

Lastly, we look at two important announcements from the MIIT in the first half of 2009. First, the assessment meeting for more than 900 projects under the MIIT Annual Electronic Information Development Fund 2009 (IT Fund) was successfully held in May 2009. Among the 19 projects calling for tenders, MIIT had received 367 submissions and the 4-day assessment has also been completed in June 2009. Second, MIIT announced in May 2009 the "Notice on the Initial Key Research Topics for the 12th 5-Year Plan" to solicit openly the research topics from the industries. In July 2009, the "Notice on the Publication of the Initial Studies of Key Research Topics for the 12th 5-Year Plan of China's Telecommunication Industry" was made available with a total of 48 research topics under ten categories called for project kickoff (*Details refer to Section 5-6, "Policy of China RFID Industry Development" of Global/China Watch*).

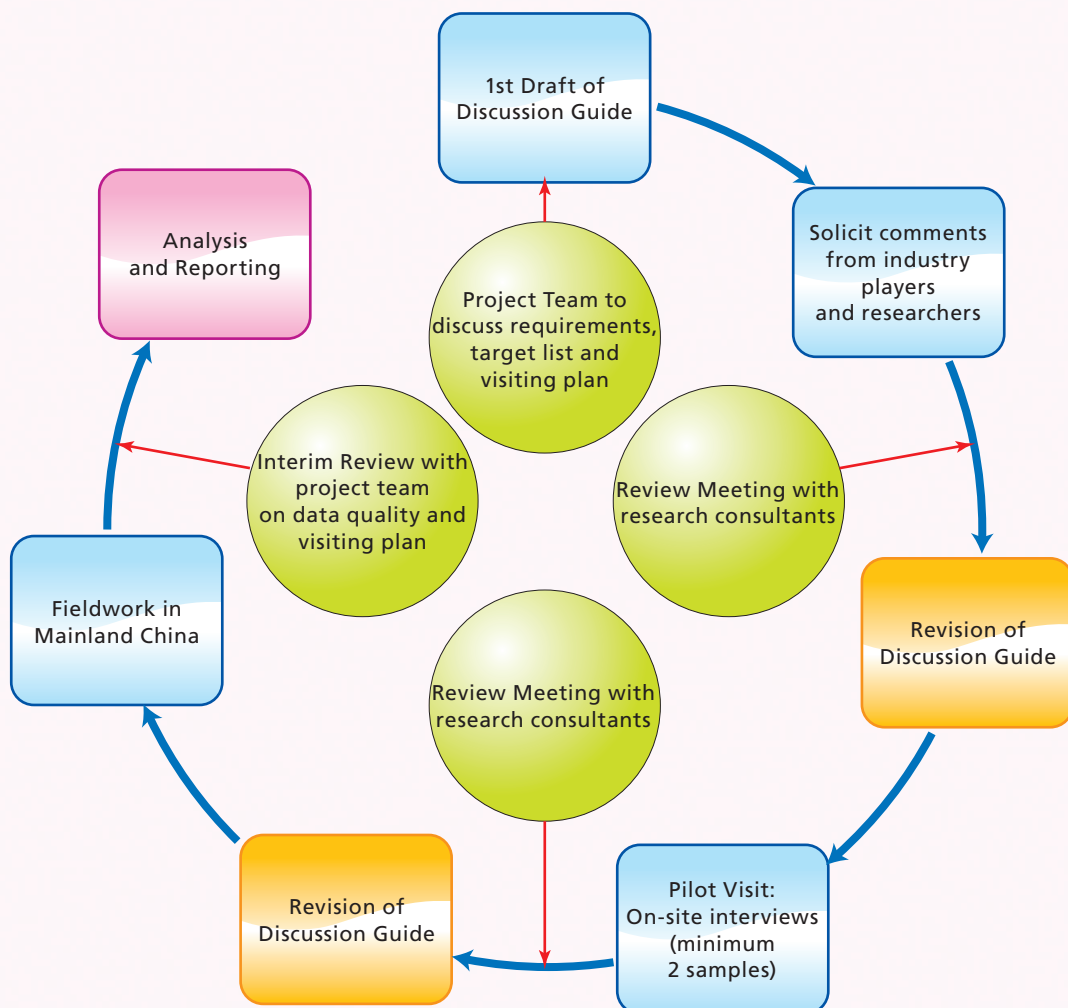


BROAD COVERAGE



BROAD COVERAGE

The essential details presented in this section are based on information collected from 15 logistics companies and 15 retailers respectively, both from mainland China. All interviews were carried out by research consultants between September and October in 2009, the average duration per interview took approximately 1.5 to 2 hours. For each company, the research consultant is required to probe opinions and stimulate discussion surrounding the company's demand and aspiration to new technologies, user requirement specifications, adoption and barriers to new technologies, logistics and supply chain product knowledge, industry issues as well as how government policies will affect industry operations. To maintain consistency of interview approach, a suite of industry focused discussion guide was in use (Appendix A-Logistics and Appendix B-Retail) and the following diagram outlines the methodology of the study.





BROAD COVERAGE

PROFILE OF PARTICIPANTS

1 Profile of Participants

Logistics Industry

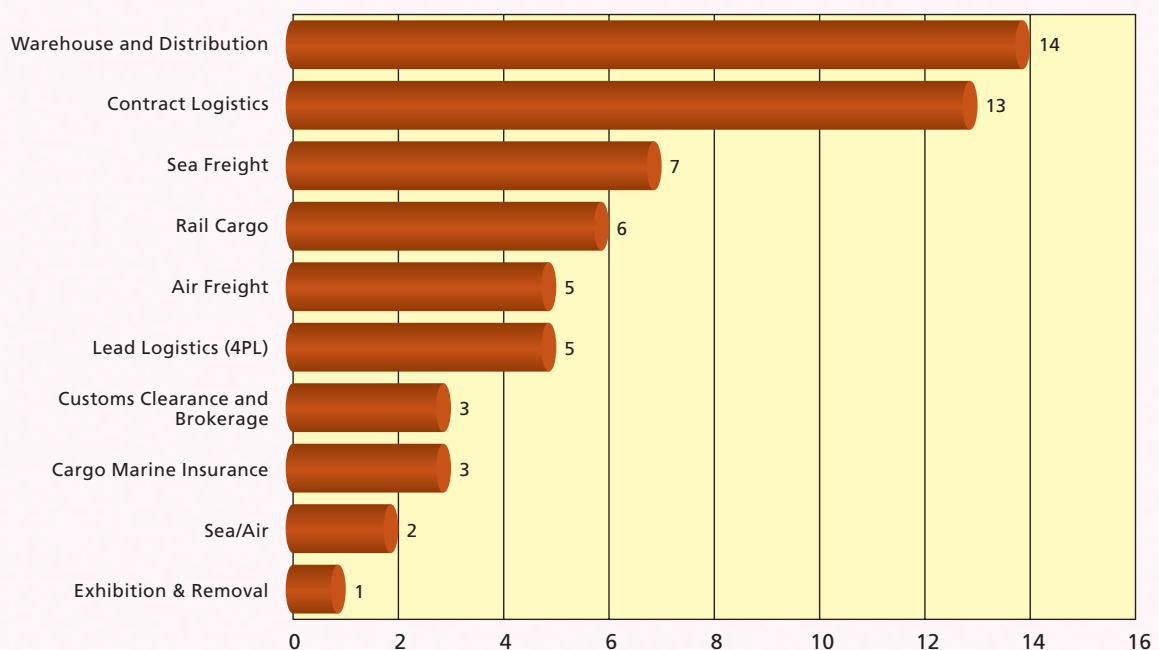
1.1 Profile of Participants by Service Coverage

Among the 15 participants who engaged in the logistics industry, they offered different types of services which were summarized in the following table. The findings suggested that a majority of the surveyed companies (93%) has covered Warehouse and Distribution as core services, it was followed by Contract Logistics (87%).

1.1 Table
Analysis of Participants by Service Coverage

Service Coverage	Number of Participants	%
Warehouse and Distribution	14	93%
Contract Logistics	13	87%
Sea Freight	7	47%
Rail Cargo	6	40%
Air Freight	5	33%
Lead Logistics (4PL)	5	33%
Customs Clearance and Brokerage	3	20%
Cargo Marine Insurance	3	20%
Sea/Air	2	13%
Exhibition & Removal	1	7%

1.1 Chart
Analysis of Participants by Service Coverage





BROAD COVERAGE

PROFILE OF PARTICIPANTS

1.2 Profile of Participants by Engaged Industry Sector

Among the 15 participants, majority of them served multiple industries. 9 out of 15 participants (60%) served Industrial companies; it was followed by Consumer (FMCG) which accounted for 53%. 7 out of 15 participants (47%) provided logistics services to Retail. Details were summarized in the following table.

1.2 Table
Analysis of Participants by Engaged Industry Sector

Industry Sector	Number of Participants	%
Industrial	9	60%
Consumer (FMCG)	8	53%
Retail	7	47%
Fashion/Apparel	6	40%
Life Sciences/Healthcare	3	20%
Aerospace/Automotive	3	20%
Hi-Tech	2	13%
Others	2	13%

1.3 Profile of Participants by Cargo Handling Capability

Among the 15 participants, majority of them (87%) possessed with Normal Goods handling capability and 60% out of those provided at least one more special cargo handling service. The findings also indicated that Temperature Controlled Cargo handling service was quite popular among the participants as close to half of them (47%) possessed with such capability. Details were summarized in the following table.

1.3 Table
Analysis of Participants by Cargo Handling Capability

Cargo Handling Capability	Number of Participants	%
Normal Goods	13	87%
Temperature Controlled Cargo	7	47%
Reefer Cargo & Perishable Goods	3	20%
Dangerous Cargo	3	20%



BROAD COVERAGE

PROFILE OF PARTICIPANTS

1.4 Profile of Participants by Employee Size

In terms of employee size, 47% of our surveyed companies employed less than 500 staffs. Employee size between 501 – 1,000 ranked second (33%); whereas employee size over 1,000 accounted for 20%.

1.4 Table

Analysis of Participants by Employee Size

Number of Staffs	Number of Participants	%
<500	7	47%
501 – 1,000	5	33%
> 1,000	3	20%
Total	15	100%

1.5 Profile of Participants by Job Title

Among the 15 respondents participating in this survey, 40% of respondents were graded Executive; it was followed by Director and Manager (27% each). One participant did not specify job title, below table records the distribution.

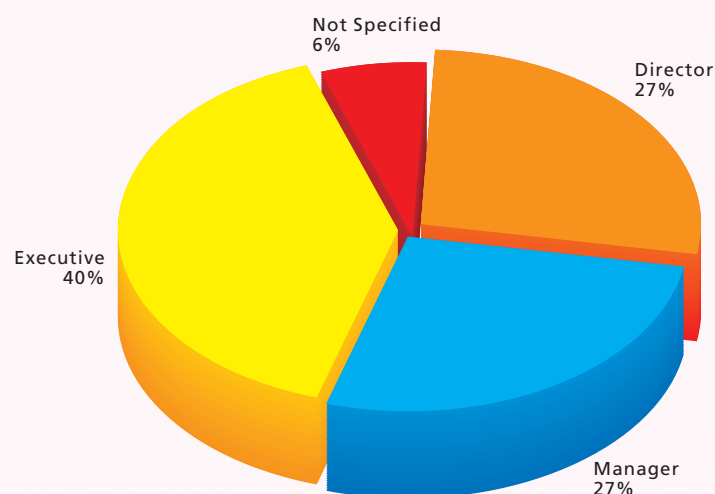
1.5 Table

Analysis of Participants by Job Title

Job Title	Number of Participants	%
Director	4	27%
Manager	4	27%
Executive	6	40%
Not Specified	1	6%
Total	15	100%

1.5 Chart

Analysis of Participants by Job Title





BROAD COVERAGE

PROFILE OF PARTICIPANTS

Retail Industry

1.6 Profile of Participants by Retail Format

Among the 15 retailers from mainland China participating in this survey, they engaged in 4 main types of retail formats. 53% of our surveyed companies were running Supermarket/Department Store, followed by Chain Store (24%). Middle & Small-sized Supermarket/Convenient Store and Specialty Store both accounted for 12%. Two companies owned more than one retail format, below table records the distribution.

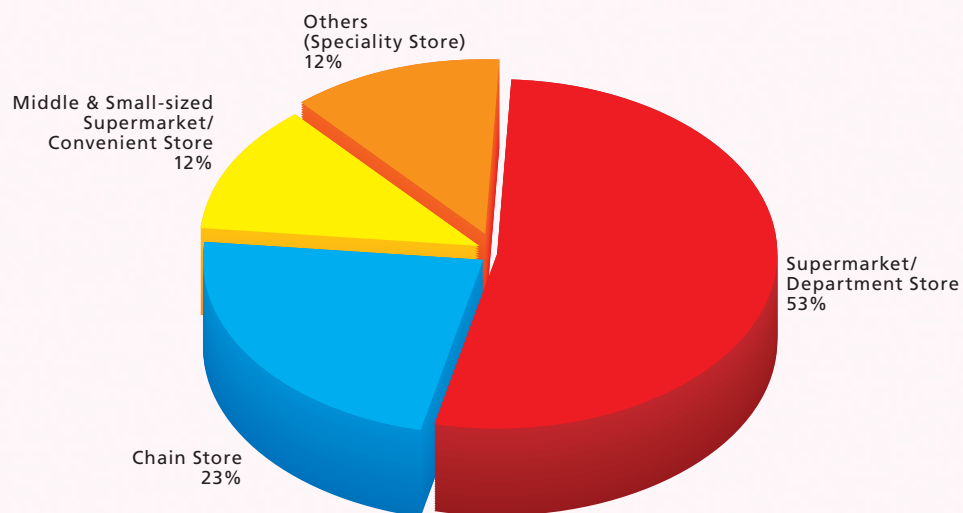
1.6 Table

Analysis of Participants by Retail Format

Retail Format	Number of Participants	%
Supermarket/Department Store	9	53%
Chain Store	4	23%
Middle & Small-sized Supermarket/Convenient Store	2	12%
Others (Speciality Store)	2	12%
Total	17	100%

1.6 Chart

Analysis of Participants by Retail Format





BROAD COVERAGE

PROFILE OF PARTICIPANTS

1.7 Profile of Participants by Number of Sales Outlets

Among the 15 participants, 33% owned less than 10 outlets; and another 33% with 11-50 outlets. Details were summarized in the following table.

1.7 Table

Analysis of Participants by Number of Sales Outlets

Sales Outlets	Number of Participants	%
<10	5	33%
11-50	5	33%
50-100	1	7%
>100	3	20%
Not Specified	1	7%
Total	15	100%

1.8 Profile of Participants by Employee Size

Among the 15 retailers from mainland China, 33% employed less than 500 staffs. It was followed by the range of 1,001-1,500, which accounted for 27%. Details were summarized in the following table.

1.8 Table

Analysis of Participants by Employee Size

Number of Staffs	Number of Participants	%
<500	5	33%
501-1,000	2	13%
1,001-1,500	4	27%
>1,500	3	20%
Not Specified	1	7%
Total	15	100%



BROAD COVERAGE

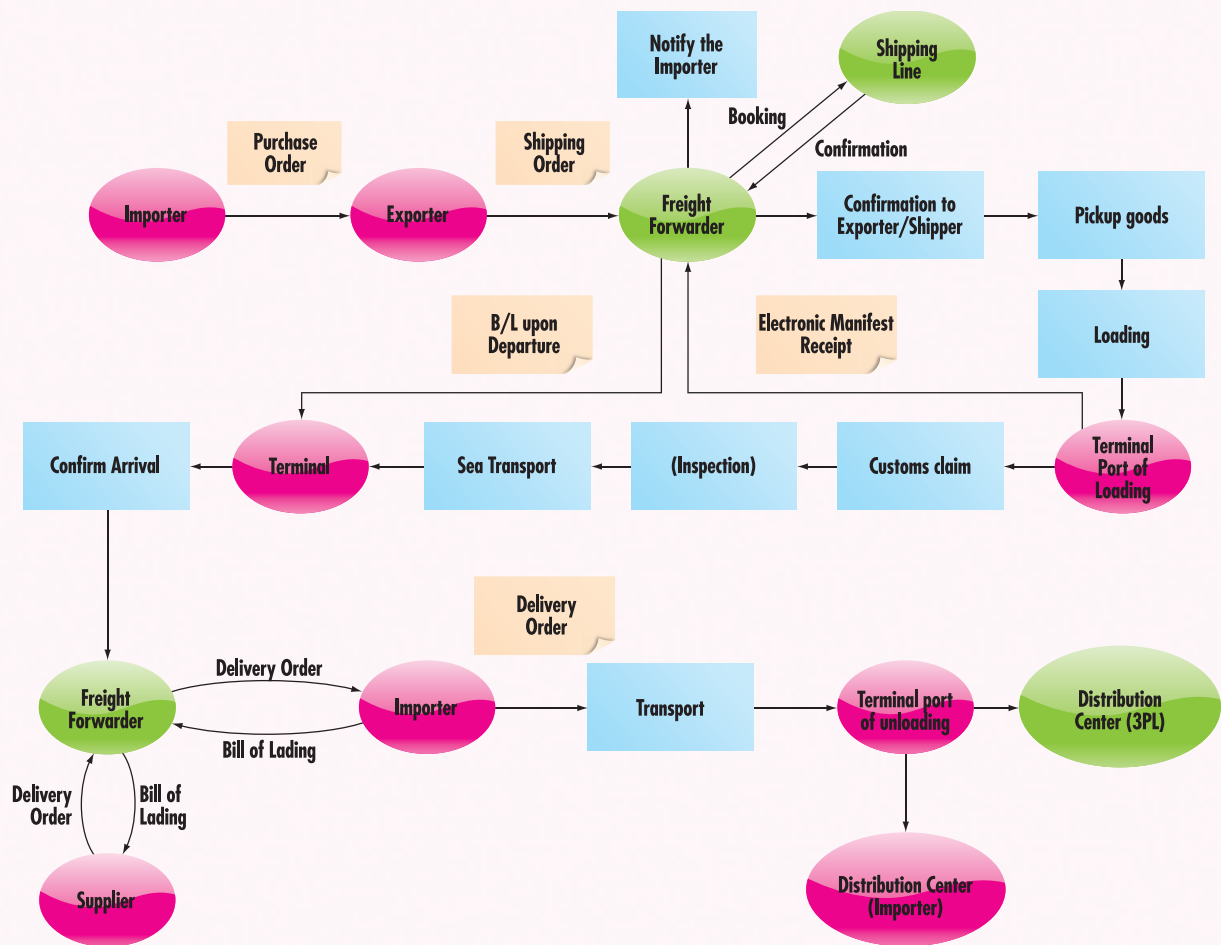
FINDINGS

2 Business Process

Logistics Industry

In this section, 15 logistics companies from mainland China participating in the survey explained their business operations to identify information flow and required technology needs. It was found that their businesses were almost running like what we described in below generic workflow diagram for logistics industry.

2a Diagram
Generic Workflow Diagram of Logistics Industry





BROAD COVERAGE

FINDINGS

2.1 Analysis on Current Freight Management System

Based on the information provided by the 15 logistics companies, 40% said they purchased their Freight Management Systems from technology providers; it was followed by self developed (33%); whereas 13% of respondents revealed that their FMS were jointly developed with partners. Details refer the following table.

2.1 Table
Analysis on Current Freight Management System

Mode	Number of Participants	%
Self Developed	5	33%
Purchased from Technology Provider	6	40%
Further Developed the Purchased Version	1	7%
Joint Development	2	13%
Not Specified	1	7%
Total	15	100%

2.2 Analysis on Functionality of Freight Management System

When asked the functionality of Freight Management System, the findings indicated that all respondents' FMS could provide Reporting feature (100%); it was followed by Data Analysis (87%). Both Load Planning and Customer Relationship Management accounted for 67%. Detailed findings were summarized in the following table.

2.2 Table
Analysis on Functionality of Freight Management System

Functions	Number of Participants	%
Data Analysis	13	87%
Load Planning	10	67%
Customer Relationship Management	10	67%
Reporting	15	100%

2.3 Analysis of Satisfaction Level on Freight Management System

Participants were further prompted to rate their satisfactory level towards their current FMS (Satisfactory Level: 1=Less satisfactory; 5=Most satisfactory). Two-thirds of respondents weighted either level 4 or 5 and the average score among the 15 participants was 3.73.

2.3 Table
Analysis of Satisfaction Level on Freight Management System

Satisfaction Level (5-pont Scale)	1	2	3	4	5	Total
Number of Participants	0	2	3	6	4	15
%	0%	13%	20%	40%	27%	100%



BROAD COVERAGE

FINDINGS

2.4 Analysis on Level of Integration with Internal and External Stakeholders

Participants were asked to provide information on their current system integration competency with internal systems and external stakeholders. Among the 15 logistics companies, 53% said they had integrated their systems with internal systems only whereas 40% had integration with both internal and external stakeholders. Detailed findings were shown in the following table.

2.4 Table

Analysis on Level of Integration with Internal and External Stakeholders

Level of Integration	Number of Participants	%
External only	1	7%
Internal only	8	53%
Both Internal and External	6	40%
Total	15	100%

2.5 Analysis of Communication Methods in Handling Bookings

Among the 15 logistics companies, the findings indicated that the majority of them were using traditional methods like Email/Fax/Telephone to receive bookings (47%); Web Portal (e-booking) ranked second (28%); EDI and XML were relatively less popular (13% each).

2.5 Table

Analysis of Communication Methods in Handling Bookings

Communication Methods	%
Web Portal (e-booking)	28%
Email/Fax/Telephone	47%
EDI	13%
XML	13%
Total	101%

Remarks: The above figures are rounded to nearest integer

2.6 Analysis on Challenges in Current Booking Procedures

The 15 logistics companies provided information on whether they faced challenges in their current booking procedures. 7 out of 15 participants (47%) indicated that they were facing challenges in their current booking procedures.

2.6a Table

Analysis on Challenges in Current Booking Procedures

Facing Challenges? (Y/N)	Number of Participants	%
Yes	7	47%
No	8	53%
Total	15	100%



BROAD COVERAGE FINDINGS

2.6bTable

Analysis on Issues in Current Booking Procedures

Issues in Current Booking Procedures	%
Time spent on collecting booking information from clients' web-portal	13%
Order description is not clear, check frequently	13%
Time lag	13%
Busy phone lines	13%
Language issues	13%
Processing urgent order	13%
Meeting new demands	13%
Time spent on training clients on placing orders	13%
Total	104%

Remarks: The above figures are rounded to nearest integer

2.7 Analysis of Satisfactory Level on Information Provided by Airlines/Ocean Carriers

The 15 logistics companies provided information on their satisfaction level towards information provided by airlines/ocean carriers. 6 out of 15 participants (40%) rated Overall Satisfactory, only a few rated the opposite (13%). However, 7 participants did not specify their opinions on this topic.

2.7 Table

Analysis of Satisfactory Level on Information Provided by Airlines/Ocean Carriers

Satisfaction to Information from Airlines/Ocean Carriers	Number of Participants	%
Overall Satisfactory	6	40%
Overall Unsatisfactory	2	13%
Not Specified	7	47%
Total	15	100%

2.8 Analysis on Truck Management Mode

The mode of truck management among the 15 logistics companies was examined. Among them, 11 out of 15 participants (73%) managed their own trucks and also adopted outsourcing. 3 out of 15 participants (20%) indicated they only adopted outsourcing mode.

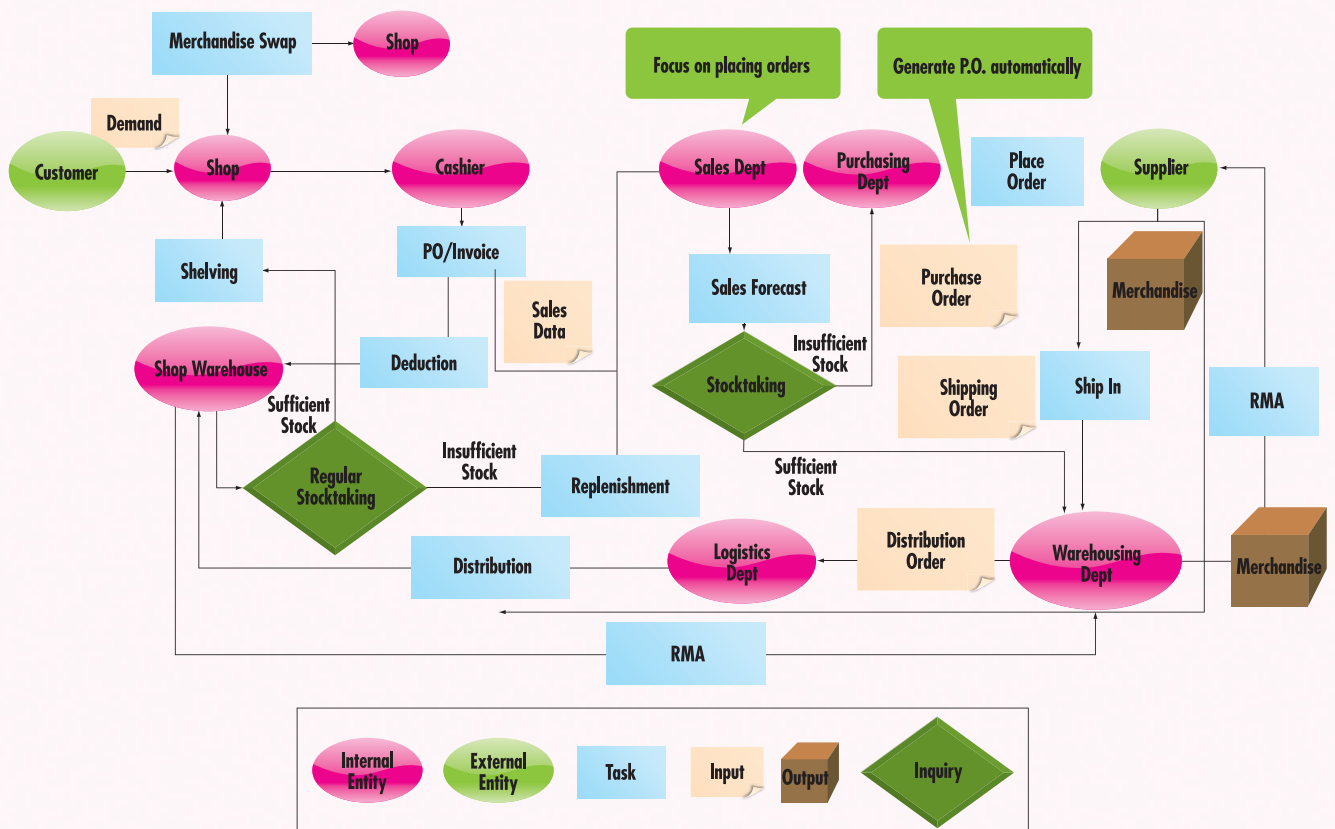
2.8 Table

Analysis on Truck Management Mode

Truck Management Mode	Number of Participants	%
Own Trucks and Outsourcing	11	73%
Outsourcing Only	3	20%
Own Trucks Only	1	7%
Total	15	100%

In this section, 15 retailers from mainland China participating in the survey were invited to explain their business operations to identify information flow and required technology needs. It was found that they were sharing with the generic workflow as shown in the following diagram.

2b Diagram





BROAD COVERAGE

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2.9 Most Important Information Flow

Among the different information flows, retail participants were asked to identify the most important one according to their business operations. Findings were summarized in the following table. Among the selections, Sales and Marketing/Understanding Customer Demand ranked the highest (42%); it was followed by Inventory Management (26%) and Ordering Processing/Replenishment (21%).

2.9 Table

Analysis on Most Important Information Flow

Most Important Information Flow	%
Sales & Marketing/Understanding Customer Demand	42%
Inventory Management	26%
Ordering Processing/Replenishment	21%
Others (e.g. Brand Structure)	11%
Total	100%

2.10 Most Time Consuming Process

The 15 retail participants were further prompted to indicate the most time consuming process. The top three processes were shortlisted in the following table, they were: Procurement (40%), Inventory Management (13%), and Customer Service (7%).

2.10 Table

Analysis on Most Time Consuming Process

Top 3 Most Time Consuming Processes	%
Procurement	40%
Inventory Management	13%
Customer Service	7%

2.11 Most Costly Process

Likewise, the top 3 most costly processes were shortlisted and summarized in the following table, they were: Rental & Property Management (25%), Labour Cost (19%) and Sales & Marketing (19%).

2.11 Table

Analysis on Most Costly Process

Top 3 Most Costly Processes	%
Rental & Property Management	25%
Labour Cost	19%
Sales & Marketing	19%



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2.12 Most Influential Process towards Company's Market Reaction

When asked which process is the most influential towards company's market reaction ability, the findings suggested that Understanding Customer Needs was the perceived most influential process (47%), Procurement and Sales ranked second (13% each), detailed findings were shown in the following table.

2.12 Table

Analysis on Most Influential Process towards Company's Market Reaction

Most Influential Process	%
Understand Customer needs	47%
Procurement	13%
Sales	13%
Operation Efficiency	7%
Distribution	7%
Brand Portfolio Information	7%
Put the Goods on Shelves	7%
Total	101%

Remarks: The above figures are rounded to nearest integer

2.13 Process involved the Highest Percentage of Errors

When asked which process involved the highest percentage of errors, retail participants ranked Inventory Management and Distribution & Logistics as top two (24% each) followed by Procurement (18%).

2.13 Table

Analysis on Process involved the Highest Percentage of Errors

Processes	%
Inventory Management	24%
Distribution & Logistics	24%
Procurement	18%
Sales Data	12%
Cashier Payment Handling	12%
Not Specified	12%
Total	102%

Remarks: The above figures are rounded to nearest integer



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2.14 Collaboration with Business Partners along the Supply Chain

In view of the critical areas in business process while collaborating with other business partners, retail participants regarded that Cooperation with Suppliers was the most critical process among the business operation (20%); whereas Communications with other Retailers and Collaboration with Business Partners both ranked second (13% each).

2.14 Table

Analysis of Collaboration with Business Partners

Critical Areas in Business Process while Collaborating with Other Business Partners	%
Cooperation with Suppliers	20%
Communications with other Retailers	13%
Collaboration with Business Partners	13%
Distribution with Logistics Service Suppliers	7%
Consignment with Suppliers	7%
Choose Suppliers and Decide Price	7%
Accuracy of Distribution Information	7%
Purchasing Computers from Suppliers	7%
Real information about Sales from Clients	7%
All Processes	7%
Warehouse Arrangement	7%
Total	102%

Remarks: The above figures are rounded to nearest integer

2.15 Pain Point in Business Operation

Regarding the pain point(s) they encountered in their business operations, 33% of the retail participants regarded there was no significant pain point. Nevertheless, Logistics, Quality Control and Government Support & Tax System were three areas with pain points perceived by retail respondents, detailed findings were shown in the following table.

2.15 Table

Analysis of Pain Point in Business Operation

Pain Point in Business Operation	%
No Pain Point	33%
Logistics	13%
Quality Control	13%
Government Support & Tax System	13%
Market Research	7%
Finance	7%
Sales Promotion	7%
Not Specified	7%
Total	100%



BROAD COVERAGE

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3 Current I.T. Applications

Logistics Industry

In this section, current I.T. applications and level of usage out of the 15 logistics companies were examined.

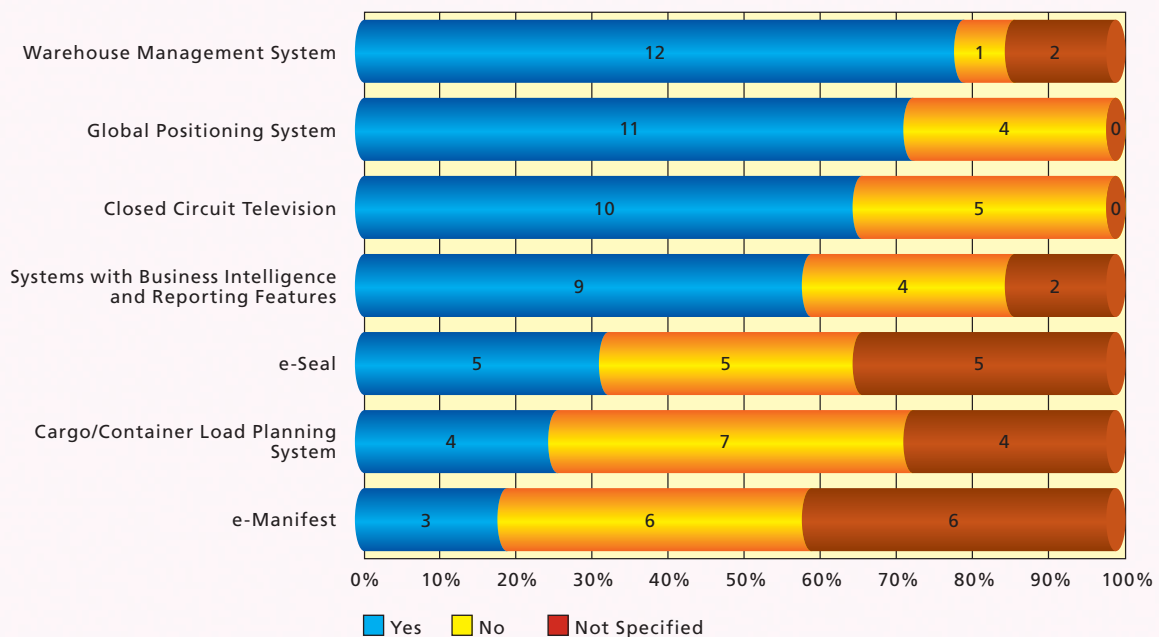
3.1 Analysis on Current I.T. Applications

The 15 logistics companies were asked to provide information on their current I.T. applications. Among the various applications, Warehouse Management System (WMS), Global Positioning System and Closed Circuit Television (CCTV) were the top three most popular applications adopted by participants, which accounted for 80%, 73% and 67% respectively.

3.1 Table
Analysis of Participants' Current I.T. Applications

Applications	Yes	No	Not Specified	Total
Warehouse Management System	12	1	2	15
Global Positioning System	11	4	0	15
e-Seal	5	5	5	15
Closed Circuit Television	10	5	0	15
e-Manifest	3	6	6	15
Cargo/Container Load Planning System	4	7	4	15
Systems with Business Intelligence and Reporting Features	9	4	2	15

3.1 Chart
Analysis of Participants' Current I.T. Applications





BROAD COVERAGE FINDINGS

3.2 Analysis on Current I.T. Applications Status

In this Section, participants were asked to select the most descriptive sentence for their current I.T. application status and we got only 10 responses to this question. The majority of the respondents (55%) believed they were in the stage of "Apply limited I.T. solution to automate a specific area of operations (e.g. document management system, warehousing system but not full ERP, finance & accounting system only, etc.)"; it was followed by the stage of "Full I.T. implementation with integration with other internal systems", which accounted for 35% of the total respondents. Results were summarized in the following table.

3.2 Table

Analysis of Participants' Current I.T. Applications Status

Current I.T. Application Status	Number of Participants	%
1 Totally manual, no hardware & software	0	0%
2 No knowledge and awareness of I.T. application. The company has no I.T. solution to solve for daily operating issues (except MS Office, public email account, etc.)	0	0%
3 Have knowledge and awareness of I.T. application but don't use any I.T. solution (except MS Office, public email account, etc.)	0	0%
4 Apply limited I.T. solution to automate a specific area of operations (e.g. document management system, warehousing system but not full ERP, finance & accounting system only, etc.)	5.5	55%
5 Full I.T. implementation with an integration with other internal systems	3.5	35%
6 Full I.T. implementation with an integration with both internal and external systems	1	10%
Total	10	100%

Remarks: 1 respondent gave a rating between 4 and 5



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Retail Industry

Likewise, in this section, current I.T. applications and level of satisfaction out of the 15 retailers from mainland China were examined.

3.3 Analysis on Current I.T. Applications

The 15 retailers were asked to provide information on their current I.T. applications and their satisfactory level were examined (Satisfactory Level: 1=Less satisfactory; 5=Most satisfactory). All participants provided information and the findings were summarized in the following table.

Among the various applications, Accounting (ACC), Point of Sale System (POS) and Card Management System were the top three most popular applications adopted by participants, which accounted for 100%, 87% and 87% respectively; satisfactory levels of each application were listed in the following table for reference.

3.3 Table

Analysis of Participants' Current I.T. Applications and Satisfactory Level

Applications	Number of Participants Currently Using	%	Number of Participants (Rated Satisfied to Very Satisfied)	%
Accounting	15	100%	13	87%
Point of Sale System	13	87%	11	85%
Card Management System	13	87%	10	77%
SIM	12	80%	9	75%
Warehouse Management System	11	73%	10	91%
Office Automation System	11	73%	8	73%
Purchase Order System	10	67%	10	100%
Human Resource Management System	10	67%	7	70%
EC Platform	9	60%	6	67%
Store Management System	9	60%	8	89%
Enterprise Resource Planning	8	53%	8	100%
Supply Chain Management System	8	53%	7	88%
Supplier Service System	8	53%	8	100%
Supplier Settlement System	8	53%	8	100%
Distribution Management System	7	47%	7	100%
Customer Relationship Management	5	33%	3	60%
Self-help Checkout System	5	33%	5	100%
Online Ordering System	4	27%	4	100%
Business Intelligence	3	20%	1	33%
PDA	3	20%	2	67%

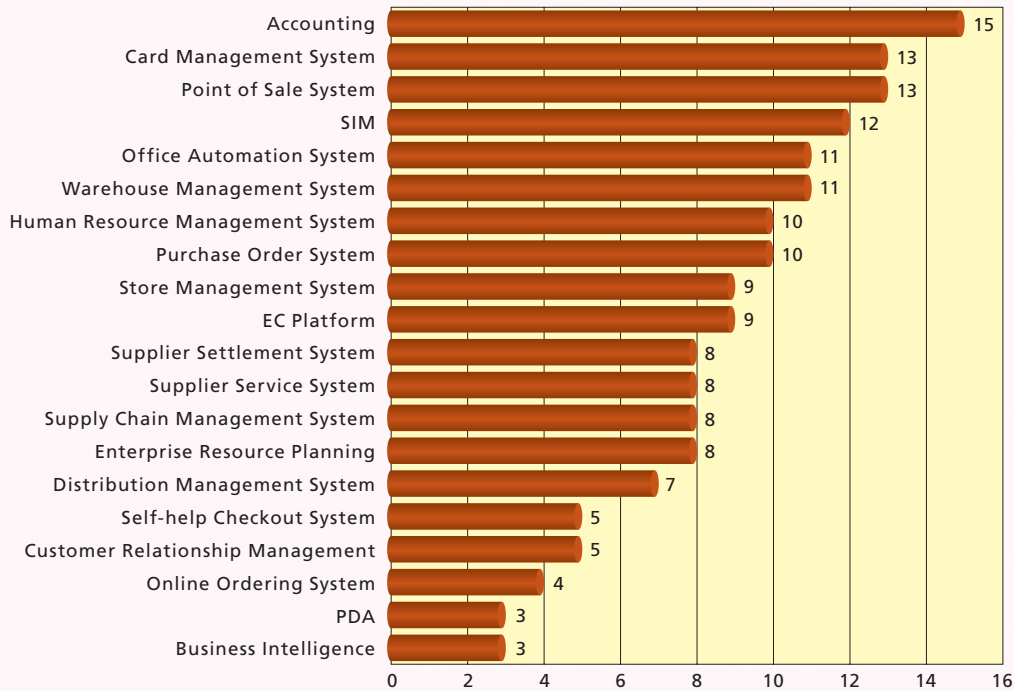


BROAD COVERAGE

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3.3 Chart

Analysis of Participants' Current I.T. Applications



3.4 Analysis on Current I.T. Applications Status

In this section, participants were asked to select the most descriptive sentence for their current I.T. application status. The majority of the respondents believed they were in the stage of "Full I.T. implementation with integration with other internal systems", which accounted for 40% of the total respondents. It was followed by the stage "Apply limited I.T. solution to automate a specific area of operations (e.g. document management system, warehousing system but not full ERP, finance & accounting system only, etc.)", which accounted for 33% of the total respondents. Results were shown in the following table.

3.4 Table

Analysis of Participants' Current I.T. Applications Status

Current I.T. Application Status	Number of Participants	%
1 Totally manual, no hardware & software	0	0%
2 No knowledge and awareness of I.T. application. The company has no I.T. solution to solve for daily operating issues (except MS Office, public email account, etc.)	0	0%
3 Have knowledge and awareness of I.T. application but don't use any I.T. solution (except MS Office, public email account, etc.)	0	0%
4 Apply limited I.T. solution to automate a specific area of operations (e.g. document management system, warehousing system but not full ERP, finance & accounting system only, etc.)	5	33%
5 Full I.T. implementation with an integration with other internal systems	6	40%
6 Full I.T. implementation with an integration with both internal and external systems	4	27%
Total	15	100%



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3.5 Analysis on Improvements Noticed after I.T. Adoption

In this section, the 15 retailers were further prompted to share the improvements they had noticed after I.T. adoption. As it was an open-ended type question, participants were welcomed to suggest more than one improvement. The findings indicated that Increased Operation Efficiency ranked the highest (21%), it was followed by Improved Management Efficiency (12%) and Cost Reduction (9%). The findings were summarized in the following table.

3.5 Table

Analysis on Improvements Noticed after I.T. Adoption

Improvements Noticed after I.T. Adoption	%
Increased Operation Efficiency	21%
Improved Management Efficiency	12%
Cost Reduction	9%
N/A	9%
Improved Data Quality	7%
Improved Reporting Efficiency	7%
Improved Inventory Management	5%
Accelerated Information Exchange	5%
Reduced Order Processing Time	5%
Reduced Labour Cost	5%
Business Process Optimization	5%
Better Internal Control	5%
Extension of Business Scope	5%
Environmental Friendly (Reduced Paper Usage)	2%
Total	102%

Remarks: The above figures are rounded to nearest integer

3.6 Analysis on Usage of Information Platform

In addition, participants were asked if they were using information platform to collaborate with business partners. The finding suggested that 6 out of 15 participants (40%) were using whereas 8 participants (53%) said that they were not using.

3.6 Table

Analysis on Usage of Information Platform

Using Information Platform? (Y/N)	Number of Participants	%
Yes	6	40%
Not Yet	8	53%
N/A	1	7%
Total	20	100%



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4 I.T. Applications Barriers and Concerns

Logistics Industry

In this section, the biggest challenges in I.T. applications and the motivating factors perceived by logistics companies for adopting I.T. were examined. In addition, participants were prompted to rank the importance of several attributes/consideration factors in deploying I.T. applications in their companies.

4.1 Analysis on Major Challenges Perceived by Participants

The 15 logistics companies were asked to indicate the major challenges they faced with technology adoption (1=Less challenging; 5=Most challenging). The findings indicated that Lack of Industry/Government Support (40%), Difficult to Cope with Rapid and Vary Customer Expectation (40%) and Shortage of Skilled I.T. People (38%) were the top three challenges. Details refer the following table.

4.1 Table
Analysis on Major Challenges Perceived by Participants

Challenges for I.T. Applications	Number of Participants	Rating on 4 to 5 (Challenging to Most Challenging)	%
Lack of Industry/Government Support	12	6	40%
Difficult to Cope with Rapid and Vary Customer Expectation	10	4	40%
Shortage of Skilled I.T. People	13	5	38%
Data Integration	12	4	33%
Limited Budget	12	3	25%
Difficult to Assess ROI	11	2	18%
User's Recognition on Application Value is Low	12	2	17%
Difficult to Cope with Rapid Technological Changes	9	1	11%
Complexity of Application	11	0	0%



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4.2 Analysis on Motivating Factors

When asked the motivating factors in deciding to enhance or upgrade their technological capabilities and customer offerings (1=Less important; 5=Most important), both Improve Operation Efficiency/Productivity and Reduce Human Error ranked the highest (87%). It was followed by Enhance Corporate Image (85%) and Increase Service Performance. The findings were summarized in the following table.

4.2 Table
Analysis on Motivating Factors

Motivating Factors	Number of Participants	Weighed (Least to Most Important)	%
Improve Operational Efficiency/Productivity	15	13	87%
Reduce Human Error	15	13	87%
Enhance Corporate Image	13	11	85%
Increase Service Performance	15	12	80%
Increase Company Profitability	14	11	79%
Build up Long-term Relationship	15	11	73%
Differentiate Themselves from Competitors	13	9	69%
Improve Customer Satisfaction	15	9	60%
Clear ROI	11	6	55%

4.3 Analysis on Rankings among Various Attributes

In addition, the 15 participants were prompted to rank on six concern areas in deploying I.T. application (Price/People/Technology/Time/Solution Providers' Capabilities/Solution Appropriateness). Among them, the majority ranked Solution Appropriateness as top concern (40%). Some others (27%) ranked People as top concern and fewer participants ranked Price and Solution Providers' Capabilities as top concerns (13% each).



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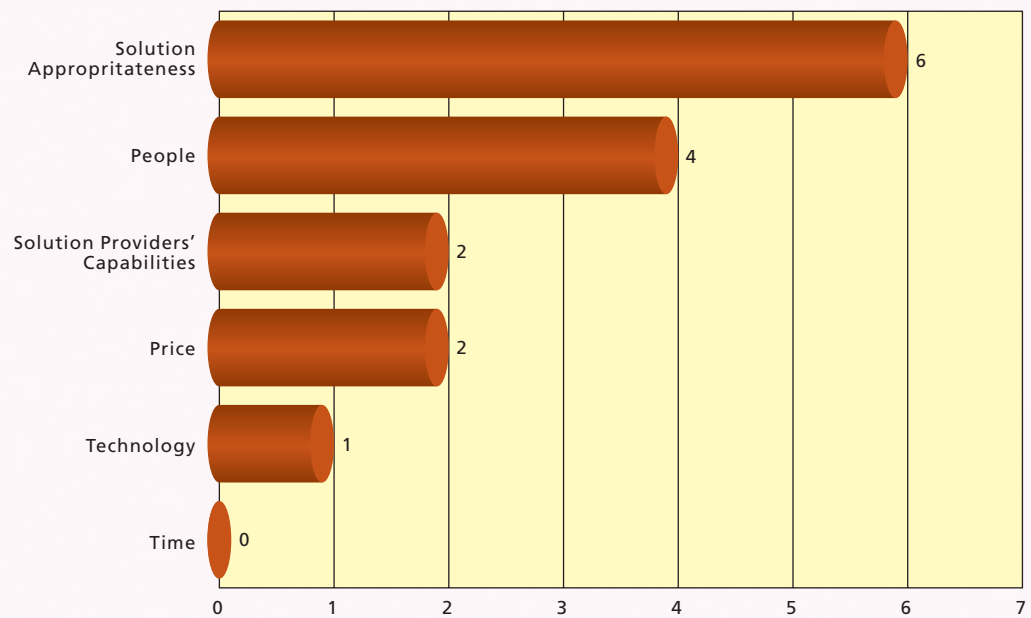
4.3 Table

Analysis on Rankings among Various Attributes

	Price	People	Technology	Time	Solution Providers' Capabilities	Solution Appropriateness	Total
Number of Participants	2	4	1	0	2	6	15
%	13%	27%	7%	0%	13%	40%	100%

4.3 Chart

Analysis on Rankings among Various Attributes





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Retail Industry

Similar questions for the 15 retailers from mainland China on the major challenges in I.T. applications and the motivating factors perceived by them in adopting I.T. were examined. In addition, participants were prompted to rank the importance of several attributes/consideration factors in deploying I.T. applications in their companies.

4.4 Analysis on Major Challenges Perceived by Participants

The 15 retailers were prompted to indicate the major challenges they faced with technology adoption (1=Less challenging; 5=Most challenging). The findings indicated that Business Process Reengineering ranked the highest (67%), it was followed by Limited Budget (38%) and Shortage of Systematic Plan (36%). Details refer the following table.

4.4 Table
Analysis on Major Challenges Perceived by Participants

Challenges for I.T. Applications	Number of Participants	Rating on 4 to 5 (Challenging to Most Challenging)	%
Business Process Reengineering	12	8	67%
Limited Budget	13	5	38%
Shortage of Systematic Plan	11	4	36%
Lack of Support from Supply Chain Partners	11	4	36%
Data Integration	14	5	36%
Shortage of Skilled I.T. Staff	12	4	33%
Potential System Hazard of Information System	13	4	31%
Difficult to Assess ROI	10	3	30%
Enormous Data	15	4	27%
Difficult to Maintain Information System	12	3	25%
Attention and Support from Management	12	3	25%
Difficult to Integrate Information System (Fast M&A)	10	2	20%
Shortage of Uniform Standard of the Retail Trade Technology	10	2	20%
Lack of Industry/Government Support	10	2	20%
Difficulties in Effective Data Mining	11	2	18%
Difficult to Adapt to the Rapid Development of I.T.	10	1	10%
Lack of Professional and Systematic Awareness of Informatization	12	1	8%
User's Recognition on Application Value is Low	10	0	0%
Complexity of Application Software	13	0	0%



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4.5 Analysis on Motivating Factors

When asked the motivating factors in deciding to enhance or upgrade their technological capabilities and customer offerings (1=Less important; 5=Most important), 93% of participants ranked Improve Service Level as the highest motivation (93%), it was followed by Improve Corporate Image (92%) and Improve Data Quality (86%). The findings were summarized in the following table.

4.5 Table
Analysis on Motivating Factors

Motivating Factors	Number of Participants	Weighed (Least to Most Important)	%
Improve Service Level	14	13	93%
Improve Corporate Image	13	12	92%
Improve Data Quality	14	12	86%
Improve Operation Efficiency	13	11	85%
Improve Reaction Ability	14	11	79%
Improve Management Level and Ability	13	10	77%
Reduce Human Error	13	9	69%
Reduce the Costs of Purchase, Distribution and Storage	13	6	46%
Reduce Labour Cost	13	6	46%
Clear ROI	13	6	46%
Direct Customer Request	12	4	33%



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4.6 Analysis on Rankings among Various Attributes

In addition, the 15 retailers were prompted to rank on seven concern areas in deploying I.T. application (Price/People/Technology/Service/Time/Solution Providers' Capabilities/Solution Appropriateness). Among them, the majority ranked Solution Appropriateness as top concern (36%), it was followed by Solution Providers' Capabilities and People (both accounted for 21%). Details refer the following table.

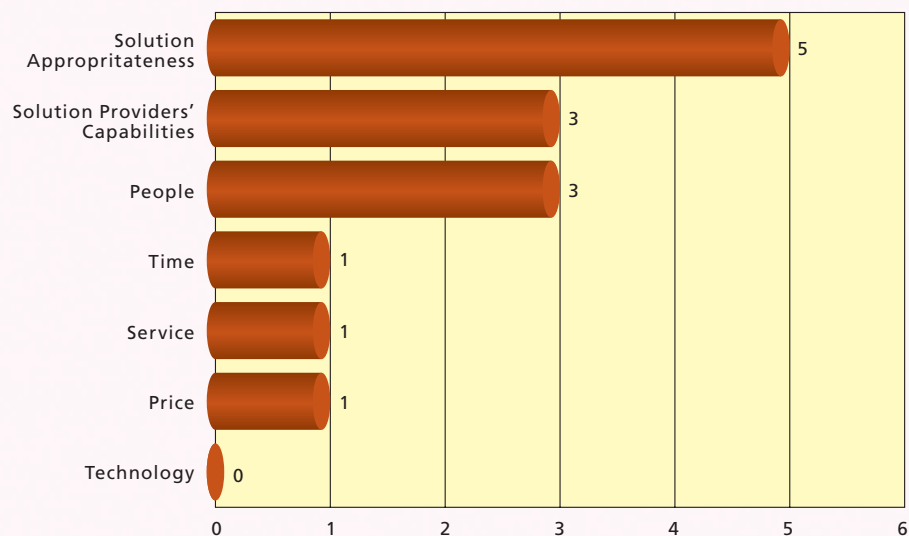
4.6 Table

Analysis on Rankings among Various Attributes

	Price	People	Technology	Service	Time	Solution Providers' Capabilities	Solution Appropriateness	Total
Number of Participants	1	3	0	1	1	3	5	14
%	7%	21%	0%	7%	7%	21%	36%	100%

4.6 Chart

Analysis on Rankings among Various Attributes





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5 Industry Trends/Characteristics

Logistics Industry

5.1 Analysis on Micro/Macro Trends

When asked the micro/macro trends that would affect business operation of the 15 logistics companies, the findings suggested that 57% of participants believed Industry Integration, M&A and Globalization would be the main trend. Some others (43%) believed that Government would provide more favorable policies.

5.1 Table

Analysis on Micro/Macro Trends

Micro/Macro Trends	%
Industry Integration, M&A and Globalization	57%
More Favorable Policies by Government	43%
Total	100%

5.2 Analysis on Whether I.T. is Able to Enhance Company's Competitiveness

The 15 logistics companies were asked to provide opinion on whether I.T. is able to enhance the company's competitiveness, 87% of them agreed that I.T. is critical for enhancing company's competitiveness.

5.2 Table

Analysis on Whether I.T. is Able to Enhance Company's Competitiveness

I.T. is Critical for Enhancing Company's Competitiveness	Number of Participants	%
Agree	13	87%
Disagree	2	13%
Total	15	100%

5.3 Analysis on Business Processes Affected by Transformation

In addition, participants were further asked if their business processes had been affected by the transformation. Based on the information provided by 8 participants, 63% expressed that they would change their business operation to enhance competitiveness.

5.3 Table

Analysis on Business Processes Affected by Transformation

Business Processes Affected by Transformation	Number of Participants	%
Change Business Operation to Enhance Competitiveness	5	63%
Increased Operation Cost by New Labour Law	2	25%
Economic Downturn Affected Business	1	13%
Total	8	100%

5.4 Analysis on I.T. Applications Needed by Transformation

The incurred changes in I.T. applications were examined. As it was an open-ended type question, participants were welcomed to suggest more than one opinion. Among various application needs, participants ranked RFID the highest (43%) followed by Web-based Technologies (29%).

5.4 Table

Analysis on I.T. Applications Needed by Transformation

I.T. Applications	%
RFID	43%
Web-based Technologies	29%
Wi-Fi	14%
Information Platform	14%
Total	100%



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Retail Industry

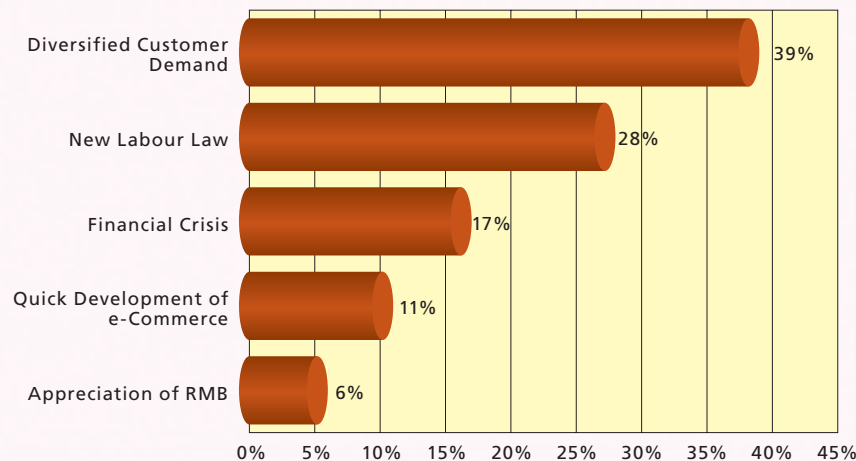
5.5 Analysis on Industry Trends/Characteristics

Likewise, in that section, we discussed industry trends and characteristics with the 15 retailers and in what ways it would affect their technology needs. The opinion indicated that Diversified Customer Demand and New Labour Law were two obvious trends. Details refer the following table.

5.5 Table
Analysis on Industry Trends/Characteristics

Trends that Impact the Industry	%
Diversified Customer Demand	39%
New Labour Law	28%
Financial Crisis	17%
Quick Development of e-Commerce	11%
Appreciation of RMB	6%
Total	100%

5.5 Chart
Analysis on Industry Trends/Characteristics



5.6 Analysis on Whether I.T. is Able to Enhance Company's Competitiveness

The 15 retailers were asked to provide opinion on whether I.T. is able to enhance the company's competitiveness, less than 50% of them agreed that I.T. is critical for enhancing company's competitiveness.

5.6 Table
Analysis on Whether I.T. is Able to Enhance Company's Competitiveness

I.T. is Critical for Enhancing Company's Competitiveness	Number of Participants	%
Agree	7	47%
Disagree	8	53%
Total	15	100%



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5.7 Analysis on Business Processes Affected by Transformation

In addition, participants were further asked if their business processes had been affected by transformation. The findings indicated that 30% of them would Increase Sales and Marketing Initiatives and 30% would focus on Business Process Optimization. Some others (20%) said that they would Develop e-Commerce and Improve Management Efficiency.

5.7 Table

Analysis on Business Processes Affected by Transformation

Business Processes Affected by Transformation	%
Increase Sales and Marketing Initiatives	30%
Business Process Optimization	30%
Develop e-Commerce	20%
Improve Management Efficiency	20%
Total	100%

5.8 Analysis on I.T. Applications Needed by Transformation

The incurred changes in I.T. applications were examined. As it was an open-ended type question, participants were welcomed to suggest more than one opinion. Among various application needs, participants ranked Increase I.T. Investment the highest (44%) followed by Develop e-Commerce (22%).

5.8 Table

Analysis on I.T. Applications Needed by Transformation

I.T. Applications/Needs	%
Increase I.T. Investment	44%
Develop e-Commerce	22%
RFID	11%
VIP Card System, Data Mining	11%
PDA	11%
Total	100%

5.9 Analysis on the Impact of e-Commerce to Traditional Trade

When asked the impact of e-Commerce to traditional retail trade, the majority of participants (46%) believed that e-Commerce posed limited impacts which could not replace traditional trade mode whereas some others (15%) said e-Commerce could speed up the transmission of messages (15%).

5.9 Table

Analysis on the Impact of e-Commerce to Traditional Trade

Impact of e-Commerce to Traditional Retail Trade	%
Limited Impacts/Could not Replace Traditional Mode	46%
Speed up the Transmission of Messages	15%
Threat to Traditional Retail	8%
Develop New Business Mode	8%
Lower Cost	8%
Create Effect on Standard Production	8%
Bring Issue on Privacy	8%
Total	100%



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6 Future I.T. Applications

Logistics Industry

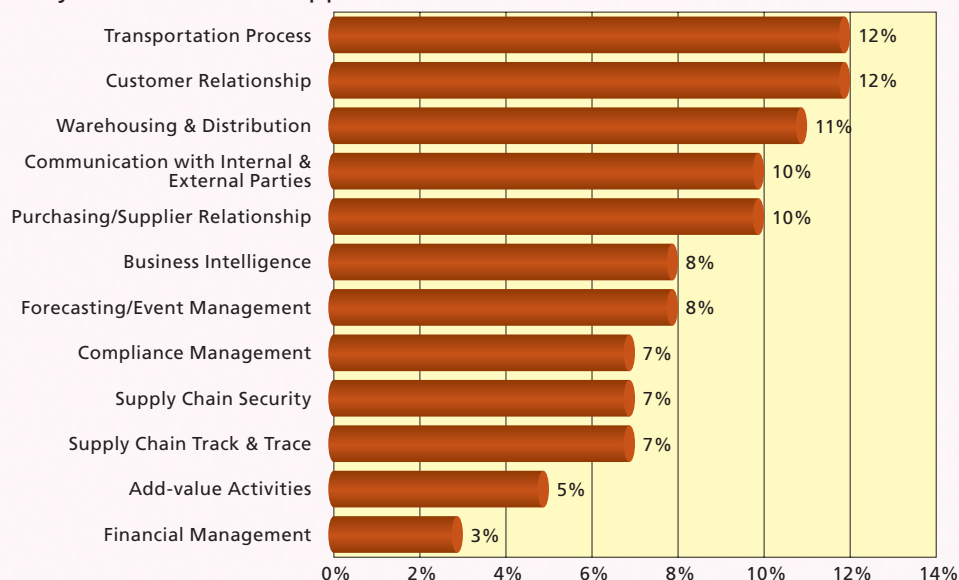
6.1 Analysis on Future I.T. Applications

The 15 logistics companies were asked to provide comment on their future I.T. adoption plan. The findings suggested that Customer Relationship and Transportation Process ranked the highest (12% each) followed by Warehousing & Distribution (11%). The findings were summarized in the following table.

6.1 Table
Analysis on Future I.T. Applications

Future I.T. Applications	%
Customer Relationship	12%
Transportation Process	12%
Warehousing & Distribution	11%
Purchasing/Supplier Relationship	10%
Communication with Internal & External Parties	10%
Forecasting/Event Management	8%
Business Intelligence	8%
Supply Chain Track & Trace	7%
Supply Chain Security	7%
Compliance Management	7%
Add-value Activities	5%
Financial Management	3%
Total	100%

6.1 Chart
Analysis on Future I.T. Applications





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6.2 Analysis on RFID

When asked the comments on RFID technology, the findings suggested that 38% of participants recognized the Value/Efficiency brought by RFID. Still, 30% regarded that the technology is Expensive.

6.2 Table
Analysis on RFID

Views on RFID	%
Recognized the Value/Efficiency	38%
Expensive	30%
No plan to Implement	19%
Immature	13%
Total	100%

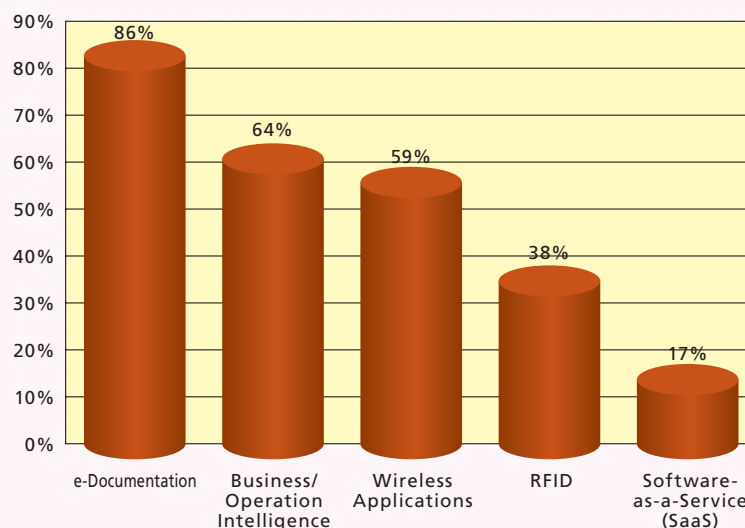
6.3 Analysis of Views on I.T. Applications/Initiatives

When asked their views on various I.T. applications/initiatives, they included Business/Operation Intelligence, Software-as-a-Service (SaaS), e-Documentation, RFID, Wireless Applications, the findings indicated that e-Documentation received highest reorganization (86%). It was followed by Business/Operation Intelligence (64%) and Wireless Applications (59%).

6.3 Table
Analysis of Views on I.T. Applications/Initiatives

Views on I.T. Applications/Initiatives	%
e-Documentation	86%
Business/Operation Intelligence	64%
Wireless Applications	59%
RFID	38%
Software-as-a-Service (SaaS)	17%

6.3 Chart
Analysis of Views on I.T. Applications/Initiatives





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Retail Industry

6.4 Analysis on Future I.T. Applications

Likewise, retails participants were asked to provide comments on their future I.T. adoption plan. The findings suggested that Customer Relationship and Communications with Internal & External Parties ranked the highest (12% each); it was followed by Compliance Management and Financial Management (10% each). Details refer to the following table.

6.4 Table

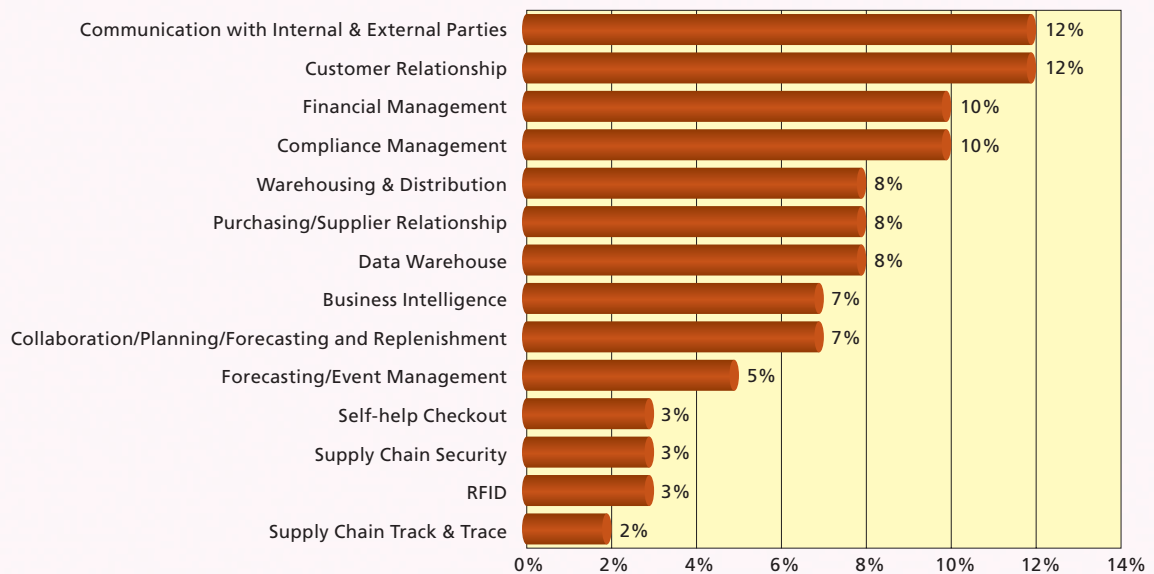
Analysis on Future I.T. Applications

Future I.T. Applications	%
Customer Relationship	12%
Communication with Internal & External Parties	12%
Compliance Management	10%
Financial Management	10%
Data Warehouse	8%
Purchasing/Supplier Relationship	8%
Warehousing & Distribution	8%
Collaboration/Planning/Forecasting/Replenishment	7%
Business Intelligence	7%
Forecasting/Event Management	5%
RFID	3%
Supply Chain Security	3%
Self-help Checkout	3%
Supply Chain Track & Trace	2%
Total	98%

Remarks: The above figures are rounded to the nearest integer

6.4 Chart

Analysis on Future I.T. Applications





BROAD COVERAGE FINDINGS

6.5 Analysis on RFID

The 15 retailers were asked to provide comment on RFID technology, only 7 participants responded to the questions. The findings suggested that 40% of them regarded the technology is Expensive and 33% recognized the Value/Efficiency brought by RFID.

6.5 Table
Analysis on RFID

Views on RFID	%
Expensive	40%
Recognized the Value/Efficiency	33%
Immature	13%
No plan to Implement	7%
Customer Demand Driven	7%
Total	100%



BROAD COVERAGE

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7 R&D Demand & Aspiration

Logistics Industry

7.1 Analysis on Industry/Government Support

The 15 logistics companies were asked about their expectations from the Government in helping the industry in term of short-term and long-term. Among them, 30% expected Government to develop Communications/Information Platform; 25% expected the Government to assist develop Policies Regulation and Industrial Standardization.

7.1 Table
Analysis on Industry/Government Support

Industry/Government Support	%
Communications/Information Platform	30%
Policies Regulation & Industrial Standardization	25%
Financial Support	25%
Talents Recruitment	5%
Not Specified	15%
Total	100%

7.2 Analysis of Views on LSCM's Contribution

When asked the participants on whether they agreed the contribution of the LSCM R&D Centre, all of them (100%) believed the long-term goal of LSCM could contribute to strengthen the competitiveness of PRD's economic.

7.2 Table
Analysis of Views on LSCM's Contribution

Contribution of the LSCM R&D Centre	Number of Participants	%
Yes	15	100%
No	0	0%
Total	15	100%



BROAD COVERAGE

FINDINGS

7.3 Analysis of Interested Areas on LSCM Roadmap

In this Section, participants were asked to indicate their interested areas of LSCM R&D roadmap. Among the 15 participants, there were 11 provided opinions and they were summarized as follow.

RFID Hardware & System

7 out of 11 participants (64%) indicated that they were interested in Theme 1 “Low Cost RFID Tag Manufacturing Techniques”

Networking & Infrastructure Technologies

7 out of 11 participants (64%) indicated that they were interested in Theme 6 “Enabling Technologies for Enterprise e-Logistics Internetworking”

Applications & Decision Support Technologies

5 out of 11 participants (45%) indicated that they were interested in Theme 9 “Sensor-enabled Logistics Applications” and Theme 11 “Enabling Technologies in Electronic Seal Based Logistics”.

7.3 Table

Summary of Interested Areas on LSCM R&D Roadmap

Themes	Number of Participants	%
RFID Hardware & System		
Theme 1 “Low Cost RFID Tag Manufacturing Techniques” is set on easing the cost issue of adoption and deployment for RFID	7	64%
Theme 2 “RFID for Manufacturing and Packaging Industries” stresses on easy use of RFID for product manufacturers who need to tag product shipment with RFID	3	27%
Theme 3 “RFID Testing and Qualification” targets for helping users to test and select appropriate RFID solutions to best fit their use	2	18%
Theme 4 “RFID beyond Gen 2” is to push the envelope of current RFID technology to support practical applications for range, accuracy, security, memory and sensor requirements	5	45%
Networking & Infrastructure Technologies		
Theme 5 In the infrastructure technologies track steers for low-barrier adoption of logistics IT with the approach of “On-Demand Technologies for Logistics Application Software Service Platforms”	4	36%
Theme 6 “Enabling Technologies for Enterprise e-Logistics Internetworking”, fostering the use of IT for logistics integration, addresses the common problem in industry for effective and efficient business process integration across enterprise boundary	7	64%
Applications & Decision Support Technologies		
Theme 7 “RFID Systems for Specific Environments” will foster the development for RFID application systems for niche but critical requirements in common logistics operations	3	27%
Theme 8 “Enabling Technologies for Mobile Logistics” encourages innovative applications for distribution and delivery which are mobile in nature	4	36%
Theme 9 “Sensor-enabled Logistics Applications” will enable automation in cargo monitoring	5	45%
Theme 10 “Positioning Technologies and Optimization for Asset Tracking and Monitoring” will add to the capability of real-time cargo tracking	2	18%
Theme 11 “Enabling Technologies in Electronic Seal Based Logistics” participates in the contemporary e-seal standards development which is taking place actively not only in the global arena but also across the local border of Hong Kong and Shenzhen	5	45%



BROAD COVERAGE

FINDINGS

Retail Industry

7.4 Analysis on Industry/Government Support

Likewise, in this section, we discussed the required industry/government support with the 15 retailers. The majority of participants expected the Government to offer more Financial Support (41%); whereas 18% would like to see more development on Communications/Information Platform.

7.4 Table

Analysis on Industry/Government Support

Industry/Government Support	%
Financial Support	41%
Communications/Information Platform	18%
Regulate Industry Policies	6%
Logistics Distribution/Traffic Control	6%
Not Specified	29%
Total	100%

7.5 Analysis of Views on LSCM's Contribution

When asked the retailers on whether they agreed the contribution of the LSCM R&D Centre, 10 participants gave response to the question. They all believed the long-term goal of LSCM could contribute to strengthen the competitiveness of PRD's economic.

7.5 Table

Analysis of Views on LSCM's Contribution

Contribution of the LSCM R&D Centre	Number of Participants	%
Yes	10	67%
Not Sepcified	5	33%
Total	15	100%

7.6 Analysis of Interested Areas on LSCM Roadmap

In this Section, participants were asked to indicate their interested areas of LSCM R&D roadmap. Among the 15 participants, there were 9 provided opinions and they were summarized as follow.

RFID Hardware & System

5 out of 9 participants (56%) indicated that they were interested in Theme 1 "Low Cost RFID Tag Manufacturing Techniques"

Networking & Infrastructure Technologies

3 out of 9 participants (33%) indicated that they were interested in Theme 6 "Enabling Technologies for Enterprise e-Logistics Internetworking".

Applications & Decision Support Technologies

2 out of 9 participants (22%) indicated that they were interested in Theme 7 "RFID Systems for Specific Environments" and Theme 11 "Enabling Technologies in Electronic Seal Based Logistics".



BROAD COVERAGE FINDINGS

7.6 Table

Summary of Interested Areas on LSCM R&D Roadmap

Themes	Number of Participants	%
RFID Hardware & System		
Theme 1 "Low Cost RFID Tag Manufacturing Techniques" is set on easing the cost issue of adoption and deployment for RFID	5	56%
Theme 2 "RFID for Manufacturing and Packaging Industries" stresses on easy use of RFID for product manufacturers who need to tag product shipment with RFID	2	22%
Theme 3 "RFID Testing and Qualification" targets for helping users to test and select appropriate RFID solutions to best fit their use	3	33%
Theme 4 "RFID beyond Gen 2" is to push the envelope of current RFID technology to support practical applications for range, accuracy, security, memory and sensor requirements	2	22%
Networking & Infrastructure Technologies		
Theme 5 In the infrastructure technologies track steers for low-barrier adoption of logistics IT with the approach of "On-Demand Technologies for Logistics Application Software Service Platforms"	1	11%
Theme 6 "Enabling Technologies for Enterprise e-Logistics Internetworking", fostering the use of IT for logistics integration, addresses the common problem in industry for effective and efficient business process integration across enterprise boundary	3	33%
Applications & Decision Support Technologies		
Theme 7 "RFID Systems for Specific Environments" will foster the development for RFID application systems for niche but critical requirements in common logistics operations	2	22%
Theme 8 "Enabling Technologies for Mobile Logistics" encourages innovative applications for distribution and delivery which are mobile in nature	1	11%
Theme 9 "Sensor-enabled Logistics Applications" will enable automation in cargo monitoring	1	11%
Theme 10 "Positioning Technologies and Optimization for Asset Tracking and Monitoring" will add to the capability of real-time cargo tracking	1	11%
Theme 11 "Enabling Technologies in Electronic Seal Based Logistics" participates in the contemporary e-seal standards development which is taking place actively not only in the global arena but also across the local border of Hong Kong and Shenzhen	2	22%



BROAD COVERAGE

RECOMMENDATIONS

Logistics Industry

8.1 Comparison of the Key Findings with LSCM Market Intelligence Report (Issue 5)

The LSCM R&D Centre had published LSCM Market Intelligence Report (Issue 5) in June 2009 to share findings which were based on information collected from 20 logistics companies. In this report, we look at a new set of findings from 15 respondents from mainland China. Some consistent views between the two sets of data were noticed and summarized.

Firstly, the two groups of logistics companies shared similar viewpoints on micro/macro trend, both groups believed that *Industry Integration*, *M&A* and *Globalization* would be the key trends. Asked what the communication methods of receiving booking would be, respondents said they relied more on traditional ways like *Email/Fax/Telephone*, followed by *Web Portal (e-booking)*. The usages of *EDI* and *XML* were relatively low, below comparison table summaries the distribution of booking methods.

8.1 Table

Distribution of Booking Methods (Comparison between Issue 7 and Issue 5)

Communication Methods	Issue 5 (%)	Issue 7 (%)
Email/Fax/Telephone	50%	47%
Web Portal (e-booking)	25%	28%
EDI	17%	13%
XML	8%	13%
Total	100%	100%

Remarks: The above figures are rounded to nearest integer

Meanwhile, consistent with Issue 5's findings, respondents said they would consider the adoption of I.T. applications in *Transportation Process*, *Warehousing & Distribution*, *Purchasing/Supplier Relationship* and *Customer Relationship* in the future.

8.2 Table

Analysis on Future I.T. Applications (Top 4 Selections)

Future I.T. Applications	Issue 5 (%)	Issue 7 (%)
Transportation Process	12%	12%
Warehousing & Distribution	12%	11%
Purchasing/Supplier Relationship	11%	10%
Customer Relationship	10%	12%



BROAD COVERAGE RECOMMENDATIONS

Retail Industry

8.2 Logistics Service Providers to Fill Retailers' Needs

It is important to understand the logistics requirements of retailers before proceeding I.T. matching with the logistics service providers. In general, retailers used to adopt three types of distribution methods, namely, *Direct Shipment (DS)*; *Warehousing* and *Cross-docking*. *Direct Shipment* is a method of delivering goods from the supplier of the product owner to the customer directly. In most cases, the customer orders the goods from the product owner. *Warehousing* as the name suggested, a company's supply chain will incorporate some warehousing function including (i) serving as a traditional distribution center and warehouse holding stock inventory and providing their downstream customers with inventory as needed; (ii) serving as transfer points for inventory or serving centralized pooling and transshipment when there is a large variety of different product. *Cross-docking* is where warehouses function as inventory coordination points rather than as inventory storage points. Goods arrive at warehouses from the manufacturer are transferred to vehicles serving the retailers, and are delivered to the retailers as rapidly as possible. Wal-Mart began utilizing cross-docking in the retail sector in the late 1980s. In retail practice, cross-docking operations may utilize staging areas where inbound materials are sorted, consolidated, and stored until the outbound shipment is completed and ready to ship. Goods spend very little time in storage at the warehouse, often less than 12 hours.

In terms of warehousing, retailers have special needs depending on their business natures. Typical requirements include regular, frozen and peripheral warehousing capability. Having reviewed the business operations of the 15 retailers in Section 2, the findings suggested that most of their operation needs were related to understanding customers' needs and supply chain management. In Section 2.12, the most influential process towards market reaction as expressed by retailers were *Understand Customer Needs* (47%). When asked the most important information flow, the majority of respondents indicated that *Sales and Marketing/Understanding Customer Demand* and *Inventory Management* were the top two among different information flows, which accounted for 42% and 26% respectively (Section 2.9).

8.3 Table

Analysis on Operation Needs vs. Key Attributes for Retailers

Operation Needs	Key Attributes	%
Most Influential Process	Understand Customer Needs	47%
Process involved the Highest Percentage of Errors	Inventory Management	24%
Critical Areas in Business Process	Cooperation with Suppliers	20%
Most Time Consuming Process	Procurement	40%
	Inventory Management	13%
Most Important Information Flow	Sales & Marketing/Understanding Customer Demand	42%
	Inventory Management	26%
Pain Point in Business Process	Logistics	13%
	Quality Control	13%



BROAD COVERAGE RECOMMENDATIONS

However, it is worth noting that the adoption of supply chain management related I.T. applications by retailers was relatively low. Apart from *Warehouse Management System (WMS)* with a high adoption level of 73%; others like *Supply Chain Management System* (53%), *Supplier Service System* (53%) and *Distribution Management System* (47%) were used by just half of the surveyed companies. Besides, the majority of our surveyed retailers (53%) were not using *Information Platform* to collaborate with their business partners.

8.4 Table

Adoption of Supply Chain Management related I.T. Applications for Retailers

Supply Chain Management Applications	Adoption (Number of Participants)	%
Warehouse Management System	11	73%
Supply Chain Management System	8	53%
Supplier Service System	8	53%
Supplier Settlement System	8	53%
Distribution Management System	7	47%
Customer Relationship Management System	5	33%

It can be regarded as an opportunity for logistics service providers to position themselves as an I.T. enabler to enhance retailers' operation efficiency and service level. We will further examine the strategic positioning of the two sectors in next section.

8.3 I.T. Competency and Strategic Positioning of Logistics and Retail Sectors

In this Section, we take a close look to the 7 logistics companies which are currently serving the retailers. Apart from serving retail sector, they also provide services to other industries including FMCG and Industrial. In terms of service coverage, they used to offer Sea Freight, Warehouse and Distribution and Contract Logistics as core services to clients. On the other hand, 86% of them possessed with Temperature Controlled Cargo handling service and 43% can handle Reefer Cargo and Perishable Goods. On I.T. application side, they regarded *Difficult to Cope with Rapid and Vary Customer Expectation* and *Shortage of Skilled I.T. People* were the two significant difficulties. Below summarizes their profiles and difficulties encountered in using I.T. applications.

8.5 Table

Analysis of Logistics Participants by Engaged Industry Sector

Industry Sector	Number of Participants	%
Retail	7	100%
Consumer (FMCG)	6	86%
Industrial	5	71%
Fashion/Apparel	5	71%
Life Sciences/Healthcare	2	29%
Others	2	29%
Aerospace/Automotive	1	14%
Hi-Tech	1	14%



BROAD COVERAGE RECOMMENDATIONS

8.6 Table

Analysis of Logistics Participants by Service Coverage

Service Coverage	Number of Participant	%
Sea Freight	6	86%
Warehouse and Distribution	6	86%
Contract Logistics	6	86%
Air Freight	4	57%
Rail Cargo	4	57%
Lead Logistics (4PL)	3	43%
Customs Clearance and Brokerage	2	29%
Cargo Marine Insurance	2	29%
Sea/Air	1	14%

8.7 Table

Analysis of Logistics Participants by Cargo Handling Capability

Cargo Handling Capacity	Number of Participants	%
Normal Goods	7	100%
Temperature Controlled Cargo	6	86%
Reefer Cargo & Perishable Goods	3	43%
Dangerous Cargo	2	29%

8.8 Table

Analysis on Major Challenges Perceived by Logistics Participants

Challenges for I.T. Applications	Number of Participants	Rating on 4 to 5 (Challenging to Most Challenging)	%
Difficult to Cope with Rapid and Vary Customer Expectation	6	4	67%
Shortage of Skilled I.T. People	6	4	67%
Data Integration	6	3	50%



BROAD COVERAGE RECOMMENDATIONS

It is crucial to identify the current position and problems faced by companies before deciding the strategic targeted position. Unlike other manufacturing or trading companies, customer shopping preference and corporate image are among the top priority of retailers' business objectives. In Section 2.12, the most influential process towards market reaction as expressed by retailers were *Understand Customer Needs* (47%). When asked the most important motivating factors for technological upgrade, they said they would be motivated if *Service Level* (93%) and *Corporate Image* (92%) could be improved by such action. From this study, we also observed that their I.T. adoption levels were competent to support administrative activities like accounting (adoption rate of Account System: 100%) and operation (adoption rate of Point of Sale System: 87%). However, they were indeed relatively incompetent at the use of supply chain related applications (Table 8.4). As indicated in Section 3.4, 40% of the respondents rated themselves in the stage of "*Full I.T. implementation with integration with other internal systems*"; whereas 27% regarded themselves in the stage of "*Full I.T. implementation with integration with both internal and external systems*". Their perception of I.T. is somewhat contradictory, only 47% of the respondents agreed that I.T. is critical for enhancing company's competitiveness (Section 5.6). Nevertheless, there were 44% said that they would increase I.T. investment (Section 5.8) to cope with the customer demands. Towards such contradictory findings, a possible interpretation could be Retailers realized the trend of I.T. adoption but they had uncertainty of the exact values that I.T. could contribute to their businesses.

I.T. is perceived as one of the effective means to enhance company's competitiveness, 87% of the logistics companies agreed that I.T. would help enhancing company's competitiveness (Section 5.2). Having discussed the current I.T. application status of our surveyed logistics companies in Section 3.2, surprisingly, more than half of them (55%) have regarded themselves in the stage of "*Apply limited I.T. solution to automate a specific area of operation*", with only 10% regarded themselves in the stage of "*Full I.T. implementation with integration with both internal and external systems*".

In fact, I.T. adoption is necessary for logistics companies to transform themselves from shipping operation contractors into logistics service providers in order to add value to customers. In addition, since the logistics companies need to support the various clients (such as retailers) in the supply chains, they need to align with or lead/help the clients by enhancing the I.T. capability.

From the strategy map illustrated on Diagram 8.1, it is recommended that all the I.T. dimension should be align with the product dimension; otherwise the I.T. adoption would be meaningless. Since most of firms (such as retailer) in supply chain gradually shift their focus from inventory to the process, even to the service, their I.T. dimension should be leveled by correspondingly. The value and purpose for logistics companies mainly resides in process and co-ordination, so they by nature should advance their I.T. adoption in order to work with their clients.

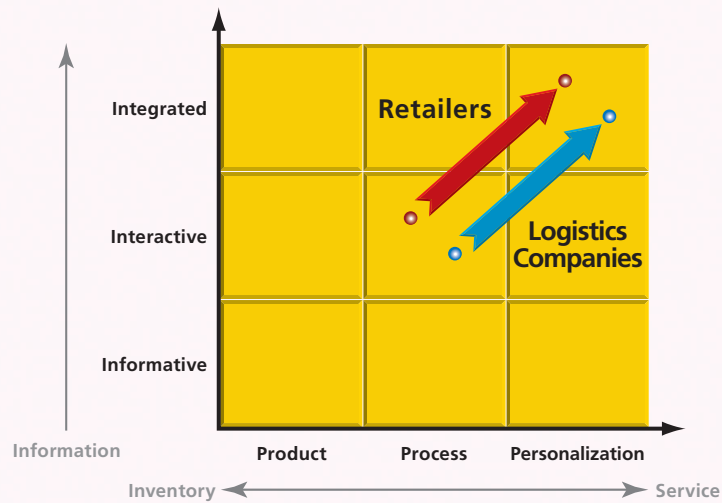
Likewise, retailers should adopt more retailing and supply chain management specified I.T. applications to enhance operation efficiency and achieve higher customer satisfaction to this end.



BROAD COVERAGE

RECOMMENDATIONS

8.1 Diagram Strategic Positioning of Logistics and Retail Sectors



8.4 Retailers to Meet Customer Satisfaction with Competent I.T. Strategy

As retailers achieve higher levels of visibility into their supply chains, opportunities to enhance supplier collaboration increase. With real-time information on a product's location in the supply chain, retailers are able to directly interact with key players in the manufacturing, sourcing, and shipping of products and, in so doing, gain a significant competitive advantage.

Situated at the end of the whole supply chain management, the success of a retail business requires accurate customers demand prediction on one hand, and effectively manages the supply chain on the other. Supplier collaboration can enable retailers to improve key supply chain measurements such as product availability, cycle times, and cost. It also allows retailers to more efficiently address many of the biggest challenges they face in supplier relationships, such as supplier/retailer disputes; invoice mismatches; data inaccuracy; and the high costs and inaccuracies resulting from manual data entry and phone or fax communications. Two examples of collaborative strategies illustrated below, namely, Retailer Supplier Partnership (RSP) and Efficient Consumer Response (ECR), not only can improve the information flow but also solve the time consuming process from suppliers to retailers and eventually to customers. These strategies require the support of appropriate I.T. applications to make it successful.

A strategic alliance is typically multifaceted, goal-oriented, long-term formal partnerships between two companies in which both risks and reward are shared and the alliance should lead to long-term strategic benefits for both partners.



BROAD COVERAGE RECOMMENDATIONS

Potential benefits of alliances include:

- Adding value to products
- Improving market access
- Strengthening operations
- Adding technological strength
- Enhancing organizational skills
- Enhancing strategic growth
- Building financial strength

RSP (Retailer Supplier Partnership)

Retailer Supplier Partnership (RSP) is one type of strategic alliances. It is the formation of strategic alliances between the retailers and their suppliers. There are three types of Retailer-Supplier Partnerships, Quick Response Strategy, Continuous Replenishment Strategy and Vendor-Managed Inventory (VMI) system.

Quick Response: Suppliers receive Point of Sale (POS) data from the retailers and use this information to synchronize their production and inventory activities to improve forecasting and scheduling. Retailers till prepares individual orders under this partnership.

Continuous Replenishment: It is also called Rapid replenishment. Vendors receive POS data and use them to prepare shipments at previously agreed upon intervals to maintain specific levels of inventory at the retail store or distribution center.

Vendor-Managed Inventory (VMI) system: It is also called Vendor Managed Replenishment (VMR). The supplier decides on the appropriate inventory levels of each of the products and the appropriate inventory policies to maintain these levels.

8.9 Table

Characteristics of Retailer-Supplier Partnership¹

Type \ Criteria	Decision Maker	Inventory Ownership	New Skills employed by Vendors
Quick Response	Retailer	Retailer	Forecasting skills
Continuous replenishment	Contractually agreed to levels	Either party	Forecasting and inventory control
VMI	Vendor	Either party	Retail management

Source: http://insightory.com/view/223/retailer_supplier_partnership



BROAD COVERAGE RECOMMENDATIONS

Advantages of Retailer Supplier Partnership²

1. Suppliers have the knowledge about order quantities so they can plan efficiently. In Quick Response for example, suppliers can reduce lead time because this knowledge is achieved through transfer of customer demand information. On the other hand, in VMI the supplier completely controlling the variability in order quantities as the retailer provides demand information and the supplier makes ordering decisions. This knowledge can be leveraged to reduce overall system costs and improve system service levels
2. Vendor can improve forecasts – better coordinate production and distribution
3. Decrease work duplication
4. Reduced safety stocks, reduced storage and delivery costs and increased service levels

Requirements for Retailer-Supplier Partnerships

1. Advanced information systems i.e. EDI, bar coding and scanning
2. Top management commitment – Information must be shared with suppliers and customers. Power and responsibility within an organization might change (e.g. contact with customers switched from sales/marketing to logistic); also cost allocation issues will have to be considered at a very high level
3. Develop a certain level of trust – This is a key element. For example in VMI, suppliers need to demonstrate not only the ability to manage the entire supply chain but also that of the retailer

ECR (Efficient Consumer Response)

Another similar collaborative strategy example named Efficient Consumer Response (ECR). It is a system for replenishing merchandise based on actual consumer demand, aims to increase consumer choice, satisfaction and service. ECR reduces the cycle time from purchase to replenishment, reduces the cost of warehousing excess inventory, and assists retailers, wholesalers, and manufacturers in determining the optimum product mix (Diagram 8.2 and 8.3). Prior methods of inventory replenishment were order driven, relying on retailers and wholesalers to predict demand. ECR is demand driven, initiating the manufacture and shipment of goods based on consumer purchase activity. ECR predicts the impact of a product promotion on retail demand and production requirements. ECR is dependent upon the efficient and timely sharing of data along the supply chain beginning with sales information collected at a point-of-sale terminal.



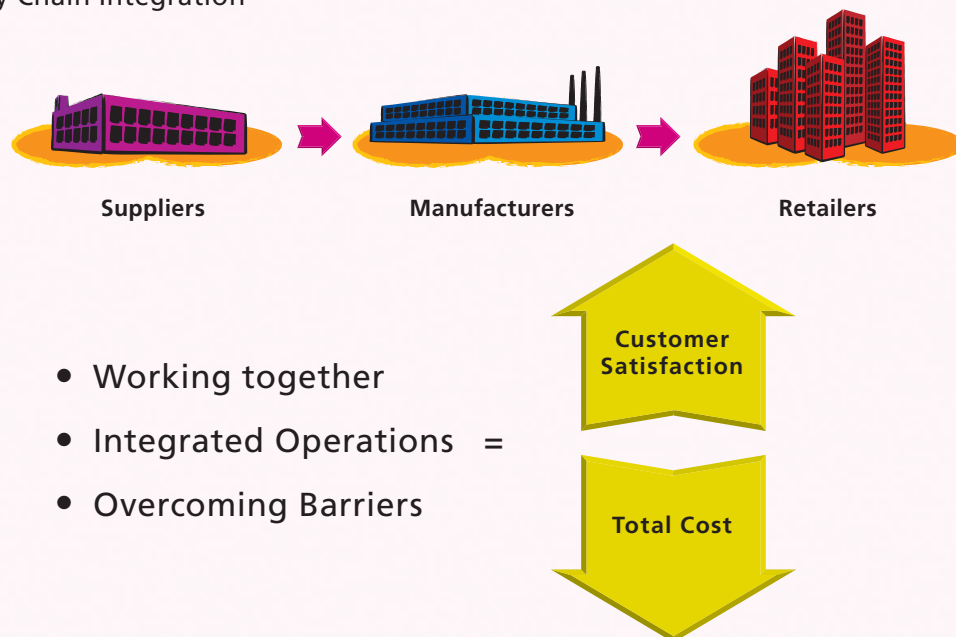
BROAD COVERAGE

RECOMMENDATIONS

There are four focus areas under ECR: Demand management, Supply management, Enablers and Integrators, which are intended to be addressed as an integrated set. These form the basis of the ECR Global Scorecard.

1. The Demand side of ECR includes all of the considerations associated with understanding and managing the demand for products and services
2. The Supply Side of ECR is focused on an integrated set of four improvement concepts, each of which addresses a different aspect of the need for rapid and efficient replenishment of products in the overall supply chain
3. Enablers are focused on development of product identification, data management and processing capabilities that are needed to permit accurate and timely communication and registration of goods flow between trading partners
4. The new Integrators domain in the ECR Scorecard adds truly integrating concepts to the ECR platform. Two concepts have been defined, the first one being Collaborative Planning Forecasting and Replenishment that is the ultimate Responsive Replenishment facilitator starting with specific partners. The second concept is E-Business, Business to Business that explores new ways of doing business using public standard-based networks³

8.2 Diagram Supply Chain Integration⁴

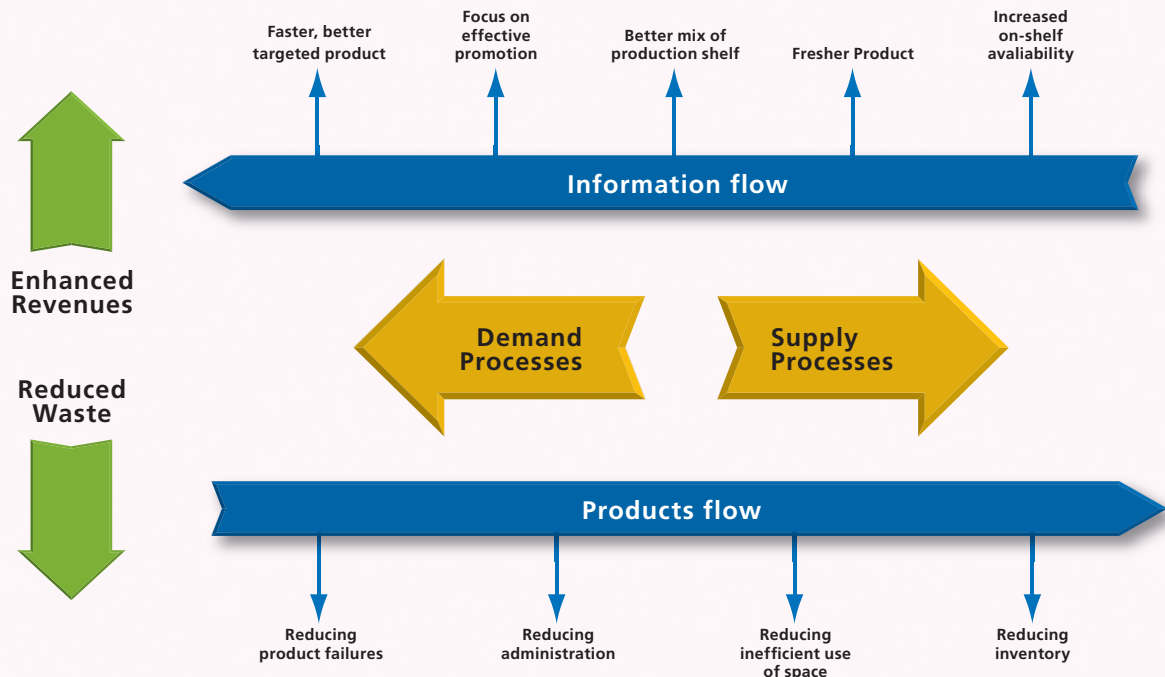


Note: ECR is about companies working together to integrate their operations and eliminate barriers that impact their ability to satisfy consumers and drive out unnecessary cost value delivered to the consumer by providing a series of practical improvement concepts to unlock this value.



BROAD COVERAGE RECOMMENDATIONS

8.3 Diagram Information flow and Product flow⁴



Note: ECR is being used to integrate previously separate aspects of the supply chain and to enhance the value delivered to the consumer by providing a series of practical improvement concepts to unlock this value.

To echo with the previous findings about the most important information flow in retailers' operation, retailers can adopt the strategy by linking ECR and CRM systems: "The front-end related Customer Relationship Marketing (CRM) systems (including business-to-business Key Account Management systems or traditional business-to-consumer applications) which capture a plethora of proprietary customer data, including behavioural ones, can now be linked to the Category Management capabilities of Efficient Consumer Response (ECR) solutions which automatically integrate exchange interactions between companies, e.g. retailers and their suppliers. This enables first tier suppliers to get a "bigger picture" of their final customers. On top of traditional sales figures, these suppliers can now understand consumer-specific behaviour, also over time and in relationship to other offering categories."⁵

ECR had successfully pulled the retail sector of the USA out of the recession in the early 1990s. In Asia, ECR has now been established in Australia, China, India, Indonesia, Korea, Malaysia, Hong Kong, Philippines, Taiwan, Thailand and Singapore. Retailer Members of ECR Asia includes Samsung Tesco, Wal-Mart, Colgate Palmolive (Eastern), Unilever, Dairy-Farm, Nestle, and Procter & Gamble.



BROAD COVERAGE

RECOMMENDATIONS

8.5 Retailers to Gain Manifold Benefits from RFID Adoption

Identifying the Retail RFID Application

A retailer is recommended to identify problem areas before choosing an RFID application. For example, if retailers have too much backroom inventory and always experience out of stock, it means they need to improve their store inventory or backdoor receiving operations, they should consider adopting RFID to improve efficiency. Once they identify the problem areas, they just need to consider acquiring the appropriate solution architecture that includes software, hardware and manpower.

RFID Applications in Retail

In Section 7.3, retailer respondents expressed their most interested topics on RFID, they included *Theme 1 "Low Cost RFID Tag Manufacturing Techniques"* and *Theme 6 "Enabling Technologies for Enterprise e-Logistics Internetworking"*, both themes accounted for 64%. In fact, retailers can gain multiple benefits from RFID adoption. The most popular usage of RFID by retailers is to perform automated receiving in the backroom; track stock movement from the backroom to the frontline; and to locate inventory location on store shelves. As a result, it can achieve helping retailers to improve customer satisfaction and increase sales.

RFID Benefits

Benefits that retailers adopting RFID includes:

- Reduce on-hand inventory and less use of "safety stock"
- Increase sales through reduced out of stocks
- Increase stock visibility and availability at point of shipment
- Reduce transportation cost and shipping volumes
- More accurate forecasts and stock replenishment
- Reduce shrink and theft in the supply chain
- Better in-stock – product on the shelf when you want it
- Improve Product Selection
- Increase customer loyalty
- Product Freshness for Dated Goods
- Easier Identification on Recalls

Reference

[1], [2] Retailer Supplier Partnership, Insightory Inc.

http://insightory.com/view/223//retailer_supplier_partnership

[3], [4] Introduction to Efficient Consumer Response (ECR), Global Scorecard.net

http://www.globalscorecard.net/getting_started/introduction.asp

[5] Watch the final customer: Business-to-Business Marketing and the Network Perspective, Executive Briefing Document 2007/1, Manchester Business School, The University of Manchester



GLOBAL / CHINA WATCH



1. State Council's Plan for Restructuring and Revitalizing the Top Ten Industries

To counter the impact of the international financial crisis on China's economy, the National Development and Reform Commission (NDRC), the Ministry of Industry and Information Technology (MIIT) and other related departments, as arranged by the State Council, jointly embarked on the planning of restructuring and revitalizing the top ten industries, which include steel, automobile, shipping, petrochemical, textile, light industries, non-ferrous metal, equipment manufacturing, electronic information and logistics. From 14 January to 10 March 2009 the Standing Committee of the State Council has in principle passed and promulgated these plans, which include: the Plan for Restructuring and Revitalizing the Automobile Industry, the Plan for Restructuring and Revitalizing the Steel Industry, the Plan for Restructuring and Revitalizing the Textile Industry, the Plan for Restructuring and Revitalizing the Equipment Manufacturing Industry, the Plan for Restructuring and Revitalizing the Shipping Industry, the Plan for Restructuring and Revitalizing the Electronic Information Industry, the Plan for Restructuring and Revitalizing the Petrochemical Industry, the Plan for Restructuring and Revitalizing the Light Industries, the Plan for Restructuring and Revitalizing the Non-ferrous Metal Industry, and the Plan for Restructuring and Revitalizing the Logistics Industry. Formulating and implementing these plans is a key measure in ensuring that the economy will grow at a steady but quicker pace and provide stronger growth momentum, and that through forceful, targeted and practicable measures, the confidence will be boosted, production and the market steadied, restructuring continued and a foundation laid for the next stage of advancement for the national economy.

2. The Plan for Restructuring and Revitalizing the Electronic Information Industry (Abstract)

This Plan is formulated as an action plan of the electronic information industry to counter the impact of the international financial crisis and to meet the general demand of the Party Central Committee and the State Council for assured growth, expanded domestic demand and restructuring; it is to ensure the steady development and accelerated restructuring of the electronic information industry as well as to drive its upgrading. The Plan will be for the period 2009-2011.

The Plan for Restructuring and Revitalizing the Electronic Information Industry covers mainly five areas: (i) current situation and challenges of the electronic information industry; (ii) guiding thinking, general principles and objectives; (iii) the mission of restructuring and revitalizing the industry; (iv) policy measures; and (v) plan implementation.

The Plan for Restructuring and Revitalizing the Electronic Information Industry **epitomises the theme** of "ensuring growth, expanding domestic demand, restructuring the industries and promoting development," which is the guiding thinking in the formulation of the plan. Ensuring growth is the primary mission, expanding domestic demand the fundamental means, restructuring the industries the core task and promoting development the ultimate objective. It is out of the need of the electronic information industry to counter the impact of the international financial crisis, to resolve deep-seated problems in the development of the industry and to maintain the healthy development of the industry that such a theme is taken.



China's electronic information industry is to **achieve two objectives** in its development in the coming 3 years: firstly, to achieve significant results in promoting growth and ensuring stability; secondly, to achieve significant improvement in its restructuring and transformation. The key mission of restructuring and revitalizing the industry is, in the coming three years, to **accomplish three objectives**: ensuring steady growth of the backbone industries, achieving breakthroughs in the strategic core industries, and bringing about new growth through new applications. Firstly, to ensure steady growth in such backbone industries as the computer industry, the electronic components industry and the audio-visual products industry; secondly, to achieve key technical breakthroughs in such core industries as the integrated circuit (IC) industry, new display devices and software industries; thirdly, to develop new areas of growth in such industries as telecommunication equipment, information services and information technology applications.

The Plan stresses accelerating the construction of an information infrastructure, promoting innovation in the business and service model, consolidating the use of information technology in the economy and society in general, applying information technologies to transform traditional industries, using new applications to drive growth, integrating information technologies, accelerating the development and promotion of industrial solutions, supporting the development of products and systems for RFID, automotive electronics, mechanical electronics, medical electronics, industrial control and testing and the formulation of their standards. The Plan also supports multi-level collaboration between information technology businesses and traditional industries for further integration, application of information technology in education, medicine, social security and transport for the improvement of the general livelihood of the people, and raises the level of information service to better address the problems facing agriculture, rural areas and farmers, thereby extending the industry to include electronic products and information services that are related to agriculture.

The Plan epitomizes the **four contributions** of the industry to the national economy and social development: an important engine for economic growth, a key industry for employment, a key basis for continued development, and a significant sector that improves livelihood and drives consumption. It also analyzes the **five major challenges** the industry faces: significant slowdown in growth, export environment far from optimistic, significant drop in foreign investment, key areas and backbone businesses facing greater difficulties and deep-seated contradictions within the industry becoming more apparent, which continue to trouble the development of China's economic information industry. It earmarks the launching of **six major projects**: (i) upgrading of IC; (ii) transformation of the flat panel display and colour television industry; (iii) new advancement of the TD-SCDMA (3G) mobile technology; (iv) promotion of digital video; (v) upgrading computers and application of the next generation of the Internet; and (vi) fostering the development of the software and information services. It also proposes **seven protective measures**: ensuring the drive of domestic demand; increased commitment from the State; stepping up policy support; perfecting the investment and financing environment; supporting the merging and restructuring of dominant enterprises; supporting the enterprises to open up the international market; strengthening the development of proprietary innovative capabilities. In developing proprietary innovative capabilities, it is stressed that key technology projects of the State need to be launched as soon as possible to drive industrial innovation. The work on formulating and promoting key RFID standards has to be stepped up so that standards and specifications can be laid down for industrial software, information security and information services. The protection of intellectual property of electronic information products and services is to be strengthened.



3. The Plan for Restructuring and Revitalizing the Logistics Industry (Abstract)

The logistics industry is a composite service industry that requires an integration of the transport industry, the storage industry, the freight agency industry and the information industry, and is a key constituent of the national economy, involving an extensive segment of the society and employing a large number of people. It has great impact on driving production and consumption, and plays a significant role in promoting industrial restructuring, redirecting economic development and improving the competitiveness of the national economy.

This Plan is formulated as an action plan for the logistics industry to counter the impact of the international financial crisis and to meet the general demand of the Party Central Committee and the State Council for assured growth, expanded domestic demand and restructuring; it is to ensure the steady development and accelerated restructuring of the logistics industry as well as to drive its upgrading. The Plan will be for the period 2009-2011.

The Plan for the Logistics Industry covers mainly six areas: (i) current development and challenges; (ii) guiding thinking, principles and objectives; (iii) the mission; (iv) key tasks; (v) policy measures; and (vi) plan implementation.

The Plan points out that modern logistics has to be developed as soon as possible so that a modern logistics service system can be established, which will enable the development of other industries. On the application of key technology, the Plan stresses that RFID technology should be used. The mission of the Plan covers ten areas: firstly, actively extending the demand of the logistics market; secondly, promoting socialization and professionalism in logistic services; thirdly, accelerating the merging and restructuring of logistics businesses; fourthly, driving the development of key logistics areas; fifthly, quickening the development of international and bond logistics; sixthly, optimising the geographical layout for the development of the logistics industry; seventhly, strengthening the link and coordination within the logistics infrastructure; eighthly, raising the level of informatization within the logistics industry; ninthly, perfecting the standards system of the logistics industry; tenthly, strengthening the development and application of new logistics technologies. In respect of new logistics technologies, barcode systems will be perfected and promoted, such automatic identification and tag technologies like barcodes, smart tags and radio frequency identification (RFID) and electronic data interchange (EDI) technologies will be used extensively, visualization technologies, product tracking technologies and goods sorting technologies will be developed, and further investments will be made in RFID and mobile logistics information service technologies, standards research and development and applications. Moreover, such new transport technologies as Global Navigation Satellite System (GNSS), Geographic Information System (GIS), Vehicle Information and Communication System (VICS), Electronic Toll Collection (ETC), Intelligent Transport System (ITS) will be actively developed and used, and more research will be done to increase the security of logistics information systems.



The Plan has confirmed revitalising nine key logistics projects, which include multi-modal transport and forwarding facilities, logistics parks, urban distribution, bulk goods and rural logistics, joint development of the manufacturing and logistics industries, promotion of logistics standards and technologies, public logistics information platform, development of logistics technologies and emergency logistics.

4. China's Overall Industrial Operations from January to May 2009

According to the National Bureau of Statistics, between January and May the growth value of large industries in China achieved a year-on-year growth of 6.3%, with the growth in May being 8.9% or 1.6% faster than in April.

Growth pace of light and heavy industries rebounds in tandem. For the period of January to May the value of both the light and heavy industries respectively grew by 7.8% and 5.7% year-on-year; and for May alone the growth of the two was respectively 9.7% and 8.6%. Mainly as a result of the positive drive of domestic consumption the light industry only experienced a mild slippage with relatively steady production, while after more than six months of adjustment and drop in the price of raw materials, fuels and energy, the heavy industry showed some improvement.

Drop in industrial production extends further. According to the statistics of the General Administration of Customs, for the period of January to May China's exports dropped by 21.8%, and in May alone the drop was 26.4%, a further drop of 3.8% over April.

(a) China's Electronic Information Industry from January to May

The latest statistics from the Performance Inspection and Coordination Bureau, MIIT show that in May 2009 the growth value of China's electronic information industry increased by 4.3% year-on-year and is growing gradually. For the period of January to May the growth value of the industry dipped by 2.2% year-on-year, while the sale values grew by 1.4%, which was lower than the average national industrial growth rate. In May micro-computer saw its 5% drop in April reverted to a growth of 18.1% in May; and colour televisions and monitors also achieved a growth of 14.9% and 4.8% respectively. The production of mobile phones, program-controlled switchboards and IC experienced negative growth.

The data show that in the first five months the receipts of China's large electronic information manufacturers from their principal businesses were 1,690 billion *yuan*, a drop of 8.5% year-on-year, or a realized profit of 38.5 billion *yuan*, a drop of 41% year-on-year. While telecommunication equipment realized a profit of 13.9 billion *yuan*, a growth of 35.1% year-on-year, IC recorded a loss of 19.4 billion *yuan*. The profits of computers, audio-visual equipment and components dropped by more than 30%, but the domestic market saw a remarkable growth trend.

From January to May, the delivered export value was US\$153 billion, which was 24.2% down year-on-year; and it was down 24.2% year-on-year in May, a drop of 1.3% greater than in April. The delivered export value accounted for 63.5% of the production value of the industry. Foreign investment slipped, with fixed asset investment in May grew only by 16.5% or a 6% drop in the growth pace. Except computers and telecommunication products, which respectively recorded a growth of 17.8% and 17.4%, the rest all noted a drop.



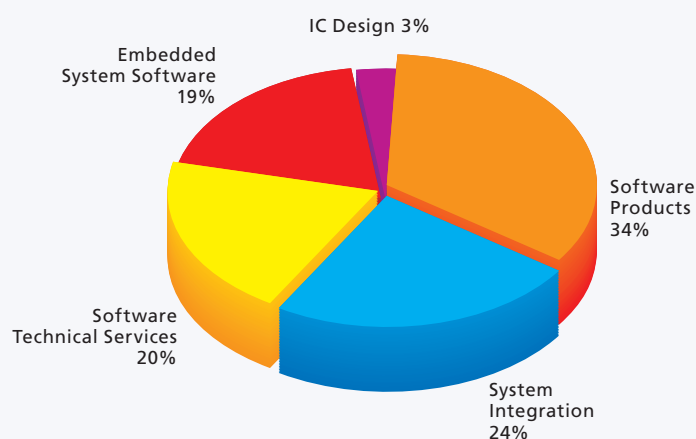
An official of the Performance Inspection and Coordination Bureau, MIIT expressed that the downward trend of China's electronic information industry became more apparent this year; though for the months of March to May there were some signs of warming, the industry in general remained at a low adjustment stage. Some of the industries and sectors are on the rise while the others are slipping, showing that the overall industrial foundation is not well set. Moreover, as there is still no clear sign of any upturn in the international market, the industrial development trend is far from optimistic, requiring close watching and active measures.

(b) China's Software Industry from January to May:

Receipts from the software industry remain steady though trending downwards, with an aggregate receipt of 329.14 billion *yuan* for the period from January to May, or up 23.3% year-on-year. The pace of growth is 5.7% down against the same period the previous year.

The trend for software as a service is becoming apparent. For the period from January to May, receipts from software products and software technical services respectively reached 115.22 billion *yuan* and 65.93 billion *yuan*, or respectively 24.2% and 28.2% up year-on-year, though for the latter the pace of growth is 18.6% down against the same period the previous year. Receipts from software contracting services reached 8.7 billion *yuan*, or 84.7% up year-on-year; receipts from embedded software were 61.02 billion *yuan*, or 20.9% up year-on-year; and receipts from system integration were 77.38 billion *yuan*, or 20.9% up year-on-year (pace of growth is 9.2% down against the same period the previous year); and receipts from IC design were 9.58 billion *yuan* or 15.4% up year-on-year.

**Composition of Receipts from the Software Industry
January – May 2009**



For the period of January to May, China's software exports reached US\$6.56 billion, a growth of 54.2% year-on-year, or 9.2% higher in the increase magnitude than the same period the previous year. For the same period, China's software industry recorded a profit of 33.2 billion *yuan*, or a growth of 25.8% year-on-year, which was an increase of 8.2% lower than the same period previous year.

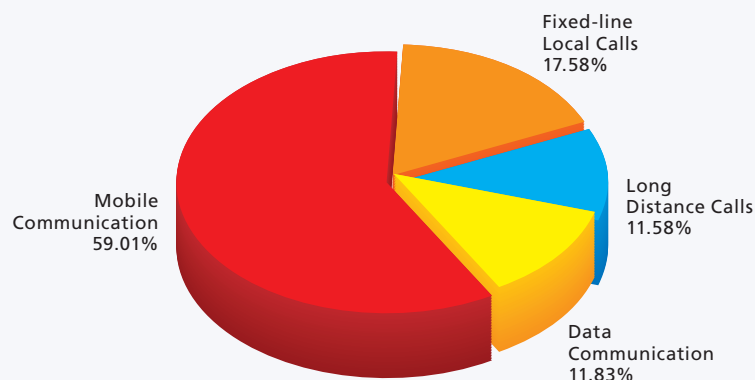


(c) China's Telecommunication Industry from January to May:

Total business volume and receipts: For the period from January to May 2009 the aggregate volume of China's telecommunications business stood at 1,009.27 billion *yuan* or a growth of 11.3% year-on-year; receipts from the main businesses of telecommunications aggregated at 335.98 billion *yuan*, or 2.1% up over the same period the previous year.

User development: For the period from January to May the aggregate net growth in telephone users stood at 36.449 million, or 1.018 billion in all, of which 332 million were fixed-line users and 687 million mobile phone users. For the same period, there were 91.629 million Internet broadband users.

**Composition of Receipts from Main Telecommunications Businesses
January – May 2009**



Local telephone business: For January to May 2009, total fixed-line local calls were 11.8% down year-on-year, but total mobile call time was up 17.0%.

Long-distance call business: For the period of January-May 2009 the total call time for long-distance calls grew by 4.8% year-on-year, and long-distance calls over fixed-line and IP calls respectively dropped 4.6% and 16.8%. The call time of mobile long distance calls increased by 28.4%.

5. MIIT Annual Electronic Information Industry Development Fund 2009 Commenced

Projects submission for the MIIT Annual Electronic Information Industry Development Fund 2009 (hereinafter referred to as IT Fund) has already commenced on 23 March 2009. In the Projects Guide for the Annual Electronic Information Industry Development Fund 2009, projects that are related to RFID technology and systems include: "research and development of enterprise management systems based on the 'service-oriented architecture' (SOA) for traceable products (food, pharmaceuticals and agricultural products processing)" in the software and information services category; "development and industrialization of the technology for sealing thin contactless smart card chips" in the IC category; "research and development of RFID products and demonstration of their industrial applications (to be tendered)" and "research and development of RFID payment products and demonstration of their applications" in the information communication category.



In the tender document for the IT Fund titled “Specifications for Research and Development of RFID Products and Demonstration of Industrial Applications”, it is specifically pointed out that the project is to support those businesses with strong technology base and market capabilities in conducting research and development of and producing and promoting application of RFID products, so that they can develop and produce UHF RFID products and systems that are of high cost-performance, pose strong competition in the market, are technologically advanced and have proprietary intellectual property rights, and ultimately achieve industrialisation of these products. The Plan also encourages the adoption of RFID products with proprietary intellectual property rights in such areas as industrial and safe production management, transport logistics and counterfeit prevention to demonstrate their application. Such applications are to promote the formation and perfection of an proprietary RFID industrial link that will quicken the development of China’s RFID industry and application. The project covers mainly:

The project is divided into UHF RFID product research and development and industrialization, and demonstration of industrial applications of RFID (industrial and safe production management, transport logistics and counterfeit prevention). A bidder may tender for the whole or part of the project based on its strength and capabilities, and equipment research and development enterprises, integration enterprises and industrial users are encouraged to jointly submit their applications for demonstration.

1. To develop proprietary UHF RFID reading devices and tagging products of high quality and reliability, to complete product typification and to enter into bulk production. To complete the design of UHF RFID reading devices, to construct the software development platform for RFID reading devices, to ensure that the UHF RFID reading devices can adapt to different complex environments to perform such functions as counting, reading and writing. To design RFID tags that are suitable to demonstrate the application of this project and meet the requirements of the application environment.
2. To encourage and, with preference given, support the adoption of RFID products with proprietary intellectual property rights, to set up demonstrations of safe production management, transport logistics and counterfeit prevention, and to lay down and promote technical specifications and standards for industrial applications.
3. To ensure that products of the project satisfy the application requirements of the markets, have general applicability, be more competitive and have a longer product life-cycle.
4. To complete the research and development of products and the setting up of demonstration for industrial applications, to secure a certain share of the market and to achieve good economic returns.

The IT Fund received submissions of more than 900 projects from 7 specialty areas and 12 categories, which were to be examined and assessed at the same time. The IT Fund 2009 put out 19 projects to tender, and received 367 tenders. Out of the need to prevent and control the H1N1 flu, the Q&A sessions that were to be attended by the enterprises were cancelled this year, instead the experts were divided into groups to assess and grade the projects in writing. The assessment has been successfully completed.



6. Key Research Topics on Industries and Informatization for the 12th Five-year Plan Published

On 25 May 2009 MIIT published a notice on the publication of key research topics in the areas of industries and informatization for the 12th Five-year Plan. According to the Notice on the Initial Key Research Topics for the 12th Five-year Plan, MIIT openly solicited from the public research topics in the areas of industries, telecommunication and informatization for the 12th Five-year Plan, and had active support from the relevant departments, research institutes and tertiary education institutes and businesses. After the consideration and assessment of various units, 45 items have been finalised as key research topics, with 13 items in the general category, 18 items in the industrial category, 5 items in the raw materials industry, 4 items in the equipment industry, 3 items in the consumer products industry, 1 item in the electronics industry, 1 item in the industrial blasting industry, 1 item in the software industry, 2 items in the telecommunications industry, 1 item in the manufacturing service industry and 14 items in the special category.

In the recent Notice on the Publication of the Initial Studies of Key Research Topics for the 12th Five-year Plan of China's Telecommunication Industry as published by MIIT, there are 48 items under ten categories.

7. Ministry of Science and Technology Held the 2009 Working Meeting on High-tech Development and Industrialization

The Department of High and New Technology Development and Industrialization held the 2009 Working Meeting on High-tech Development and Industrialization from 16 to 17 April 2009 in Qingdao, Shandong. The meeting was to implement the spirit of the "17th National Congress of the CPC", the "Opinions of the State Council on Making the Most of Technology Support to Promote Steady but Faster Economic Development" and the plan of the National Science and Technology Conference on the development and industrialisation of high-tech, to make in-depth studies of the support of science and technology in restructuring and upgrading industries, to promote the thinking and measures for developing the national economy at a steady but faster pace and to plan the development and industrialization of high-tech in 2009.

At the meeting the Director-General of the Department of High and New Technology Development and Industrialization delivered the Working Report on the Development and Industrialization of High and New Technology, and the Director of the Torch Centre presented "Thoughts on the Policies of High and New Technology Development and Industrialization" and "Impact of the International Financial Crisis on China's High and New Technology Industries and Related Thoughts." The responsible officials of the Department also gave presentations on their work in 2008 and the thinking that will guide their work in 2009.

Du Zhanyuan, Vice Minister of the Ministry of Science and Technology stressed that there must be more focused work in the following six areas: firstly, focusing on key projects and cultivating strategic industries; secondly, promoting key technology and results so as to quicken the process of transforming and industrialising the results and support the revitalization of key industries; thirdly, mobilizing technology personnel to enter the economic field, attracting high-order professionals and supporting enterprises' capabilities to innovate; fourthly, making good use of the characteristics of high-tech zones to develop regional economic growth zones; fifthly, quickening the pace of works that are beneficial to the livelihood of the people so that the public can enjoy the fruits of advanced technologies; sixthly, putting in place a mechanism for innovation and transforming the way work is done.

Remark: Original text contributed by RFID China Alliance. If any discrepancy exists between the Chinese and English versions, the Chinese version shall prevail.



APPENDIX A

DISCUSSION GUIDE – LOGISTICS

Background Information

- Company Name, job title and/or department
- Size of Company
 - ◆ No. of staff in Hong Kong, Mainland China and Overseas
 - ◆ No. of I.T. staff in Hong Kong, Mainland China and Overseas
- Year of Establishment
- Service Coverage
 - ◆ Air-freight
 - ◆ Sea-freight (LCL/FCL/Non Containerized Load/Buyer Consolidation)
 - ◆ Sea-Air
 - ◆ Warehouse and Distribution
 - ◆ Contract Logistics
 - ◆ Customs Clearance and Brokerage
 - ◆ Cargo Marine Insurance
 - ◆ Rail-Cargo
 - ◆ Lead Logistics (4PL)
 - ◆ Fair & Exhibition/Home Removal
 - ◆ Others
- Cargo Handling Capability
 - ◆ Dangerous Cargo
 - ◆ Reefer Cargo & Perishable Goods
 - ◆ Temperature Controlled Cargo (e.g. Beverage)
 - ◆ General Cargo
- Core Industry Sectors:
 - ◆ Industrial
 - ◆ Life Sciences/Healthcare
 - ◆ Retail
 - ◆ Consumer (FMCG)
 - ◆ Fashion/Apparel
 - ◆ Aerospace/Automotive
 - ◆ Hi-Tech
 - ◆ Others (e.g. Oil and Gas)
- Accreditation:
 - ◆ TAPA
 - ◆ ISO9002
 - ◆ C-TPAT
 - ◆ Others, please specify

Section A:

Current I.T. Application Level in Business & Operation Process

In this section, we ask participants how they typically do their business to identify information flow and technology needs derived from their business and operation process.

A generic work flow diagram applicable for the industry sector being studied

- Does the company operate any “Freight Management System” (or Operation Management System)?
 - ◆ If YES, please advise whether it’s a self-developed system and how long does it take for such development?
 - ◆ If it’s purchased from a technology provider, how much does it cost? And the maintenance fee incurred?
 - ◆ How satisfied are you with the current system? (1 = Less satisfied; 5 = Most satisfied)
- Does your FMS/OPMS provide the function of: CRM, Reporting, Data Analysis, Load Planning?
- Have you integrated your FMS/OPMS with external stakeholders, e.g. airlines, ocean carriers, DTTN/Tradelink, shippers or consignees)?
 - ◆ If YES, please describe the detailed integration.
 - ◆ If it’s just for internal use, what kind of the internal systems are being integrated with? (Accounting/Finance, Sales/Marketing, Warehouse Management ...etc)
- Does your company support the system with BI (Business Intelligence) features in providing the analytical reporting function, alert management, shipment trends, ABC analysis in sorting out the top tier accounts?
- What are the key channels of communication that your company used to receive bookings? (e.g. Fax/E-mail with Excel file/Phone Call/Web-Portal/EDI/RosettaNet/XML or others)
 - ◆ Please advise the distribution of the above channels in terms of percentage.
 - ◆ Upon receipt of booking, do you have any acknowledgement of receipt with SO number to the shippers? If so, please advise the channels of communication (through phone call/E-mail/return fax/SMS or others) and the distribution as well.



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- How does your company send bookings to airlines and ocean carriers? (e.g. portal, fax or other ways?)
 - ♦ Do the airlines/ocean carriers send your company space/order confirmation upon receipt of your booking? And what are the channels of communication?
- Have you encountered any challenges in the booking procedures?
- Does your company spend plenty of resource on data entry? If so, does your company fully utilize the raw data for airway bills/bill of lading and commercial document preparation? How does your company overcome this challenge? What is the level of human error in data entry in terms of %?
- Do the airlines/ocean carriers provide your company with sufficient information? Is it real time information? For example: the cargo offload, space availability, schedule delay, special offering? If so, please advise the channels of communication? What kind of extra information that you are looking for from the airlines? How useful of this information to your business and operation process? And why?
- Any systems to monitor the vendor performance such as airline, ocean carrier, trucker, warehouse provider, trucker and sub-contractor? (In providing the KPI analysis, historical records for the shipment delay, damage, lost) Is it useful? Does your company think that the tool in selecting the optimized vendors based on the pre-set criteria in considering their past performance, costs, service readiness?
- Any systems equipped with interface with terminals (AAT/Hactl/HIT/MTL/OnePort)? If not, any portals your company is using (Traxon, Ezycargo, One Port, GT Nexus, INTTRA)? What is the major function of these systems/portals? How useful? What kinds of function need to be improved?
- While cargo/container delivering to the terminal, any document signed back to your company? Does your company accept e-receipt?
- Would you mind sharing your experience in using platform (e.g. One-Port) to retrieve the e-Mate receipt? (for ocean)
- Any additional information does your company expect from the terminal? Such as the status of the cargo/container.
- While preparing the cargo load plan/container load plan, does your company utilize any application or technology such as cargo load optimizer, cargo optimization system to facilitate the planning? If not, why? In current, does your company only make use of human expertise? How's the effectiveness? Does it achieve your request?
- Does your company think that the system in calculating the actual cost allocation on each kg/CBM useful? (Case elaboration: The DDU air shipment pickup from Dongguan by consolidation truck via HKG gateway to L.A. This involves truck cost, fuel surcharge, air-freight, customs brokerage, documentation, terminal charge, CFS...etc)
- Any issues in preparing e-manifest, customs declaration? Is it time consuming? Currently how to manage it? What kinds of technology or system to adopt in this area?
- Any warehouse management systems available (CFS warehouse/Air-freight Fast Moving warehouse)? If so, is it self-developed or purchased from the technology provider? If not, does not company think that there is no such demand?
- How to locate your cargo or shipment? By manual record or by system? Is it necessary to have a system to locate the cargo location?
- Any systems available for monitoring the cargo unloading and loading process? By CCTV or other technologies? Any additional If not available, how to ensure the security and enhance the visibility?
- Does you company manage your own trucks? Or it's out-sourced to a trucking company?



APPENDIX A

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- Any GPS or monitoring system to track the truck/trailer activities? If so, how many truck installed with those technologies? Is it a mandatory? Does your company know the technology of e-seal/smart container?
- While the cargo picked up from the terminal, in case of abnormal case occurred such as cargo damage found, wet...etc? Any potential needs in taking the photos and recording down the status in where the information given to the operation department and the consignee is for decision making on survey arrangement? (for air)
- Are the sales easy to view their sale performance in term of target, tonnage, revenue, and the numbers of new accounts...etc?
- Any channels for the customer to respond the issues of price, performance...etc? This will help the company in continuous improvement.
- As for the DSO and credit limit issues, any alert systems available to notify the sales or operation for the shipment control? Is it useful?

Show a multiple choice sheet for participant's selection

- Please click the following most describing your current I.T. application.
 - ♦ Totally manual, no hardware and software
 - ♦ No knowledge and awareness of I.T. application. The company has no I.T. solution to solve for daily operating issues (except MS Office, public email account, etc.)
 - ♦ Have knowledge and awareness of I.T. application but don't use any I.T. solution (except MS Office, public email account, etc.)
 - ♦ Apply limited I.T. solution to automate a specific area of operations (e.g. document management system, warehousing system but not full ERP, finance & accounting system only, etc.)
 - ♦ Full I.T. implementation with an integration with other internal systems
 - ♦ Full I.T. implementation with an integration with both internal and external systems

Section B:

I.T. Application Barriers & Concerns

In this section, we ask participants what are their concerns and difficulties to apply I.T. solutions.

- What is the biggest challenge your company faces with technology adoption?

Please rate the selected items in terms of the degree of challenge.

(1 = Less challenging; 5 = Most challenging)

- ♦ data integration
- ♦ limited budget
- ♦ difficult to assess ROI
- ♦ difficult to cope with rapid technological changes
- ♦ shortage of skilled I.T. people
- ♦ user's recognition on application value is low
- ♦ lack of industry/government support
- ♦ complexity of application software
- ♦ difficult to cope with rapid and vary customer expectation
- ♦ other (please specify)

- When deciding to enhance or upgrade your technological capabilities and customer offering, what are the most important motivating factors?

Please rate the selected items in terms of the degree of importance.

(1 = Less important; 5 = Most important)

- ♦ improve operational efficiency
- ♦ increase service performance
- ♦ improve customer satisfaction
- ♦ increase company profitability
- ♦ differentiate themselves from competitors
- ♦ build up long-term relationship
- ♦ clear ROI
- ♦ reduce human error
- ♦ corporate image
- ♦ other (please specify)

- Please rank the following concern areas on an I.T. application:

- ♦ Price
- ♦ People
- ♦ Technology
- ♦ Time
- ♦ Solution Providers' Capabilities
- ♦ Solution Appropriateness



APPENDIX A

DISCUSSION GUIDE – LOGISTICS

Section C:

Industry trends/characteristics

In this section, we ask participants how their industry characteristics will affect their technology application needs in the future.

- What are some hot issues/trends of third party logistics provider now? (Threats, opportunities, new customer's requirements, etc.)
 - ♦ How would you see the impact of the increased fuel service charge nowadays?
 - ♦ Do you agree that I.T. capability is a critical competitive factor in this industry?
- Do you foresee any micro/macro trends that are going to impact your industry in the future? Such as airline alliance and the termination of ocean carrier alliance, Global M&A.
- How is this transformation going to affect your business process? Such as financial tsunami, Three Links, new China labor law, manufactories removal, the change of operation in China – processing trade to domestic trade and self-investment.

Do they incur any implications on your technology application needs? Such as Wal-Mart mandatory in using RFID, wireless Technologies, Web-Based Technologies...etc. If so, what are they and why?

- What business applications and how you will automate them with technology in future?
 - ♦ Customer relationship
 - ♦ Purchasing/Supplier relationship
 - ♦ Transportation process
 - ♦ Add-value activities
 - ♦ Warehousing & Distribution
 - ♦ Communication with internal & external parties (e.g. Portal Technology and Electronic Document Exchange)
 - ♦ Supply chain track & trace
 - ♦ Supply chain security
 - ♦ Compliance management
 - ♦ Forecasting/Event Management
 - ♦ Business Intelligence
 - ♦ Others (Please Specify)
- What do you expect the % of the total cost in your I.T. adoption?
- What is your current spending (in terms of % and/or absolute amount)?
- What is your view on those initiatives/technologies?
 - ♦ RFID
 - ♦ Wireless Application such as WiFi Network
 - ♦ e-Documentation such as eFCR
 - ♦ Business/Operation Intelligence
 - ♦ SaaS

Section D:

Future I.T. Applications

In this section, we ask participants about their expectation the needs of I.T. application, we would then discuss with them about how our centre would be able to develop the solution.

- In coping with the severe competition, what kinds of I.T. solutions your company plans to implement? If NO, why?

Section E:

R&D Demand & Aspiration

In this section, we ask participants what industry/government support are needed in I.T. adoption.

- Do you have any expectation for government/R&D Centre in helping the industry in term of short-term & long-term?

Show LSCM's 2008 R&D Roadmap for participant to comment

- In which areas of LSCM R&D roadmap are you interested in? And what other key technology initiatives would your company be interested?
- Do you think the function and long-term goal of the LSCM R&D Centre contributes to strengthening PRD's economic competitiveness? If not, why?



APPENDIX B

DISCUSSION GUIDE – RETAIL

Background Information

- Company Name, job title and/or department
- Size of Company – No. of staff in Hong Kong, Mainland China and Overseas
- No. of I.T. staff in Hong Kong, Mainland China and Overseas
- Year of Establishment
- Major Business (e.g. Department Store, Chain Store, Supermarket)

Section A:

Business Process

In this section, we ask participants how they typically do their business to identify information flow and technology needs derived from their business processes.

A generic work flow diagram applicable for the industry sector being studied

- How far do you think this diagram illustrates how you do your business? Do you have anything to add?
- As per above work flow diagram, what kind of information flows is critical for your operations?
- Which process is the most time consuming?
- Which process is the most costly?
- Which process is the most influential towards your company's market reaction ability?
- Which process involves the highest percentage of errors?
- Which process needs I.T. the most?
- What are the critical areas in your business processes while collaborating with other business partners along the supply chain, such as suppliers, 3PL, distribution centre, etc.?
- What is the pain point(s) you see in your business processes in complying with relevant governmental and industrial regulatory authorities?

Section B:

Current I.T. Application Level

In this section, we ask participants how they currently apply information technology for their business operations.

A slide illustrating possible I.T. solutions for their business operations

- What I.T. solutions are you using? Who is/ are the service providers? And what about the service model?

- How satisfied are you with the current technology solutions within your company today?

Please rate the selected items in terms of the degree of satisfaction.

(1 = Less satisfied; 5 = Most satisfied)

- What type of technology is being used in your I.T. solutions?
- What are the improvements you have noticed?
- Are you using information platform (HK, Mainland China and Overseas) to collaborate with your business partners? Please give the details.
- How competitive is your current I.T. system in compared with that of the whole industry?
(1 = Less competitive; 5 = Most competitive)
- In addition to your current status, how competitive and in what areas you think you are in view of the next 5 years of the development trends?

Show a multiple choice sheet for participant's selection

- Please click the following most describing your current I.T. application.
 - ♦ Totally manual, no hardware and software
 - ♦ No knowledge and awareness of I.T. application. The company has no I.T. solution to solve for daily operating issues (except MS Office, public email account, etc.)
 - ♦ Have knowledge and awareness of I.T. application but don't use any I.T. solution (except MS Office, public email account, etc.)



APPENDIX B

DISCUSSION GUIDE – RETAIL

- ♦ Apply limited I.T. solution to automate a specific area of operations (e.g. document management system, truck assignment system but not full fleet management concerned, finance & accounting system only, etc.)
- ♦ Full I.T. implementation with an integration with other internal systems
- ♦ Full I.T. implementation with an integration with both internal and external systems

Section C:

I.T. Application Barriers & Concerns

In this section, we ask participants what are their concerns and difficulties to apply I.T. solutions.

- What is the biggest challenge your company faces with technology adoption?

Please rate the selected items in terms of the degree of challenge.

(1 = Less challenging; 5 = Most challenging)

- ♦ business process re-engineering
- ♦ data integration
- ♦ limited budget
- ♦ difficult to assess ROI
- ♦ difficult to cope with rapid technological changes
- ♦ shortage of skilled I.T. people
- ♦ user's recognition on application value is low
- ♦ lack of industry/government support
- ♦ complexity of application software
- ♦ other (please specify)

- When deciding to enhance or upgrade your technological capabilities and customer offering, what are the most important motivating factors?

Please rate the selected items in terms of the degree of importance.

(1 = Less important; 5 = Most important)

- ♦ improves operational efficiency
- ♦ improves customer service
- ♦ improves management level
- ♦ improves market reaction ability
- ♦ reduces costs of purchase, distribution and storage
- ♦ direct customer request
- ♦ reduces labor costs
- ♦ improves data quality
- ♦ clear ROI
- ♦ reduce human error
- ♦ improves corporate image
- ♦ other (please specify)
- Please rank the following concern areas on an I.T. application:
 - ♦ Price
 - ♦ People
 - ♦ Technology
 - ♦ Service
 - ♦ Time
 - ♦ Solution Providers' Capabilities
 - ♦ Solution Appropriateness



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DISCUSSION GUIDE – RETAIL

Section D:

Industry trends/characteristics

In this section, we ask participants how their industry characteristics will affect their technology application needs in the future.

- What are the threats, opportunities or other circumstances of your industry now?
- How do you think about the development trend of retail informatization?
- How would you see the impact of e-commerce to the traditional retail industry?
Do you agree that I.T. capability is a critical competitive factor in retail industry?
- Do you foresee any micro/macro trends that are going to impact your industry in the future?
- How is this transformation going to affect your business process?
- Do they cast any implications on your technology application needs? Such as Wal-mart mandatory in using RFID, wireless technologies, web-based technologies, etc.

Section E:

RFID Perception

In this section, we ask participants about their opinion on the RFID technology and its application.

- What value do you think RFID technology can bring to retail industry?
- Have you applied RFID technology in any department of your company? If so, has it brought any value to your company?
- What do you think are the barriers to the adoption of RFID technology?
- How RFID to become popular and how long does it take in your opinion? What and any plan to make your existing application to be RFID-enabled in the future?



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DISCUSSION GUIDE – RETAIL

Section F:

Future I.T. Applications

In this section, we ask participants what are their future I.T. strategic plans and their needs of I.T. application..

- Is there any I.T. plan/strategy for your company?

Show a list of potential application areas for participant to comment

- What business applications and how you will automate them with technology in future?
 - ♦ Data Warehouse
 - ♦ Sales and marketing/Customer relationship
 - ♦ Purchasing/Supplier relationship
 - ♦ Planning/Forecasting/Replenishment
 - ♦ Warehousing & Distribution
 - ♦ Radio Frequency Identification (RFID)
 - ♦ Communication with internal & external parties (e.g. Portal Technology and Electronic Document Exchange)
 - ♦ Supply chain track & trace
 - ♦ Supply chain security
 - ♦ Compliance management
 - ♦ Forecasting/Event Management
 - ♦ Business Intelligence
 - ♦ Financial Management
 - ♦ Self-help checkout
 - ♦ Others
- What do you expect the % of the total cost in your I.T. adoption?
- What is your current spending (in terms of % and/or absolute amount)?

Section G:

R&D Demand & Aspiration

In this section, we ask participants what industry/ government support are needed in I.T. adoption

- Do you have any expectation for government/ R&D Centre in helping the industry in term of short-term & long-term?

Show LSCM's 2008 R&D Roadmap for participant to comment

- In which areas of LSCM R&D roadmap are you interested in? And what other key technology initiatives would your company be interested?
- Do you think the function and long-term goal of the LSCM R&D Centre contributes to strengthening PRD's economic competitiveness? If not, why?



APPENDIX C

ORIGINAL TEXT OF “POLICY OF CHINA RFID INDUSTRY DEVELOPMENT”

中国RFID产业发展政策

原文：中国RFID产业联盟

(一) 国务院颁布十大产业调整和振兴规划

为应对国际金融危机对我国实体经济的影响，根据国务院部署，国家发改委、工业和信息化部会同有关部门开展了钢铁、汽车、船舶、石化、纺织、轻工、有色金属、装备制造业、电子信息，以及物流业等十个重点产业调整和振兴规划的编制工作。自2009年1月14日始至2009年3月10日止，国务院常务会议已原则通过了这些规划，并已颁布。十大产业振兴规划包括：《汽车产业调整和振兴规划》、《钢铁产业调整和振兴规划》、《纺织工业调整和振兴规划》、《装备制造业调整和振兴规划》、《船舶工业调整和振兴规划》、《电子信息产业调整和振兴规划》、《石化产业调整和振兴规划》、《轻工业调整和振兴规划》、《有色金属产业调整和振兴规划》、《物流业调整和振兴规划》。制订和实施重点产业调整和振兴规划，是确保经济平稳较快增长、增强后劲的重要举措，通过研究提出强有力的、有针对性的、可操作的措施，提升信心，稳定生产、稳定市场，推进结构调整，为国民经济再上新台阶夯实基础。

(二) 电子信息产业调整和振兴规划 (摘要)

为应对国际金融危机的影响，落实党中央、国务院关于保增长、扩内需、调结构的总体要求，确保电子信息产业稳定发展，加快结构调整，推动产业升级，特制定本规划，作为电子信息产业综合性应对措施的行动方案。规划期为2009-2011年。

《电子信息产业调整和振兴规划》的主要内容包括五个方面：一、电子信息产业现状及面临的形势；二、指导思想、基本原则和目标；三、产业调整和振兴的主要任务；四、政策措施；五、规划实施。

《电子信息产业调整和振兴规划》贯彻一条主线，“保增长、扩内需、调结构、促发展”是规划制定的主导思想。保增长是首要任务，扩内需是根本途径，调结构是核心任务，促发展是最终目的。选择这样一条主线，是在国际金融危机背景下，电子信息产业应对挑战、解决产业发展深层次问题、保持产业持续健康发展的需要。

未来3年我国电子信息产业发展要实现**两大目标**：第一，促增长、保稳定取得显著成效；第二，调结构、谋转型取得明显进展。在产业调整和振兴的主要任务中明确提出，今后三年，**电子信息产业要完成三大任务**确保骨干产业稳定增长、战略性核心产业实现突破、通过新应用带动新增长。第一，要确保计算机、电子元器件、视听产品等骨干产业稳定增长；第二，要突破集成电路、新型显示器件、软件等核心产业的关键技术；第三，要在通信设备、信息服务、信息技术应用等领域培育新的增长点。

《电子信息产业调整和振兴规划》强调要加速信息基础设施建设，大力推动业务创新和服务模式创新，强化信息技术在经济社会领域的运用，积极采用信息技术改造传统产业，以新应用带动新增长。要加强信息技术融合应用。加速行业解决方案的开发和推广，组织开展行业应用试点示范工程，支持RFID（电子标签）、汽车电子、机床电子、医疗电子、工业控制及检测等产品和系统的开发和标准制定。支持信息技术企业与传统工业企业开展多层次的合作，进一步促进信息化与工业化融合。结合国家改善民生相关工程的实施，加强信息技术在教育、医疗、社保、交通等领域应用。提高信息技术服务“三农”水平，加速推进农业和农村信息化，发展壮大涉农电子产品和信息服务产业。

《电子信息产业调整和振兴规划》概括了该产业为国家经济社会发展做出的**四大贡献**，即：经济增长的重要引擎、吸纳就业的重要行业、可持续发展的重要支撑、改善民生及扩大消费的重要领域。分析了**产业面对的五项突出挑战**：产业增幅明显放缓、出口形势不容乐观、外资投入大幅减少、重点领域和骨干企业面临较大困难、新形势下产业内部深层次矛盾更加凸显，这些将继续困扰我国电子信息产业发展。**明确实施六项重大工程**：1、集成电路升级；2、平板显示和彩电工业转型；3、TD-SCDMA第三代移动通信产业新跨越；4、数字影视推广工程；5、计算机提升和下一代互联网应用；6、软件及信息服务业培育。提出要**落实七项保障措施**：落实内需带动；加大国家投入；加强政策扶持；完善投融资环境；支持优势企业并购重组；支持企业开拓国际市场；强化自主创新能力建设。在自主创新能力建设上，着重强调要加快实施国家科技重大专项，推动产业创新发展。要加强RFID等关键标准的制定和推广工作，加快制定工业软件、信息安全、信息技术服务标准和规范。加强对电子信息产品和服务的知识产权保护。



APPENDIX C

ORIGINAL TEXT OF “POLICY OF CHINA RFID INDUSTRY DEVELOPMENT”

(三) 物流业调整和振兴规划(摘要)

物流业是融合运输业、仓储业、货代业和信息业等的复合型服务产业,是国民经济的重要组成部分,涉及领域广,吸纳就业人数多,促进生产、拉动消费作用大,在促进产业结构调整、转变经济发展方式和增强国民经济竞争力等方面发挥着重要作用。

为应对国际金融危机的影响,落实党中央、国务院保增长、扩内需、调结构的总体要求,促进物流业平稳较快发展,培育新的经济增长点,特制定本规划,作为物流产业综合性应对措施的行动方案。规划期为2009—2011年。

《物流业规划》的主要内容包括六个方面:一、发展现状与面临的形势;二、指导思想、原则和目标;三、主要任务;四、重点工程;五、政策措施;六、规划实施。

《物流业规划》指出,必须加快发展现代物流,建立现代物流服务体系,以物流服务促进其他产业发展,在关键技术应用方面重点强调了要应用RFID技术。规划的主要任务包括十个方面:第一,积极扩大物流市场需求;第二,大力推进物流服务的社会化和专业化;第三,加快物流企业兼并重组;第四,推动重点领域物流发展;第五,加快国际物流和保税物流发展;第六,优化物流业发展的区域布局;第七,加强物流基础设施建设的衔接与协调;第八,提高物流信息化水平;第九,完善物流标准化体系;第十,加强物流新技术的开发和应用。对于物流新技术,要完善并推广物品编码体系,广泛应用条形码、智能标签、无线射频识别(RFID)等自动识别、标识技术以及电子数据交换(EDI)技术,发展可视化技术、货物跟踪技术和货物快速分拣技术,加大对RFID和移动物流信息服务技术、标准的研发和应用的投入。积极开发和利用全球定位系统(GNSS)、地理信息系统(GIS)、道路交通信息通信系统(VICS)、不停车自动交费系统(ETC)、智能交通系统(ITS)等运输领域新技术,加强物流信息安全体系研究。

规划确定了振兴物流业九大重点工程,包括多式联运和转运设施、物流园区、城市配送、大宗商品和农村物流、制造业和物流业联动发展、物流标准和技术推广、物流公共信息平台、物流科技攻关及应急物流等。

(四) 2009年1-5月中国工业总体运行情况

据国家统计局统计,1-5月,全国规模以上工业增加值同比增长6.3%,其中5月份增长8.9%,比4月份加快1.6个百分点。

轻、重工业增速同步回升。1-5月,轻、重工业增加值同比分别增长7.8%和5.7%;其中5月份分别增长9.7%和8.6%,轻工业主要受国内消费刚性需求拉动,下滑程度浅,生产形势相对稳定;重工业在经历了半年多的调整后,原材料、燃料和动力购进价格下降,运行状况得到改善。

工业品出口降幅进一步扩大。据海关统计,1-5月,我国外贸出口额同比下降21.8%,其中5月份降幅达到26.4%,比4月份扩大3.8个百分点。

1. 我国电子信息产业1-5月运行情况:

工业和信息化部运行监测协调局最新统计数据显示,2009年5月中国电子信息产业工业增加值同比增长4.3%,增幅逐步回升。1-5月工业增加值同比去年下降2.2%;销售产值同比增长1.4%,低于同期全国工业平均增速。5月份,微型计算机设备由4月的下降5%转为增长18.1%;彩电增长14.9%,显示器增长4.8%。手机、程控交换机、集成电路产量呈负增长。

数据显示,前5个月中国规模以上电子信息制造业实现主营业务收入1.69万亿元,同比下降8.5%;实现利润385亿元,同比下降41%。通信设备实现利润139亿元,同比增长35.1%。集成电路亏损194亿元。计算机、视听设备、元件利润下降30%以上,内销市场增势明显。1-5月出口交货值1530亿美元,同比下降24.2%,5月份同比下降24.2%,下降幅度比4月提高1.3个百分点;出口交货值占行业销售产值的比重为63.5%。外商投资下滑,1-5月固定资产投资增长16.5%,增速下降6个百分点。其中仅计算机和通信产品分别增长17.8%和17.4%,其余均下降。

工信部运行监测协调局有关负责人表示,今年中国电子信息产业下行趋势明显,尽管3-5月产业连续出现一些回暖迹象,但总体仍处于低位调整阶段,部分行业和领域存在升降交替现象,产业整体回升的基础并不稳固。而且由于国际市场并无明显转好迹象,产业发展形势依然不容乐观,仍需密切跟踪并采取积极措施。



APPENDIX C

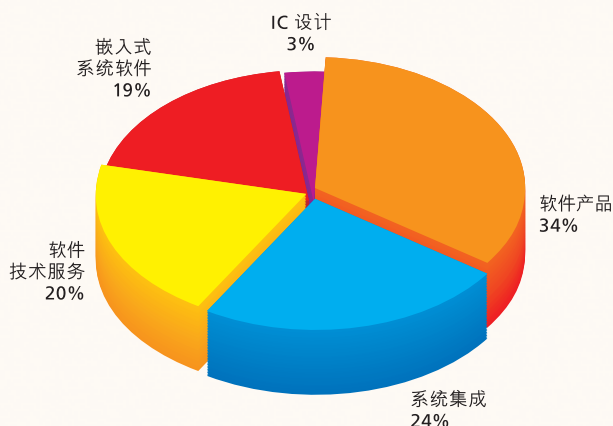
ORIGINAL TEXT OF “POLICY OF CHINA RFID INDUSTRY DEVELOPMENT”

2. 我国软件业1-5月经济运行情况：

软件产业收入稳中有降。1-5月累计完成软件业务收入3291.4亿元，同比增长23.3%，增速比去年同期低5.7个百分点。

软件服务化趋势明显。1-5月共完成软件产品收入1152.2亿元，同比增长24.2%。软件技术服务收入659.3亿元，同比增长28.2%，增速比去年同期低18.6个百分点。其中，软件外包服务收入87亿元，增长84.7%。嵌入式软件收入610.2亿元，同比增长20.9%，系统集成收入773.8亿元，同比增长20.9%，低于去年同期增速9.2个百分点；IC设计业收入95.8亿元，同比增长15.4%。

2009年1-5月软件产业收入构成情况



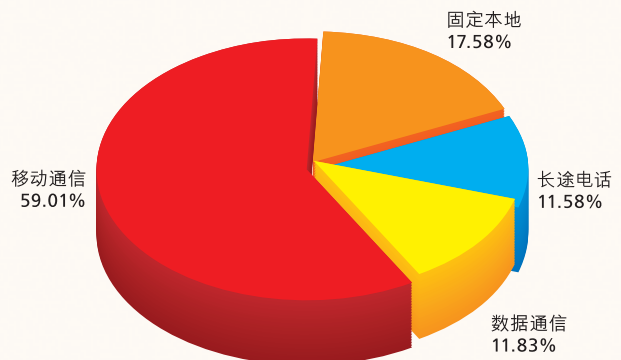
1-5月，我国软件出口65.6亿美元，同比增长54.2%，增幅比去年同期高9.2个百分点。1-5月，我国软件产业完成利润总额332亿元，同比增长25.8%，增幅比去年同期低8.2个百分点。

3. 我国通信业1-5月运行状况：

业务总量和业务收入：2009年1-5月，全国电信业务总量累计完成10092.7亿元，比上年同期增长11.3%；电信主营业务收入累计完成3359.8亿元，比上年同期增长2.1%。

用户发展：1-5月份，全国累计净增电话用户3644.9万户，总数达到10.18亿户。其中，固定电话用户3.32亿户；移动电话用户达到6.87亿户。1-5月份，互联网宽带接入用户达到9162.9万户。

2009年1-5月电信主营业务收入构成



本地电话业务：2009年1-5月，固定本地电话通话量比上年同期下降11.8%，而移动本地电话通话时长比上年同期增长17.0%。

长途电话业务：2009年1-5月，长途电话通话总时长比上年同期增长4.8%。其中固定传统长途、IP电话通话时长分别下降4.6%、16.8%，而移动长途电话通话时长增长28.4%。

(五) 工信部2009年度电子信息产业发展基金项目启动

工业和信息化部2009年度电子信息产业发展基金（以下简称电子发展基金）项目申报工作已于2009年3月23日开始启动。在《2009年度电子信息产业发展基金项目指南》中涉及射频识别相关技术和系统的项目包括：软件与信息服务类中“基于面向服务架构（SOA）的产品可追溯的企业管理系统研发（食品、药品、农产品加工）”项目；集成电路类中“薄型非接触智能卡芯片封装技术开发及产业化”项目；信息通信类中的“RFID产品研发及行业应用示范（招标项目）”和“射频电子支付产品研发及应用示范”。

在电子信息产业发展基金招标项目招标文件《RFID产品研发及行业应用示范规范书》中，明确指出项目的目标是：通过本项目的实施，重点支持国内从事RFID产品研发、生产以及应用推广方面技术基础和市场能力较强的企业，研制性价比高、实用性好、市场竞争力强、技术先进、具有自主知识产权的超高频RFID产品和系统，实现产业化；鼓励采用自主知识产权RFID产品，在工业与安全生产管理、交通物流、防伪等领域建立应用示范，通过行业应用示范的引导，促进自主RFID产业链的形成和完善，加快国内RFID产业和应用的发展。项目的主要内容包括：



APPENDIX C

ORIGINAL TEXT OF “POLICY OF CHINA RFID INDUSTRY DEVELOPMENT”

本项目分为超高频RFID产品研发及产业化、RFID行业应用示范（工业与安全生产管理、交通物流、防伪领域）二项内容，投标方可以根据自身的优势和实力选投其中的全部或部分内容，鼓励设备研制企业、集成企业和行业用户单位联合申报应用示范。

1. 自主研制高性能、高可靠的超高频RFID读写设备、标签等产品，完成产品定型和批量生产。完成超高频RFID读写设备整机设计，建立超高频RFID读写设备软硬件开发平台，实现超高频RFID标签的清点、读、写等功能，能够适应多种复杂环境；设计适合于本项目应用示范的RFID标签，满足特定使用环境的要求。
2. 鼓励和优先支持采用自主知识产权RFID产品，建立安全生产管理、交通物流、防伪行业应用示范，提出行业应用技术规范和标准，并进行推广。
3. 保证本项目产品满足市场的应用需求，具有广泛的适用性、较强的市场竞争力和较长的产品生命周期。
4. 完成产品研制和行业应用示范建设，占有一定的市场份额，取得良好的经济效益。

2009年度电子发展基金申报项目超过900个，共分7个专业，12个组别同时进行评审。2009年度电子信息产业发展基金招标项目共设19项，收到投标文件367份。因甲型H1N1流感防控工作需要，今年取消企业现场答辩，采取专家分组集中书面评阅、单独打分的评审方式，项目评审工作已顺利完成。

（六）工业和信息化领域“十二五”规划 重点研究课题公布

2009年5月25日，工业和信息化部发布了关于公布工业和信息化领域“十二五”规划重点研究课题的通知。根据《关于“十二五”规划前期重大问题研究的通知》，工信部面向社会公开征集工业、通信业和信息化领域“十二五”规划研究课题，得到了有关部门、科研院所、高等学校、企业等各方面的积极支持。经对各单位申报课题进行研究评审，最终确定了45项入选重点研究课题。这些课题中综合类有13项；行业类有18项，其中原材料行业（5项），装备工业（4项），消费品工业（3项），电子制造业（1项），民爆行业（1项），软件业（1项），通信业（2项），生产性服务业（1项）；专项类有14项。

近日工信部印发了《关于公布中国通信业“十二五”规划前期预研重点研究课题的通知》，共有十大类、总计48项。

（七）科技部2009年度高新技术发展及 产业化工作会议召开

2009年4月16日-17日，科技部高新司在山东省青岛市召开了2009年度高新技术发展及产业化工作会议。会议旨在深入贯彻落实党的“十七大”精神，认真贯彻落实《国务院关于发挥科技支撑作用促进经济平稳较快发展的意见》和全国科技工作会议对高新技术发展及产业化工作的部署，深入研究科学技术支撑工业领域产业结构调整和升级，促进国民经济平稳较快发展的思路 and 措施，部署2009年度高新技术发展及产业化工作。

高新司司长作了《高新技术发展及产业化工作报告》，火炬中心主任分别以《对高新技术产业化若干政策的思考》、《国际金融危机对我国高新技术产业的影响及其思考》为题作了大会报告。会议还安排高新司各处负责同志介绍了2008年工作总结和2009年工作思路。

科技部杜占元副部长强调，2009年高新技术领域要着力做好以下六个方面的工作：一是抓紧实施重大专项，培育战略性新兴产业；二是推广一批重大技术和成果，加快成果转化和产业化进程，支撑重点产业振兴；三是动员科技人员进入经济主战场，积极引进高层次人才，支持企业增强自主创新能力；四是发挥高新区独特作用，培育区域经济增长点；五是加快推进科技惠民工程，让广大群众共享科技进步成果；六是着力做好体制机制创新，转变工作方式。



APPENDIX D

READER OPINION FORM

Thank you for reading the LSCM Market Intelligence Report. In order to improve the quality of the report and its value to the industry, we invite you to complete this reader opinion form.

1. How do you find the report comprehensive and useful? Does it reflect industry problems and technology needs?

2. Does the report contain sufficient detail? What other contents you would like to include in the report?

3. Which parts of the report are the most useful to your work?

4. How does the information in this report impact on your views of enabling technologies?

5. What improvements can be made to this report?

6. Do you have any other comments or suggestions?

7. Would you recommend your colleagues/partners reading this report?

8. Contact Information *(Optional)*

Name ☐ Ir ☐ Prof ☐ Dr ☐ Mr ☐ Mrs ☐ Ms

Company

Phone Number

Email

Thank you for your feedback. Please return the completed form by fax: (852) 2299 0552 or email to klam@lscm.hk.



APPENDIX E

MEMBERSHIP APPLICATION FORM



Act Now!

Apply Centre Membership
on or before
31 March 2010 to enjoy
Annual Membership
Fee Waiver!

Centre Membership Scheme

Promotional Terms and Conditions:

1. The promotional period is between 1 April 2009 and 31 March 2010 inclusive (the "Promotional Period").
2. Applicant is required to submit the completed application form via mail or online channel together with all supporting documents within the Promotional Period. A notification letter will be sent to the successful applicant by mail.
3. Membership application is subject to the LSCM R&D Centre's usual membership approval procedure.
4. Membership and annual membership fee waiver for successful applicant will expire on 31 March 2010. Next membership year will be started on 1 April 2010, annual membership fee shall be payable upon renewal.
5. The LSCM R&D Centre reserves the right to amend the promotional offers and these terms and conditions at any time without prior notice. In the event of any disputes arising out of this promotion, the decision of the LSCM R&D Centre shall be final.



A member of Hong Kong R&D Centres
香港研發中心成員



APPENDIX E

MEMBERSHIP APPLICATION FORM

Application Form for LSCM R&D Centre Membership

Membership Categories *(please select and mark with a tick)*

Centre Membership Categories

☐ Individual Membership

☐ Company / Institute Membership

☐ Technology / Solution Provider Membership

Part IA- General Information *(For "Company/ Institute" & "Technology /Solution Provider" Membership Only)*

Company Name (in English)

(In Chinese)

Office Address / Correspondence Address

Telephone Number

Facsimile Number

Email

Postcode

Country

Website

Name of Representative (in English) ☐ Ir ☐ Prof ☐ Dr ☐ Mr ☐ Mrs ☐ Ms

(in Chinese)

Position (in English)

(in Chinese)

Business Registration Number

Year of Establishment

No. of Staff (in Hong Kong)

No. of Staff (outside Hong Kong)

Part IB - General Information *(For individual Membership Only)*

Name (in English) ☐ Ir ☐ Prof ☐ Dr ☐ Mr ☐ Mrs ☐ Ms

(in Chinese)

Correspondence Address

Telephone Number

Email

Your Job (please specify your company name)

Postcode

Country

Part II - Industry *(please mark with a tick)*

☐ Government

☐ Non-profit Organization

☐ University

☐ Technology - Hardware Vendor

☐ Technology - Software Vendor

☐ Technology - System Integrator

☐ 3rd / 4th Party Logistics Service

☐ Shipping

☐ Freight Forwarding - Air / Sea

☐ Storage & Warehousing

☐ Carrier Services

☐ Cargo Terminal Operators

☐ Trucking

☐ Logistics & Courier Services

☐ Retailer

☐ Manufacturer

☐ Others, please specify:



APPENDIX E

MEMBERSHIP APPLICATION FORM

Part III - Payment Method

By Cheque

Please issue a cheque for the appropriate amount made payable to "Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies Limited". Please write the full name of your company at the back side of the cheque. An acknowledgement of receipt will be returned to you within Ten(10)working days.

Issuing Bank: _____ Cheque Number: _____

Part IV - Terms and Conditions

1. Membership commences on 1 April and expires on 31 March each year. Annual Membership Fee will be calculated on quarterly basis (three months) for members joining at any time of the year.
2. Annual Membership Fee is payable upon application. Please issue a cheque payable to "Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies Limited", and attach it to the application form.
3. Annual Membership Fee:
 - Free (Individual Membership)
 - HK\$2,000 (Centre Membership - Company / Institute)
 - HK\$10,000 (Centre Membership - Technology / Solution Provider)
4. Applications for membership will be considered by the LSCM R&D Centre at the regular meeting scheduled for that purpose, the entire application procedure will take around Forty-five (45) working days.
5. The applicant reserves the right of terminating the membership by giving no less than Thirty (30) days' written notice to the LSCM R&D Centre Office.
6. The LSCM R&D Centre reserves the right to use member's company name and logo for display in our official functions and marketing materials.
7. The LSCM R&D Centre reserves the right to amend these Terms and Conditions at any time without prior notice.

Part V - Declaration of the Applicant

1. The applicant declares that all particulars given in the application are true and correct.
2. The applicant agrees to the Terms and Conditions and the Bylaws relating to Membership (Appendix 1).
3. The applicant agrees to pay the annual membership fee upon application.
4. The applicant agrees the information submitted can be used by the LSCM R&D Centre for membership related purpose.**

Authorization Signature:

Position:

Date:

(For company membership, please sign with company chop)

****About Your Information and the Personal Data Privacy Ordinance**

The membership data can be used by the LSCM R&D Centre for membership related purposes such as production of the Members' Directory, issuing membership certificate, sending out circulars and publications, conducting surveys, or other directly related activities in print or on-line format. If you wish to make alternative arrangement or not to receive certain information, please inform us in writing. For unsuccessful applications, personal data collected will be destroyed after Six (6) months.

For LSCM R&D Centre Use

Membership Application Received on:

Received By:

Approved at Regular Meeting held on:

Membership Number:

Membership Class:

Remarks:

Handled by:

Funded by:





APPENDIX E

MEMBERSHIP APPLICATION FORM

Appendix 1

BYLAWS OF THE HONG KONG R&D CENTRE FOR LOGISTICS AND SUPPLY CHAIN MANAGEMENT ENABLING TECHNOLOGIES

ARTICLE I MEMBERSHIP

SECTION 1

Categories of Membership: Membership in the Centre shall be in Three (3) categories as follows:

Individual: An individual membership shall be available to all person who is interested in innovative logistics and supply chain related technologies

Company / Institute: An organization membership shall be available to all companies / institutes, e.g. small or medium sized enterprises, venture capitalists, R&D organizations and universities

Technology / Solution Provider: An organization membership shall be available to all companies that provide solutions and technologies to end-user companies, e.g. vendors, SI

SECTION 2

Membership Application Procedures: Application for membership in the Centre shall be made by completing the prescribed form. The completed form shall be returned to the Centre in person, by mail or through on-line submission.

In person / By Mail:

1. Obtain the application form in person from the LSCM R&D Centre Office or download the form online.
2. Carefully read the Notes to applicant on the application form to understand the requirements and procedure for application for membership.
3. Submit the completed application form and a copy of Business Registration with annual membership fee* to the LSCM R&D Centre Office in person or by post. Please issue a cheque for the appropriate amount made payable to "HK R&D Centre for Logistics and Supply Chain Management Enabling Technologies Limited". An acknowledgement of receipt will be returned to you.
4. The LSCM R&D Centre Office will contact you for further information if necessary and will inform you of the result of the application in due course. The cheque payment will be settled only when the application is approved.
5. For membership enquiries, please contact the LSCM R&D Centre Office at (852) 2299 0551 quoting your reference number or email us at membership@lscm.hk

*Applicable to company membership only

On-line Submission:

1. Select "Online Registration" under Membership of the Centre's official website at www.lscm.hk.
2. Carefully read the Notes to applicant on the on-line application form to understand the requirements and procedure for application for membership.
3. Submit the completed form and select payment method.

(a) By Cheque

Please issue a cheque for the appropriate amount made payable to "Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies Limited". The cheque should be sent together with a copy of Business Registration* to the following address within Two (2) weeks:

Hong Kong R&D Centre for Logistics and
Supply Chain Management Enabling Technologies
Room 202, Level 2, Block B, Cyberport 4
100 Cyberport Road, Hong Kong
(Ref.: Membership Application - Reference No. XXXX)

Please write the full name of your company at the back side of the cheque. An acknowledgement of receipt will be returned to you.

(b) By Credit Card

Please input credit card information on-line and the annual membership fee will be debited from this credit card only when the application is approved. Please send a copy of Business Registration* by fax: (852) 2299 0552 or email: membership@lscm.hk within 2 weeks.

4. The LSCM R&D Centre Office will contact you for further information if necessary and will inform you of the result of the application in due course.
5. For membership enquiries, please contact the LSCM R&D Centre Office at (852) 2299 0551 quoting your reference number or email us at membership@lscm.hk

*Applicable to company membership only.

The LSCM R&D Centre reserves all rights to amend the Terms and Conditions on the prescribed form at any time without prior notice.

SECTION 3

Membership Dues and Admission: Membership commences on 1 April and expires on 31 March each year. Annual Membership Fee shall be payable upon application. For renewal, Annual Membership Fee shall be payable on or before the first day of the next membership year.

Annual Membership Fee:

Individual:	Free
Company/Institute:	HK\$2,000.00
Technology / Solution Provider:	HK\$10,000.00

Membership fee will be calculated on quarterly (three months) basis for members joining at any time of the year.

The amount of Annual Membership Fee shall be determined annually by the Centre provided that the Centre may in its absolute discretion reduce, remit or waive any Annual Fee from or paid by an Individual, a Company/Institute or a Technology/Solution Provider member.

SECTION 4

Termination of Membership: Memberships may be terminated:

- (a) by resignation: A member in good standing, may resign at any time by giving Thirty (30) days written notice, and no annual dues or any part(s) thereof shall be refunded. Resignation shall take effect not earlier than Thirty (30) days after receipt of the written notice by the Centre.
- (b) by lapsing: A membership will be considered as lapsed and automatically terminated if such member's dues remain unpaid for Thirty (30) days after the first day of the membership year; however, the Centre may grant a grace period of an additional Thirty (30) days to such delinquent members. Members whose membership has lapsed shall be allowed to rejoin as a renewing member at the absolute discretion of the Centre.
- (c) by expulsion: A membership may be terminated by expulsion as provided in Section 7, Article I of these Bylaws, or any other conduct that is seriously prejudicial to the Centre.

SECTION 5

Transfer of Membership: Membership of the Centre shall not be transferred or assigned.

SECTION 6

Reinstatement: A person / company whose membership has been terminated for non-payment of dues may be reinstated as a member upon payment of the current annual dues. A person / company whose membership has been terminated for any other reasons may apply for reinstatement as a new applicant only as prescribed in Section 2 and 3 of this Article I. Reinstatement shall not be granted to persons / companies with any outstanding indebtedness to the Centre.

SECTION 7

Rules of Conduct: These Guidance Notes apply to all Members. The Centre may change or add any Rules from time to time provided that such changes or additions are not contrary to these Bylaws.

- (a) Members shall demonstrate a level of competence consistent with their class of membership
- (b) Members shall at all times act with integrity and contribute to society
- (c) Members shall not infringe intellectual property rights including but not limited to copyrights, trademarks, service marks, trade dress, design rights (registered or not) and patents of other, and shall give proper credit for intellectual property rights when usage of such right is granted
- (d) Members shall respect the privacy of other
- (e) Members shall be honest and trustworthy
- (f) Members shall be fair and not to discriminate regardless of religion, gender, disability, age, or national origin
- (g) Members shall reject bribery in all its forms, and shall avoid engaging in work or act that leads to conflict of interest situation
- (h) Members shall seek, accept, and offer honest criticism of R&D work, and to credit properly the contributions of others

SECTION 8

Personal Data Privacy Ordinance: The membership data can be used by the LSCM R&D Centre for membership related purposes such as production of the Members' Directory, issuing membership certificate, sending out circulars and publications, conducting surveys, or other directly related activities in print or on-line format. If you wish to make alternative arrangement or not to receive certain information, please inform us in writing. For unsuccessful applications, personal data collected will be destroyed after Six (6) months.

SECTION 9

Amendments: These Bylaws may be amended by the Board of Directors of the Centre from time to time at its discretion. In case of any discrepancy between the Bylaws and the Memorandum of Association of the Centre, the Memorandum of Association of the Centre shall prevail.



APPENDIX E

MEMBERSHIP APPLICATION FORM

Centre Membership		
Category	Criteria and Benefits	Annual Fee
Individual Membership	<p>Individual participates as an ordinary member.</p> <p>Members' Benefit</p> <ul style="list-style-type: none"> • Entry to international networks of companies and researchers • Have preference to participate in LSCM R&D Centre's organized events (e.g. training, conference) 	Free
Company / Institute Membership	<p>Company / institute participates as an ordinary member, e.g. small or medium sized enterprise, venture capitalist, R&D organizations and universities.</p> <p>Members' Benefit</p> <ul style="list-style-type: none"> • Entry to international networks of companies and researchers • Access to LSCM R&D Centre's project portfolio and information, provided that project confidentiality is not comprised • Have preference to participate in LSCM R&D Centre's organized events (e.g. training, conference) • Access to membership networks and member area on website • Have preference to participate / sponsor / co-organize in LSCM R&D Centre's events • Company name listed on LSCM R&D Centre website • Have rights to display "Member of LSCM R&D Centre" on business card and other various functions, occasions, materials and applications subject to approval 	HK\$2,000
Technology / Solution Provider Membership	<p>Companies that provide solutions and technologies to end-user companies. They will have preference to participate / speak / sponsor / co-organize in Centre's events.</p> <p>Members' Benefit</p> <ul style="list-style-type: none"> • Entry to international networks of companies and researchers • Access to LSCM R&D Centre's project portfolio and information, provided that project confidentiality is not comprised • Have preference to participate in LSCM R&D Centre's organized events (e.g. training, conference) • Access to membership networks and member area on website • Have preference to participate / sponsor / co-organize in LSCM R&D Centre's events • Company name listed on LSCM R&D Centre website • Have rights to display "Member of LSCM R&D Centre" on business card and other various functions, occasions, materials and applications subject to approval • Opportunity to champion new Supply Chain Management enabling technologies • Eligible to participate in providing consulting and solutions to LSCM R&D Centre community 	HK\$10,000

Application Procedures

1. Obtain the application form in person from the LSCM R&D Centre Office or download the form online.
2. Carefully read the notes to applicant on the application form to understand the requirements for membership.
3. Submit the completed form and a copy of Business Registration with annual membership fee* to the LSCM R&D Centre Office in person or by post. Please issue a cheque for the appropriate amount made payable to "Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies Limited". An acknowledgement of receipt will be returned to you within Ten(10)working days.
4. Postal address: Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies, Room 202, Level 2, Block B, Cyberport 4, 100 Cyberport Road, Hong Kong
5. The LSCM R&D Centre Office will contact you for further information if necessary and will inform you of the result of the application in due course. The cheque payment will be settled only when the application is approved.
6. For membership enquiries, please contact the LSCM R&D Centre Office at 2299 0551 quoting your reference number or email us at membership@lscm.hk.

* Applicable to company membership only



APPENDIX E

MEMBERSHIP APPLICATION FORM



即日起

成功申请成为研发中心会员，
可获豁免会员年费！
推广优惠至2010年3月31日，
请即行动！

研发中心会员计划

推广优惠条款及细则：

1. 推广期由2009年4月1日起至2010年3月31日止，首尾两天包括在内（「推广期」）。
2. 任何人士须于推广期内透过邮递或网上填妥研发中心会员申请表格及交妥申请所需之文件，成功申请者将获专函通知。
3. 研发中心会员申请须通过本研发中心的一般会员审批程序。
4. 成功申请者之会籍有效期及所获豁免之会费一律至2010年3月31日止。新一年度之研发中心会员会籍将于2010年4月1日起重新开始，届时旧研发中心会员必需缴交年费，方可更新研发中心会员之新会籍。
5. 本研发中心保留权利可修改优惠及本条款及细则，而毋须预先通知。是次推广如有任何争议，本研发中心保留最终决定权。



A member of Hong Kong R&D Centres
香港研发中心成员



APPENDIX E

MEMBERSHIP APPLICATION FORM

香港物流及供应链管理应用技术研发中心——会员申请表

会员类别 (请于适当位置划上勾号)

中心会员

☐ 个人

☐ 公司/学院

☐ 技术/解决方案供应商

甲部 (一) —— 申请人资料 (只供「公司/学院」和「技术/解决方案供应商」会员填写)

公司名称 (英文)

(中文)

办事处地址/通讯地址

电话号码

传真号码

电邮地址

邮政编号

国家

公司网址

公司代表人姓名 (英文)

(中文) ☐ 工程师 ☐ 教授 ☐ 博士 ☐ 先生 ☐ 太太 ☐ 女士

职衔 (英文)

(中文)

商业登记证号码 (等同营业执照注册号)

公司成立年份

香港职员人数

海外职员人数 (香港以外地方)

甲部 (二) —— 申请人资料 (只供个人会员填写)

申请人姓名 (英文)

(中文) ☐ 工程师 ☐ 教授 ☐ 博士 ☐ 先生 ☐ 太太 ☐ 女士

通讯地址

电话号码

电邮地址

职业 (请列明公司名称)

邮政编号

国家

乙部——业务性质 (请于适当位置划上勾号)

- ☐ 政府机构
☐ 非牟利机构
☐ 大学/学院
☐ 硬件供应商
☐ 软件供应商
☐ 系统整合商

- ☐ 三方/四方物流服务业
☐ 航运业
☐ 货运业-空运/海运
☐ 仓库及货仓管理业
☐ 运输业
☐ 货柜码头经营者

- ☐ 货车运输业
☐ 物流及速递服务业
☐ 零售商
☐ 制造商
☐ 其他, 请列明: _____



APPENDIX E

MEMBERSHIP APPLICATION FORM

丙部—付款方法

支票

请以支票支付会员年费，抬头祈付「香港物流及供应链管理应用技术研发中心有限公司」。请于支票背面填写公司名称。本研发中心将于收妥支票后十个工作日内向阁下发回收据。

银行名称：_____ 支票号码：_____

丁部—条款及细则

1. 会籍每年由四月一日起生效，三月三十一日期满。如于年中入会，会费将以季度(三个月)计算。
2. 报名须缴付年费。请以支票付款，抬头祈付「香港物流及供应链管理应用技术研发中心有限公司」，并连同申请表一并交回。
3. 年费：
 - 免费 (个人会员)
 - 港币2,000元 (中心会员-公司/学院)
 - 港币10,000元 (中心会员-技术/解决方案供应商)
4. 会员理事会将于下次例会讨论会员申请，申请过程约需四十五个工作日。
5. 申请人保留取消会籍之权利，但必须给予本中心办事处不少于三十天的书面通知方为有效。
6. 本研发中心有权于本研发中心之公开活动或宣传资料中展示会员的公司名称和商标。
7. 本研发中心保留更改条款及细则内容之权利，恕不另行通知。

中文译本如与英文原文有差异，概以英文为准。

戊部—申请人声明

1. 申请人确认申请表上填写的所有资料均属正确无误。
2. 申请人同意本研发中心提供之条款及细则和参阅附例(见附件1)。
3. 申请人同意于提交会员申请表时缴交年费。
4. 申请人同意本研发中心使用阁下已递交的资料用于与会籍有关的用途。**

授权人签名	职衔	日期
(如申请人为公司，请盖上公司印章)		

**关于阁下的资料与《个人资料(私隐)条款》

会员提交的资料，只可供本研发中心作与会籍有关的用途，如以印刷本或电子形式编制《会员名录》、签发会籍证书、发出通函及刊物、进行意见调查，或其他直接相关的活动。阁下欲作其他资料使用的安排或不欲收到某些资料，请书面通知本研发中心。落选申请人的个人资料将于六个月内销毁。

只供本研发中心使用

会员申请表收妥日期：	接收职员：
会籍批核日期：	会员编号：
会员类别：	
备注：	负责职员：

资助：



創新科技署
Innovation and
Technology Commission





APPENDIX E

MEMBERSHIP APPLICATION FORM

附件 1

香港物流及供应链管理应用技术研发中心附例

第1条 会籍

第1节

会籍类别 本中心会籍分为如下三(3)个类别：

个人：

个人会籍适用于所有对创意物流及供应链相关技术感兴趣的人士

公司 / 学院：

机构会籍适用于所有公司/学会，例如中小型企业、创业资本家、研发机构及大学

技术/解决方案供应商：

机构会籍适用于所有为最终用户公司提供解决方案及技术的公司，例如软件开发商及系统整合商

第2节

会籍申请程序：如欲申请本中心会籍，须填写指定表格，然后亲身或以邮递方式交回本中心，或于网上递交表格。

亲身/以邮递方式递交

1. 亲身前往香港物流及供应链管理应用技术研发中心办事处索取申请表格，或于网上下载表格。
2. 仔细阅读附载于申请表上的申请人须知，以了解申请会籍的要求。
3. 将填妥的表格连同商业登记证副本（等同营业执照注册副本）及会费*，亲身或以邮递方式递交香港物流及供应链管理应用技术研发中心办事处。请在支票写上适当金额，抬头请写「香港物流及供应链管理应用技术研发中心有限公司。」确认收据将于十(10)个工作日内寄回申请人。
4. 如有需要，香港物流及供应链管理应用技术研发中心办事处将与申请人联络，要求提供进一步的资料，并将在适当时候通知申请人有关申请的结果。支票将于申请获得批准后始过数。
5. 有关会籍查询，请致电(852) 2299 0551与本中心办事处联络，并报上参考编号，或致电邮往 membership@lscm.hk 与本中心办事处联络。

*只适用于公司会籍

网上递交：

1. 登入本中心的正式网站 www.lscm.hk，在会籍项下选择「网上登记」。
2. 仔细阅读附载于网上申请表格的申请人须知，以了解申请会籍的要求。
3. 提交已填妥的表格，并选择付款方式。

以支票付款：

请在支票写上适当金额，抬头请写「香港物流及供应链管理应用技术研发中心有限公司。」支票须于两(2)星期内连同商业登记证副本（等同营业执照注册副本）送交下述地址。支票背面请写上申请人公司的全名。确认收据将于十(10)个工作日内寄回申请人。

香港物流及供应链管理应用技术研发中心
香港数码港道100号数码港4B座2楼202室
(有关申请会籍事宜一参考编号XXXX)

以信用卡付款：

请输入信用卡资料，会费将于申请获得批准后始从有关信用卡户口扣除，请于两(2)星期内传真商业登记证副本（等同营业执照注册副本）至(852) 2299 0552或电邮至 membership@lscm.hk。

4. 如有需要，香港物流及供应链管理应用技术研发中心办事处将与申请人联络，要求提供进一步的资料，并将在适当时候通知申请人有关申请的结果。
5. 有关会籍查询，请致电(852) 2299 0551与本中心办事处联络，并报上参考编号，或致电邮往 membership@lscm.hk 与本中心办事处联络。

香港物流及供应链管理应用技术研发中心保留权利随时对指定表格上的条款及细则进行修订，而毋须事先发出通知。

第3节

会费及入会费：会籍每年由四月一日起生效，三月三十一日期满。年费须于申请入会时缴付，续会年费则于下一会籍年度首日或之前缴付。

年费：

个人：	免费
公司 / 学院：	港币2,000.00元
技术 / 解决方案供应商	港币10,000.00元

如于年中入会，会费将以季度(三个月)计算。

第4节

会籍终止：会籍可于下述情况下终止：

退会：

纪录良好的会员可随时给予三十(30)天书面通知要求退会，年费将不获退还。退会生效日期不得早于本中心收到书面通知的日期。

会籍失效：

如会员于会籍年度首日三十(30)天内仍未缴付会费，其会籍将被视为失效且自动终止；然而，本中心可给予该等逾期未付会费的会员额外三十(30)天的宽限期。本中心会酌情批准会籍已失效的会员重新入会成为续会会员。

开除会籍：

会员可因本条例第1条第7节的规定或任何其他严重损害本中心的行为，而被开除及终止会籍。

第5节

会籍转让：本中心会籍不得转让或转借。

第6节

恢复会籍：因欠缴会费而被终止会籍的人士/公司，可于缴付该年度会费后恢复会籍。因任何其他原因而被终止会籍的人士/公司，只可按照本条例第1条第2及3节所指定的程序以新申请人身份申请恢复会籍。于本中心有任何未清缴款项的人士/公司，将不获准恢复会籍。

第7节

行为守则：以下的指引适用于所有会员。本中心可不时对任何守则作出增修，惟所增修的内容不可与该等附例相违。

1. 会员应展示与其会员等级相符的能力水平
2. 会员应时刻保持诚信，并对社会作出贡献
3. 会员不得侵犯知识产权，包括版权及其他方面的专利权；如获授权使用，应遵守知识产权法规
4. 会员应尊重他人的隐私
5. 会员应待人诚实可靠
6. 会员应处事公正，且不因宗教、性别、残疾、年龄或国籍等因素而产生歧视
7. 会员应拒绝接受任何形式的贿赂，并应避免参与会导致利益冲突情况出现的工作或行动
8. 会员应寻求、接受及提出对研发工作诚意的批评，并适当地对他人所作的贡献予以提述。

第8节

个人资料(私隐)条例：会籍资料可供香港物流及供应链管理应用技术研发中心作会籍相关的用途，如以印刷本或电子形式编制《会员名录》、签发会籍证书、发出通函及刊物、进行意见调查，或其他直接相关的活动。会员如欲另作安排或不欲收取若干资料，请以书面通知本中心。未获接纳申请入会人士的个人资料，将于六(6)个月后销毁。

第9节

修订：本中心董事局或会不时酌情对本附例进行修订。假如本附例与本中心《组织大纲》存有任何歧异，概以本中心《组织大纲》为准。



APPENDIX E

MEMBERSHIP APPLICATION FORM

中心会员		
会员类别	准则及权益	年费
个人	<p>以个人名义成为基本会员。</p> <p>会员可享权益</p> <ul style="list-style-type: none"> • 打开公司和研究的国际网络 • 拥有优先权参与本研发中心举办之活动（例如培训、会议） 	全免
公司/学院	<p>以公司/学院名义成为基本会员，例如中小型企业、投资者、研发机构和大学。</p> <p>会员可享权益</p> <ul style="list-style-type: none"> • 打开公司和研究的国际网络 • 在不泄露研发项目机密的原则下，会员可得到本研发中心的研发项目纲要及资料 • 拥有优先权参与本研发中心举办之活动（例如培训、会议） • 登入会员网络及会员专用网页 • 拥有优先权参与/赞助/合办本研发中心的活动 • 公司名字可刊登于本研发中心之网页 • 有权于名片上或于不同活动、场合、刊物和申请上显示「香港物流及供应链管理应用技术研发中心会员」之字样，但须获本研发中心批准 	港币2,000元
技术/解决方案 供应商	<p>为终端用户公司提供方案和技术的公司。他们享有优先权参与或赞助本研发中心举办之活动，亦可于活动中参与演讲或与本研发中心合办活动。</p> <p>会员可享权益</p> <ul style="list-style-type: none"> • 打开公司和研究的国际网络 • 在不泄露研发项目机密的原则下，会员可得到本研发中心的研发项目纲要及资料 • 拥有优先权参与本研发中心举办之活动（例如培训、会议） • 登入会员网络及会员专用网页 • 拥有优先权参与 / 赞助 / 合办本研发中心的活动 • 公司名字可刊登于本研发中心之网页 • 有权于名片上或于不同活动、场合、刊物和申请上显示「香港物流及供应链管理应用技术研发中心会员」之字样，但须获本研发中心批准 • 有机会使用新的供应链管理应用技术 • 可参与提供顾问服务和方案予本研发中心 	港币10,000元

申请程序

1. 亲身前往本研发中心办事处索取会员申请表或从本研发中心网站下载。
2. 请仔细阅读会员申请表上的申请人须知，以了解会员计划的申请条件及程式。
3. 填妥会员申请表后，连同商业登记证副本（等同营业执照注册副本）和会费亲身递交或邮寄至本研发中心办事处。请以支票付款，抬头祈付「香港物流及供应链管理应用技术研发中心有限公司」。本研发中心将于收妥支票后十个工作日内向阁下发回收据。
4. 如有需要，本研发中心办事处会联络阁下以获取更多资料和通知阁下会员申请的结果。本研发中心只会在申请获批后才兑现交回之支票。
5. 通讯位址：香港数码港道100号数码港4B座2楼202室 香港物流及供应链管理应用技术研发中心。
6. 有关会员申请查询，请致电2299 0551联络本中心办事处，查询时请引述阁下的参考编号以便翻查资料。亦可以电邮至 membership@lscm.hk 查询。

* 只适用于公司会员



Hong Kong R&D Centre for Logistics and
Supply Chain Management Enabling Technologies
香港物流及供應鏈管理應用技術研發中心

Contact Us

Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies

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Email : info@lscm.hk

Website : www.lscm.hk

聯絡我們

香港物流及供應鏈管理應用技術研發中心

香港數碼港道100號數碼港4B座2樓202室

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