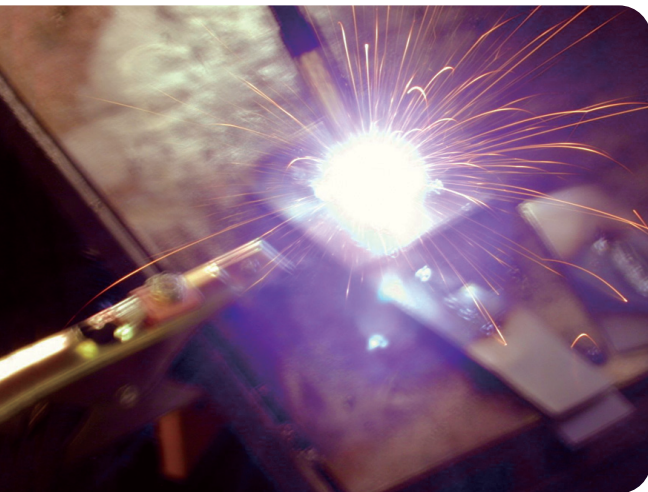


# LSCM MARKET INTELLIGENCE REPORT

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

ISSUE 3 – Logistics and Manufacturing  
January 2009



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

## 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 3) – January 2009" is to share findings from on-site company visit exercise focusing on trucking industry in Hong Kong. In addition, a new set of findings contributed from 20 more manufacturing companies from mainland China were added subsequent to Issue 1-Manufacturing\* we published in August 2008. We got also an updated status of China's RFID industry development and more cases on RFID adoption and application in relevant industries in China presented in this issue. In forthcoming issues, the Project Team will study more industries and stay connected with stakeholders along the supply chain (a total of 400 companies are in the visiting plan).

\*Download Site: [http://www.lscm.hk/pages/files/news/publication/LSCM\\_MI\\_Report\\_1.pdf](http://www.lscm.hk/pages/files/news/publication/LSCM_MI_Report_1.pdf)



# 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.

### 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 HK 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.

#### Role in the Project

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



# BACKGROUND

## PROJECT TEAM

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

The following are core members of the Project:

#### **Project Coordinator and Principal Investigator**

Mr. Anthony KWOK

Manager, Industry & Technology Programs, LSCM R&D Centre

#### **Deputy Project Coordinator and Co-Investigator**

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Consultant, LSCM R&D Centre

Dr. Benjamin YEN

Associate Professor, School of Business, HKU

#### **Project Manager**

Ms. Kelly LAM

Marketing Manager, 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 own special thanks to the following companies, which participated in in-depth interviews to share invaluable opinions with us. Without their willingness to assist the project team in understanding the industry needs and technology capabilities, the analysis of findings and this report would not have been at all possible.

Cargo System Warehouse & Transport Limited
EAC Prosperity Logistics Enterprise Limited
Elephant Transportation Co., Ltd.
Exclusive Container Drayage Limited
Fortune Mind Transportation Co., Ltd.
Golden Fame Shipping Limited
Good Vision Logistics Co., Ltd.
Kania Logistics Limited
Newcity Transportation Limited
Orient Trucking Limited
Sagawa Express (H.K.) Co. Ltd.
Vanquish Container Transportation Limited
Wah Kee Sea Land Transportation Limited
Zielona Transport Limited

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 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
PRD - 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 have received the whole-hearted support of many individuals. We are grateful to our Co-Investigator, **Dr. Benjamin Yen** for imparting his value added time, expertise and feedback.

Our heartfelt appreciation also goes to our external consultant, **Ms. Grace Wong** for her support and hard work, despite having to work at odd hours and at Christmas holidays.

Acknowledgement is also due to our Co-Investigator, **Mr. William Chan** who assisted the project team to liaise with collaborating parties in China and PRD during various stages which facilitated the release of this report.

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.



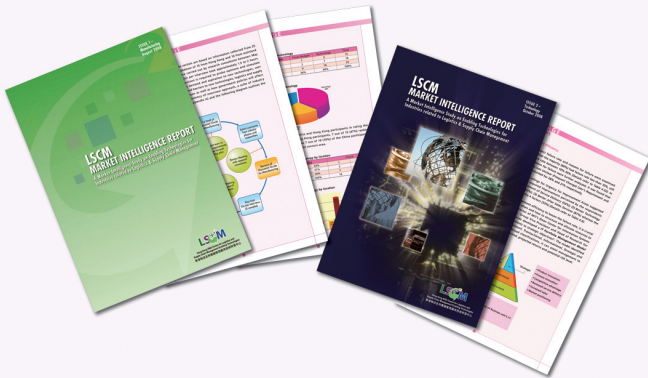


### Share and Learn – Attendees benefited from Market and Technology Intelligence

In November 2008, more than 150 industry practitioners joined our Industry and Technology Forum.

The forum featured several presentations on the latest trends and research on supply chain management through market intelligence studies and survey results. Two panel discussion sessions covered pertinent topics for supply chain professionals and researchers to exchange views and network.

To download the full reports and learn more about the project “Market Intelligence Study”, visit [www.lscm.hk/mi](http://www.lscm.hk/mi).



### How to Join Us?

Valuable market and technology intelligence from supply chain experts as well as sharing of latest RFID industry development await you. Industry-support Organizations and enterprises can join us as Supporting Organization, Industry Sponsor or Centre Member. Anyone who is not a LSCM member but interested in becoming one, email us at [membership@lscm.hk](mailto:membership@lscm.hk).

### Submit your R&D Project Applications Now

The LSCM R&D Centre is inviting applications for research and development projects. Please visit [www.lscm.hk](http://www.lscm.hk) for technology themes and application procedures.

*Deadline for Applications:*

**20 February 2009, 5:00 pm (HK Time)**

### Don't Miss the LSCM Annual Conference 2009



The first LSCM Annual Conference 2009 will be held on 6 March 2009 at the Marco Polo Hong Kong Hotel. It aims to bring government officials, R&D experts, and business professionals from all over the world together to share experiences and explore opportunities in the areas of application and technology innovations in logistics and supply chain management and related fields. Mark your calendar and visit [www.lscm.hk](http://www.lscm.hk) for more information.



# 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 1)** in August 2008 to share initial findings which were based on information collected from 25 manufacturing companies. In this current issue, a new set of findings contributed from another 20 manufacturing companies from mainland China were presented and some consistent findings between the two sets of data were noticed and summarized in **Section 8 of Broad Coverage**. For instance, the two groups both realized that *procurement of raw materials and production* were the most time consuming and costly process within their operation. Among various applications, Accounting (ACC) and Enterprise resource planning (ERP) were widely adopted by manufacturing companies. The study also found that improvement on operational efficiency and data quality would motivate manufacturing companies to upgrade their technological capabilities. When asked which level describes the best their current I.T. application status, over 50% of the respondents believed that they were “*Full I.T. implementation with integration with other internal systems*”. In addition, technology was ranked as top concern among the three areas (People/Budget/Technology) when deploying an I.T. application. The rankings are revealing and majority of the respondents believed that I.T. can help enhancing their competitiveness in facing unfavorable business environment. However, we observed that manufacturing companies have not fully utilized information technology to collaborate with their business partners such as information platform. At this point, the difficulties in I.T. adoption were further spelt out in **Section 4-6 of Broad Coverage**.

The trucking industry is an important component of Hong Kong’s logistics industry, trucking companies and trucks are link between manufacturers and other parties along the supply chain to retailers, eventually to consumers. We observed that the 15 truckers from Hong Kong participating in the in-depth interview exercise had low I.T. adoption level and weak I.T. knowledge. When asked which level describes the best their current I.T. application status, over 70% of the respondents believed that they applied limited I.T. solution to automate a specific area of operations. The phenomenon was apparent when industry specified applications were prompted to indicate, for instance adoption rate on containerized logistics management and portal solutions were low (*Details refer to Section 3.1-3.3 of Broad Coverage*). The study also found that *difficult to cope with rapid technological changes*



## EXECUTIVE SUMMARY

and *limited budget* were the top two challenges perceived by truckers in adopting I.T. applications. As far as improving operational efficiency and customer service are concerned, these two factors would motivate truckers to upgrade their technological capabilities. Nevertheless, budget was ranked as top concern among the three areas (People / Budget / Technology) when deploying an I.T. application (*Details refer to **Section 4.1-4.3 of Broad Coverage***). Despite the technological aspects, the current position and problems faced by trucking companies were examined. Respondents expressed that Hong Kong logistics industry is a shrinking industry, they also believed that Shenzhen is replacing Hong Kong's position. Truckers should consider moving upwards along the strategic position map from merely delivery service to value added service as explained in **Section 8.2-8.4 of Broad Coverage**.

Following the review of the development of China's information industry in 2007 that we published in **LSCM Market Intelligence Report (Issue 1)**, an update on the performance of China's information industry in first half of 2008 was added in this current issue. The article "Policy of China RFID Industry Development" published in the **"Global/China Watch"** section shares the rapidly growing areas within information industry, for instance software I.T. services saw the fastest growth and accounted for a rise of 44.7% in terms of revenues. From the said article, key contents from the "Development Plan of the Golden Card Project and National Applications of IC Card (2008 to 2013)" (hereinafter to be called as "The Plan") compiled by the Office of National Golden Card Project Coordination Leading Group, related departments and ministries and the pilot cities and provinces of Golden Card Project were summarized. Officially published on January 24, 2008, "The Plan" has formulated its major roles and development focus in the next five years in addition to policies and measures. For those involved with research should pay attention to the "Application Guide of the Key Projects in Advanced Manufacturing Technology 2008 (RFID Technology and Applications) - National High-tech R&D Program (863 Program)" issued by the Ministry of Science and Technology in September 2008 for schemes to support as proposed in the guide (*Details refer to **Section 1-3, "Policy of China RFID Industry Development" of Global/China Watch***).

It is undoubtedly true that informatization has become a hot development trend worldwide. It is also an important force in driving economic and social transformations. The circular issued by the National Development and Reform Commission about pilots of informatization aimed to promote autonomous and innovative technology in applications in which informatization in the transportation sector, improvement of product logistics with lower energy consumption and improvement of quality and efficiency of national economy were part of the works to focus. In the last section, key projects "Macro-control of Grain and Research & Demonstration of Key Information Protection Technology" under the National Key Technology R&D Program in the 11th 5-Year Plan covering four main areas were introduced with an aim to modernize the grain industry with I.T. and increase macro-control of grain (*Details refer to **Section 4-5, "Policy of China RFID Industry Development" of Global/China Watch***).

Lastly, more practical applications of RFID technology in relevant industries in China were presented geographically. Examples included: the trial run of "Electronic Gate" at Huanggang Custom in Shenzhen, non-stop Electronic Toll Collection (ETC) on all Highways at Hubei, tracking and monitoring of live pigs and vegetables supplied to Hong Kong with RFID technology, etc. (*Details refer to **"The Adoption & Application of RFID Technology in Relevant Industries in China" of Global/China Watch***).

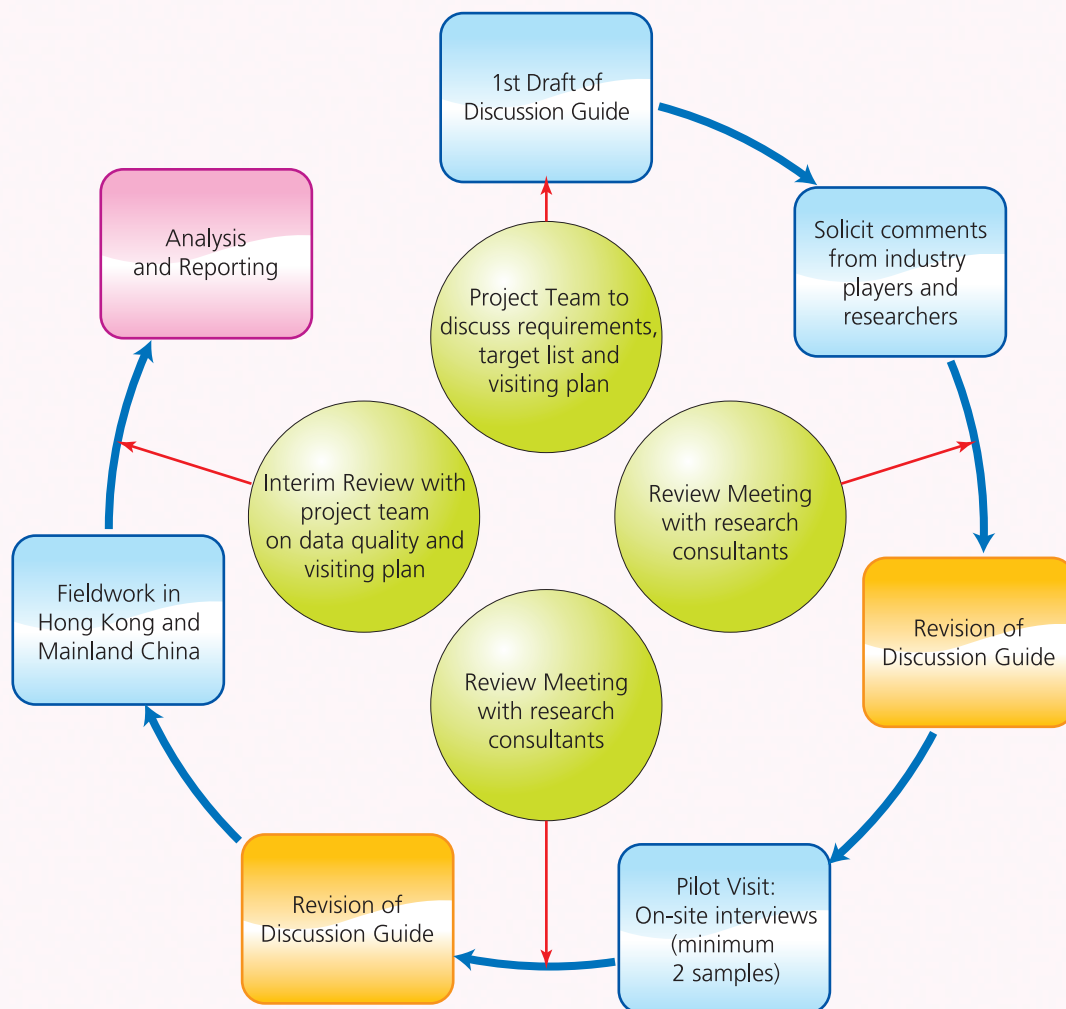


BROAD COVERAGE



## BROAD COVERAGE

The essential details presented in this section are based on information collected from 15 trucking companies from Hong Kong and 20 manufacturing companies from mainland China respectively. All interviews were carried out by research consultants between July and October in 2008, 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-Trucking and Appendix B-Manufacturing) and the following diagram outlines the methodology of the study.





# BROAD COVERAGE

## PROFILE OF PARTICIPANTS

### 1 Profile of Participants

#### Trucking Industry

##### 1.1 Profile of Participants by Business Nature

Among the 15 participants who engaged in Hong Kong trucking industry, they are classified according to business nature which was summarized in the following table. Local transportation services accounted for 27% (4 out of 15), Local and cross border transportation services accounted for 33% (5 out of 15) whereas Local and cross border transportation services with warehouse and/or support activities for transportation accounted for 40% (6 out of 15).

1.1 Table

Analysis of Participants by Business Nature

Business Nature	Number of Participants	%
Local Transportation Services	4	27%
Local and Cross Border Transportation Services	5	33%
Local and Cross Border Transportation Services with warehouse and / or support activities for transportation	6	40%
Total	15	100%

##### 1.2 Profile of Participants by Employee Size

Among the 15 truckers in Hong Kong, 5 out of them employed more than 100 staffs. Truckers who employed with 20-50 staffs also accounted for the same percentage (i.e. both accounted for 33%). It was followed by less than 20 (accounted for 20%); 51-100 was the least (accounted for 13%), details were summarized in the following table.

1.2 Table

Analysis of Participants by Employee Size

Number of Staffs	Number of Participants	%
< 20	3	20%
20-50	5	33%
51-100	2	13%
> 100	5	33%
Total	15	100%

##### 1.3 Profile of Participants by Job Title

Among the 15 truckers in Hong Kong participating in the survey, 9 out of them were graded CEO or Director (accounted for 60%) and the rest were all Managers.

1.3 Table

Analysis of Participants by Job Title

Job Title	Number of Participants	%
CEO	1	7%
Division Head / Director	8	53%
Manager	6	40%
Total	15	100%



# BROAD COVERAGE

## PROFILE OF PARTICIPANTS

### 1.4 Profile of Participants by Fleet Size

While analyzing the participants in terms of fleet size, 14 out of the 15 truckers shared fleet size information with us. The majority of the participants had fleet size between 20 to 50 (accounted for 40%), only 1 participant stated that he owned over 100 goods vehicles. Details refer to the following table.

1.4 Table

Analysis of Participants by Fleet Size

Number of Fleets	Number of Participants	%
< 20	4	27%
20-50	6	40%
51-100	3	20%
> 100	1	7%
Not Specified	1	7%
Total	15	100%

### 1.5 Profile of Participants by Mode of I.T. Employment

While analyzing the participants' mode of I.T. employment, 14 out of the 15 truckers shared the required information with us. The findings indicated that the majority of them adopted Outsourced model (accounted for 67%), whereas 4 truckers employed I.T. staff on their own (accounted for 27%).

1.5 Table

Analysis of Participants by Mode of I.T. Employment

Mode of I.T. Employment	Number of Participants	%
Outsourced	10	67%
Internal Staff	4	27%
Not Specified	1	7%
Total	15	100%



# BROAD COVERAGE

## PROFILE OF PARTICIPANTS

### Manufacturing Industry

#### 1.6 Profile of Participants by Industry Sector

Among the 20 manufacturers from mainland China participating in the survey, they engaged in different industries which were summarized in the following table. Electronic industry accounted for 35% (7 out of 20), whereas Garment industry ranked next which accounted for 25% of the total response (5 out of 20).

1.6 Table

Analysis of Participants by Industry Sector

Industry Sector	Number of Participants	%
Electronic	7	35%
Garment	5	25%
Chemical	2	10%
Machinery	2	10%
Others	2	10%
Packaging	1	5%
Toys	1	5%
Total	20	100%

#### 1.7 Profile of Participants by Job Title

Among the 20 manufacturers from mainland China participating in the survey, 10 out of them were graded Manager (accounted for 50%) followed by Director grade (accounted for 30%). Details refer to the following table.

1.7 Table

Analysis of Participants by Job Title

Job Title	Number of Participants	%
Director	6	30%
Manager	10	50%
Planner	2	10%
Not Specified	2	10%
Total	20	100%

#### 1.8 Profile of Participants by Employee Size

Among the 20 manufacturers from mainland China, 7 out of them employed less than 1,000 staffs (accounted for 35%). Manufacturers who employed with 3,001-10,000 staffs ranked next (accounted for 30%). It was followed by 1,001-2,000 (accounted for 20%); 2,001-3,000 was the least (accounted for 15%). Details refer to the following table.

1.8 Table

Analysis of Participants by Employee Size

Number of Staffs	Number of Participants	%
1-1,000	7	35%
1,001-2,000	4	20%
2,001-3,000	3	15%
3,001-10,000	6	30%
10,000>	0	0%
Total	20	100%



# BROAD COVERAGE

## FINDINGS

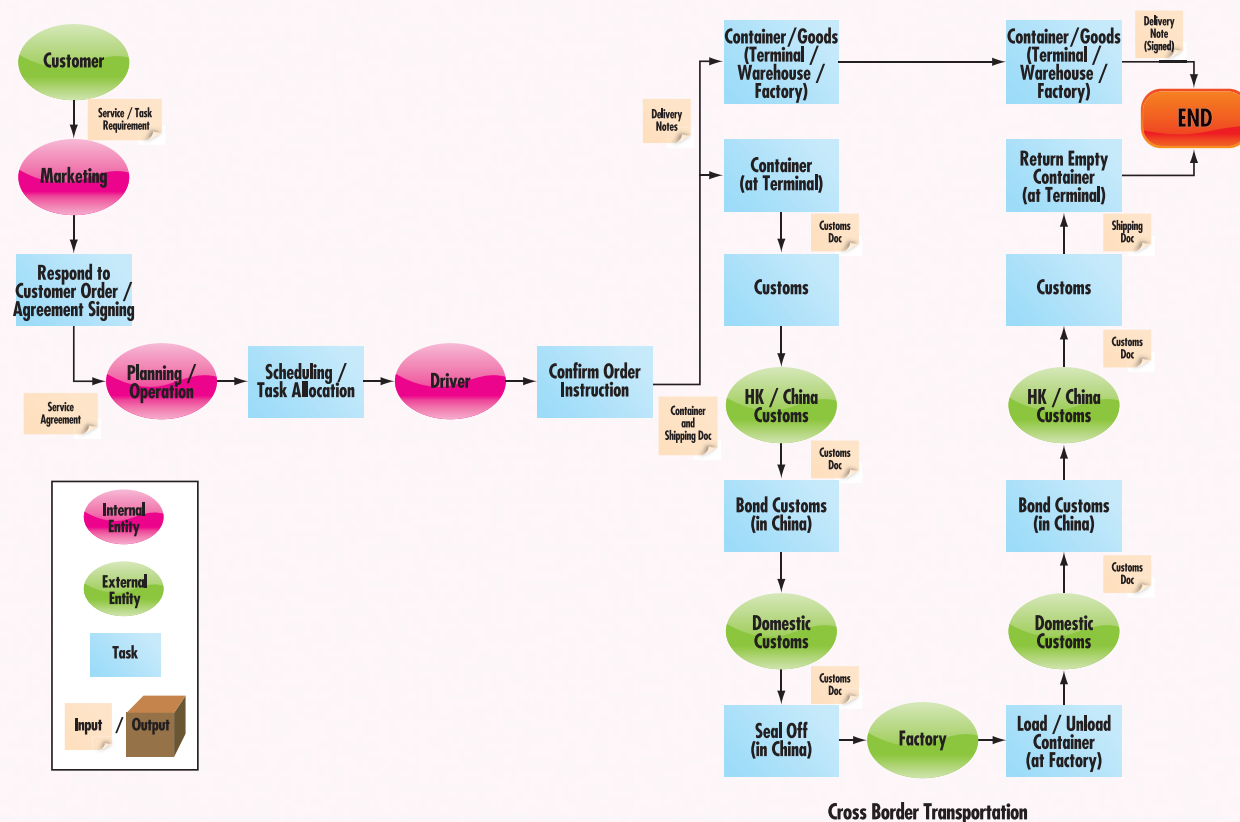
### 2 Business Process

#### Trucking Industry

In this section, 15 truckers from Hong Kong participating in the survey explained their business operations to identify information flows and technology needs. It was found that their businesses were almost running like what we described in below generic workflow diagram.

##### 2a Diagram

Generic Workflow Diagram of Trucking Industry





# BROAD COVERAGE

## FINDINGS

### 2.1 Most Important Information Flow

Among the different information flows, participants were prompted to identify the most important one according to their business operation. Findings were summarized in the following table. Among the selections, Customer Relationship Management ranked the highest (accounted for 17%); it was followed by Accounting System (accounted for 13%) and Business Intelligence/ Decision Support Systems & Query/Reporting Solutions (accounted for 12%).

2.1 Table

Analysis by Most Important Information Flow

Most Important Information Flow	%
Customer Relationship Management	17%
Accounting Solutions	13%
Business Intelligence / Decision Support Systems & Query / Reporting Solutions	12%
Human Resources Management	12%
Sales Order Processing & Fulfillment Systems	10%
Management Information Systems	8%
Point of Sales	8%
Enterprise Resources Planning	6%
Information & Knowledge Management Solution	6%
Sales Force Automation Systems	6%
Manufacturing Resource Planning	4%
Total	100%

### 2.2 Most Time Consuming Process

All the 15 participants provided information on their most time consuming process. The findings suggested that Customs Clearance ranked the highest (accounted for 35%), it was followed by Delivery/Pick Up of Container or Cargos from Terminals and Warehouses (accounted for 26%).

2.2 Table

Analysis by Most Time Consuming Process

Most Time Consuming Process	%
Customs Clearance	35%
Delivery / Pick Up of Container or Cargos from Terminals and Warehouses	26%
Loading and Unloading Cargo	22%
Many Charges are Required	9%
Customer Order Clarification	4%
Traffic Conditions	4%
Total	100%



# BROAD COVERAGE

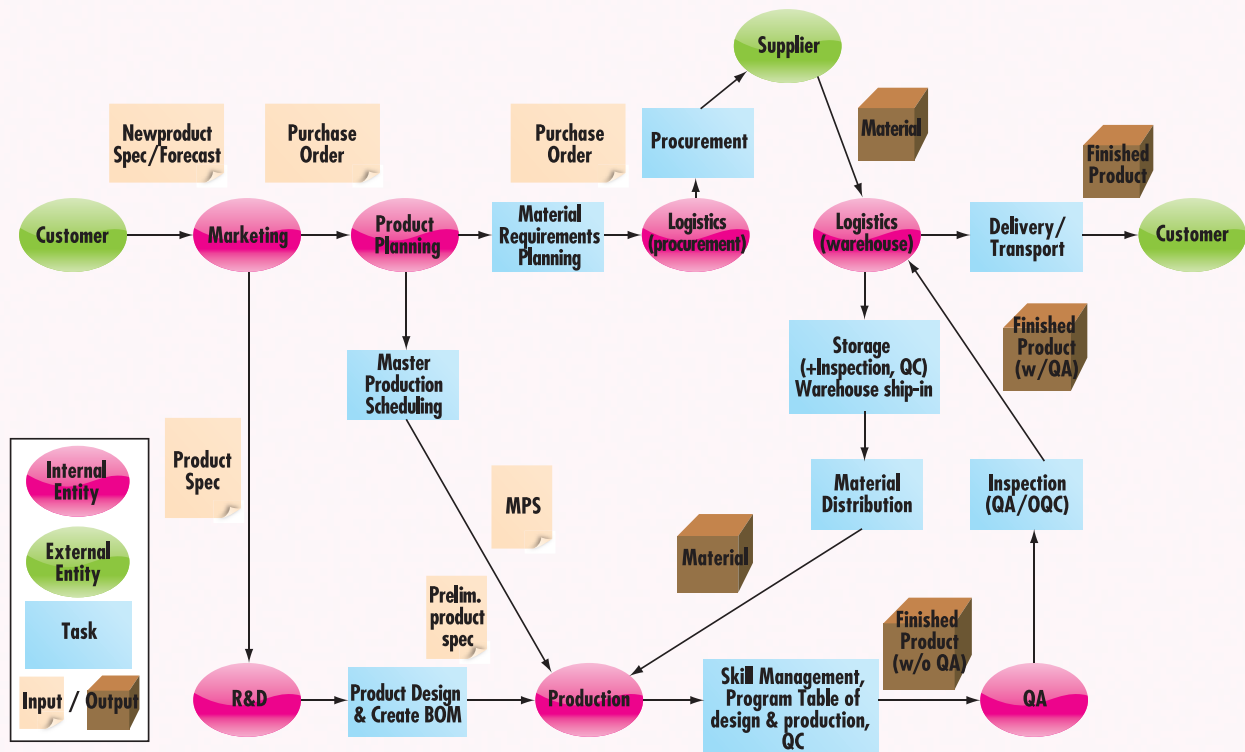
## FINDINGS

### Manufacturing Industry

In this section, 20 manufacturers from mainland China participating in the survey explained their business operations to identify information flows and technology needs. It was found that their businesses were almost running like what we described in below generic workflow diagram.

#### 2b Diagram

Generic Workflow Diagram of Manufacturing Industry





## BROAD COVERAGE FINDINGS

### 2.3 Most Important Information Flow

Among the different information flows, participants were prompted to identify the most important one according to their business operation. Findings were summarized in the following table. Among the selections, Material Requirement ranked the highest (accounted for 16%); it was followed by Production Schedule (accounted for 11%) and Purchasing (accounted for 11%).

#### 2.3 Table

Analysis by Most Important Information Flow

Most Important Information Flow	%
Material Requirement	16%
Production Schedule (Product Control Management)	11%
Purchasing	11%
FAZHI	5%
Design and Procurement	5%
Manufacturing	5%
Shipment & Warehouse Management	5%
Collaboration	5%
New Product Development	5%
Implementing TPS	5%
Every Process	5%
Planning	5%
Logistic Demand	5%
Warehousing	5%
Order Receiving	5%
Total	100%

### 2.4 Collaboration with Other Business Partners along the Supply Chain

Participants were asked the areas that collaborating with other business partners along with supply chain. It was indicated that Phone, fax, mail ranked the highest (accounted for 32%), it was followed by Material supply (accounted for 14%) and Procurement (accounted for 11%).

#### 2.4 Table

Analysis by Collaborating Areas along the Supply Chain

Collaborating Areas along the Supply Chain	%
Phone, Fax, Email	32%
Material Supply	14%
Procurement	11%
Keep good partnership	7%
MSN, QQ	4%
Time Reliability / Quality of materials / Effective operation of 3PLs	4%
System Connection	4%
Settlement Process	4%
New product development requirement	4%
Safety of transportation	4%
Credits problems with customers	4%
Communication with supplier	4%
Quality problems with 3PL	4%
Production Management	4%
Total	100%



# BROAD COVERAGE

## FINDINGS

### 2.5 Pain Point in Business Operation

Regarding the pain point(s) they encountered in their business operations, participants regarded Insufficient government support received the highest weighting (accounted for 37%), it was followed by Customs (accounted for 26%).

2.5 Table

Top 2 Highest Pain Point in Business Operation

Pain Point	%
Insufficient Government support	37%
Customs	26%
Nil	16%

### 2.6 Most Time Consuming Process

Participants were further prompted to indicate the most time consuming process. The findings were summarized in the following table. It was found that Production and Procurement of raw materials both ranked the highest (accounted for 33% each), it was followed by R&D which accounted for 8%.

2.6 Table

Analysis by Most Time Consuming Process

Most Time Consuming Process	%
Production	33%
Procurement of Raw Materials	33%
R&D	8%
Development	4%
Shipping	4%
Customs	4%
Traffic Jam Issue	4%
Material Planning	4%
FAZHI	4%
Total	100%

### 2.7 Most Costly Process

Among the different processes, participants regarded that Production was the most costly process within their business operations (accounted for 39%), whereas Procurement of raw materials ranked second (accounted for 34%) and it was followed by Labour cost (accounted for 9%).

2.7 Table

Analysis by Most Costly Process

Most Costly Process	%
Manufacturing (Production)	39%
Procurement	17%
Purchasing material	17%
Labour cost	9%
Transportation	4%
R&D	4%
Development cost for new product	4%
Marketing	4%
Total	100%



# BROAD COVERAGE FINDINGS

## 3 Current I.T. Applications

### Trucking Industry

In this section, current I.T. applications and level of usage out of the 15 truckers from Hong Kong were examined.

#### 3.1 Analysis on Current I.T. Applications

The 15 truckers 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, ACC, GPS and FMS were the top three most popular applications adopted by participants, which accounted for 87%, 53% and 47% respectively. Whereas it was noteworthy to find that Containerized Logistics Management had a low adoption rate. For instance, only 3 participants (20%) are currently using RFID and 2 participants (13%) using E-seal.

3.1 Table

Analysis of Participants' Current I.T. Applications

Applications	Number of Participants Currently Using	%	Number of Participants (Rated Satisfied to Very Satisfied)	%
Accounting	13	87%	9	69%
Global Positioning System (GPS)	8	53%	6	75%
Fleet Management System (FMS)	7	47%	4	57%
General Packet Radio Service (GPRS)	6	40%	3	50%
Total Maintenance Solutions (TMS)	5	33%	3	60%
Geographic Information system (GIS)	5	33%	1	20%
Invoice Process	5	33%	4	80%
Customer Relationship Management (CRM)	4	27%	3	75%
Electronic Cargo Manifest (EMAN)	4	27%	1	25%
Radio Frequency Identification (RFID)	3	20%	1	33%
E-SEAL	2	13%	0	0%
Warehouse Management System (WMS)	2	13%	2	100%
Human Resoucece	1	7%	0	0%
Customer tracking of goods	1	7%	0	0%
Digital Trade & Transporation Network (DTTN)	0	0%	0	0%
PDA	0	0%	0	0%
On-Board Trucker Information System (OBTIS)	0	0%	0	0%

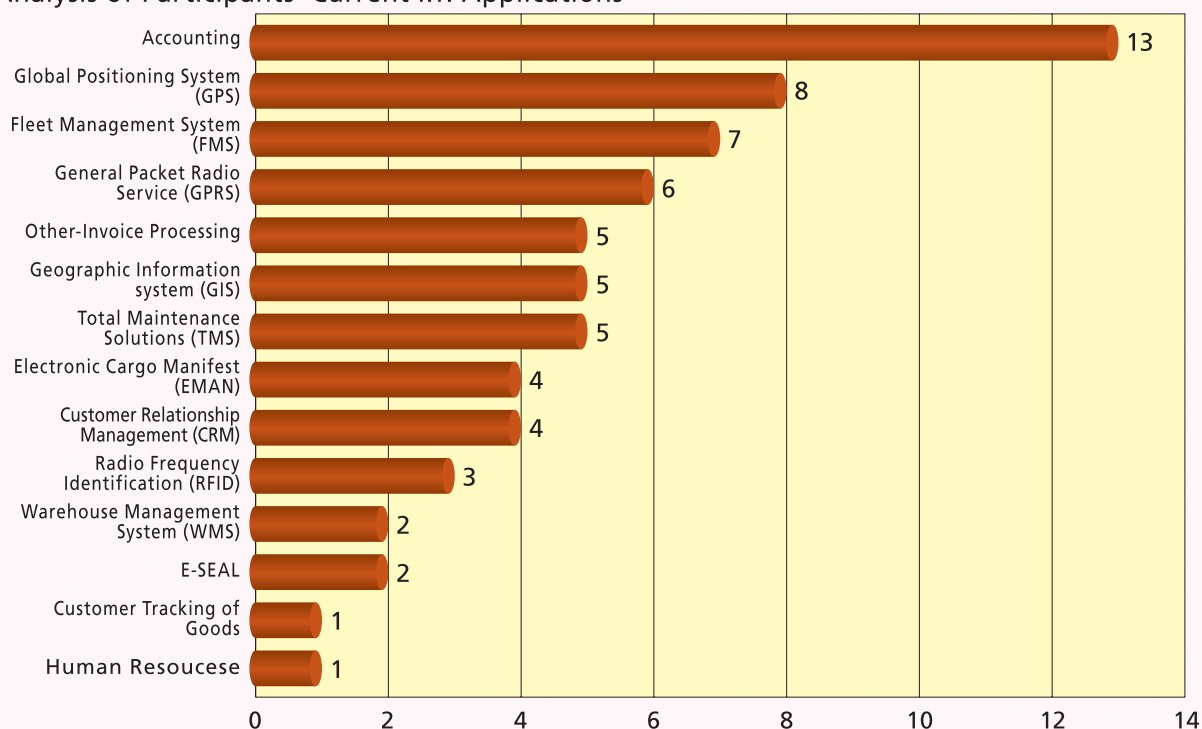


# BROAD COVERAGE

## FINDINGS

### 3.1 Chart

Analysis of Participants' Current I.T. Applications



### 3.2 Analysis on Related I.T. Applications

Participants were further promoted for specifying the I.T. applications related to trucking industry. The findings suggested that only 3 out of 15 participants (accounted for 20%) were currently using Containerized Logistic Management. Details were summarized in the following table.

#### 3.2 Table

Analysis on Related I.T. Applications

Related I.T Appliations	Number of Participants	%
Containerized Logistics Management	3	20%
Currently Using E-Seal	2	13%
Joined OBTIS	2	13%
Currently I.T. Portals	1	7%
Currently Using eTR	2	13%
Currently Using DTTN	0	0%



## BROAD COVERAGE FINDINGS

### 3.3 Analysis on Current I.T. Application Status

In this section, participants were asked to select the most describing sentence for their current I.T. application status. Results were shown in the following table.

The majority of the truckers believed that 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.)”, 11 out of 15 respondents opted for this stage, which accounted for 73% of the total respondents. It was followed by the stage “Full I.T. implementation with integration with other internal systems”, 2 out of 15 respondents opted this sentence, which accounted for 13% of the total respondents.

#### 3.3 Table

Analysis of Participants’ Current I.T. Application 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.)	1	7%
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.)	11	73%
5	Full I.T. implementation with an integration with other internal systems	2	13%
6	Full I.T. implementation with an integration with both internal and external systems	1	7%
Total		15	100%



# BROAD COVERAGE

## FINDINGS

### Manufacturing Industry

Likewise, in this section, current I.T. applications and level of satisfaction out of the 20 manufacturers from mainland China were examined.

#### 3.4 Analysis on Current I.T. Applications

The 20 manufacturers 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, ACC, HR and ERP were the top three most popular applications adopted by participants, which accounted for 90%, 85% and 80% respectively; whereas among the satisfaction level for these three applications, ACC accounted for 90%, HR accounted for 47% and ERP accounted for 69% respectively.

3.4 Table

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

Applications	Number of Participants Currently Using	%	Number of Participants (Rated Satisfied to Very Satisfied)	%
ACC	18	90%	18	90%
HR	17	85%	8	47%
ERP	16	80%	11	69%
SIM	16	80%	11	69%
PO	15	75%	10	67%
MRP	14	70%	8	57%
WMS	14	70%	8	64%
CAD / CAM	11	55%	8	73%
Bar Code	8	40%	5	63%
EDI	7	35%	5	71%
WiFi	7	35%	7	100%
CRM	5	25%	1	20%
FMS	3	15%	0	0%
GPS	2	10%	2	100%
PDA	2	10%	2	100%
BI	1	5%	0	0%
RIFD	0	0%	0	69%

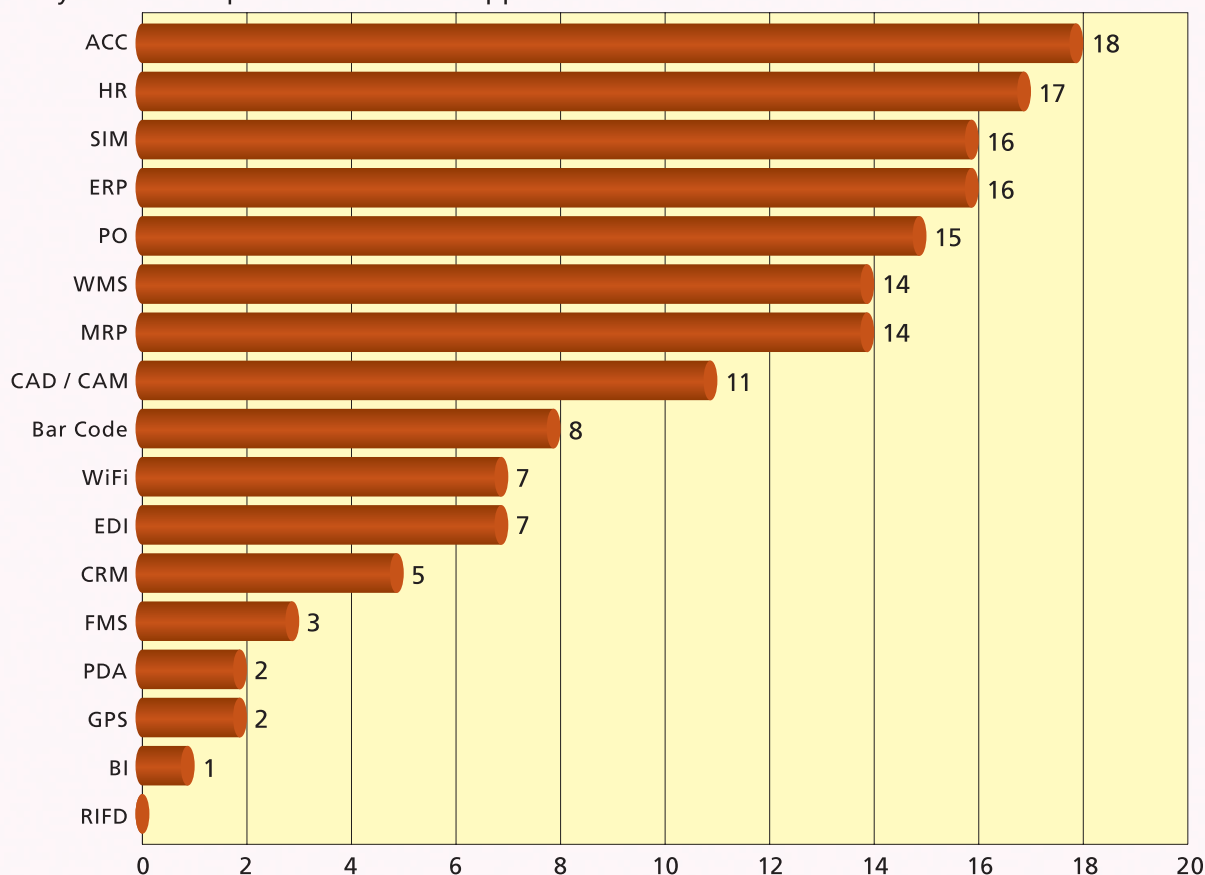


# BROAD COVERAGE

## FINDINGS

### 3.4 Chart

Analysis of Participants' Current I.T. Applications



### 3.5 Analysis on Current I.T. Application Status

In this section, participants were asked to select the most describing sentence for their current I.T. application status. Results were shown in the following table.

The majority of the manufacturers believed that they were in the stage of "Full I.T. implementation with integration with other internal systems", 11 out of 20 respondents opted for this stage which accounted for 55% 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.)", 8 out of 20 respondents opted this sentence, which accounted for 40% of the total respondents.

#### 3.5 Table

Analysis of Participants' Current I.T. Application 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.)	8	40%
5 Full I.T. implementation with an integration with other internal systems	11	55%
6 Full I.T. implementation with an integration with both internal and external systems	1	5%
Total	20	100%



## BROAD COVERAGE FINDINGS

### 3.6 Analysis on Improvements Noticed After I.T. Adoption

In this section, participants were prompted to share with the improvements they had noticed after I.T. adoption. As it was an open-ended type question, participants were allowed to suggest more than one improvement. The findings were summarized in the following table. The findings indicated that Increase operation efficiency ranked the highest (26%), it was followed by Better data management (14%) and Improve information flow (12%).

3.6 Table

Analysis on Improvements Noticed after I.T. Adoption

Improvements Noticed After I.T. Adoption	%
Increase Operation Efficiency	26%
Better Data Management	14%
Improve Information Flow	12%
Better Business Process Management	9%
Better Management Information	7%
Reduce Human Error	7%
Better Inventory Control	7%
Better Material Control (Material Planning)	5%
Save Labour Force	5%
Reduce Operation Cost	2%
Customer Recognition	2%
Increase Productivity	2%
Improve Accounting Audit Efficiency	2%
Total	100%

### 3.7 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 11 out of 20 participants (accounted for 55%) were not using whereas 7 participants (accounted for 35%) were using. 2 participants expressed that they are planning to use, details refer to the following table.

3.7 Table

Analysis on Usage of Information Platform

Usage of Information Platform	Number of Participants	%
Yes	7	35%
No	11	55%
Planning, Not Yet	2	10%
Total	20	100%

### 3.8 Analysis of Participants by Perceived Competitiveness

In addition, participants were asked the perceived competitiveness of their current technology solutions Vs the industry today (1=Less competitive; 5=Most competitive). The results suggested that 55% of the participants perceived their current technology solutions were ranked between levels 4 to 5. Detailed findings were summarized in the following table.

3.8 Table

Analysis of Participants by Perceived Competitiveness

Competitive Level	1	2	3	4	5	Total
% of Participants	5%	5%	33%	35%	23%	100%



# BROAD COVERAGE

## FINDINGS

### 4 I.T. Applications Barriers and Concerns

#### Trucking Industry

In this section, the biggest challenges in I.T. applications and the motivating factors perceived by truckers in adopting I.T. were examined. In addition, participants were prompted to rank the importance of 3 factors (People, Budget and Technology) in deploying I.T. application in their company.

#### 4.1 Analysis of Participants by Perceived Competitiveness

The 15 truckers were asked to indicate the major challenges they faced with technology adoption (1=Less challenging; 5=Most challenging). The findings indicated that Difficult to cope with rapid technological changes ranked the highest (accounted for 60%), it was followed by Limited budget (accounted for 53%) and Shortage of skilled I.T. people (accounted for 50%). Details refer to the following table.

4.1 Table

Analysis on Major Challenges Perceived by Participants

Challenges for I.T. Applications	Number of Participants	Number of Participants (Rated Challenging to Most Challenging)	%
Difficult to Cope with Rapid Technological Changes	15	9	60%
Limited Budget	15	8	53%
Shortage of Skilled IT People	14	7	50%
Difficult to assess ROI	15	7	47%
User's Recognition on Application Value is Low	15	7	47%
Lack of Industry / Government Support	14	7	50%
Complexity of Application	14	5	0%
Data Integration	14	4	29%

#### 4.2 Analysis on Motivating Factors

The 15 truckers were prompted to rate the most important motivating factors when deciding to enhance or upgrade their technological capabilities and customer offering (1=Less important; 5=Most important). The findings indicated that Improves operation efficiency/productivity ranked the highest (accounted for 93%), it was followed by Improves customer service (accounted for 87%) and Improve data quality (accounted for 80%). The findings were summarized in the following table.



## BROAD COVERAGE FINDINGS

### 4.2 Table

Analysis on Motivating Factors

Motivating Factors	Number of Respondents	Number of Participants (Rated Important to Most Important)	%
Improves Operational Efficiency / Productivity	15	14	93%
Improves Customer Service	15	13	87%
Improves Data Quality	15	12	80%
Clear ROI	15	10	67%
Corporate Image	15	9	60%
Direct Customer Request	15	8	53%
Reduce Labor Costs	15	8	53%
Reduce Human Error	15	8	53%

### 4.3 Analysis on Rankings among People, Budget and Technology

In addition, the 15 truckers were invited to rank on the three concern areas in deploying an I.T. application (People/Budget/Technology). Among respondents' provided information, the majority ranked Budget as the top concern (accounted for 73%), 27% of them ranked Technology as the top concern (27%). The findings were summarized in the following table.

### 4.3 Table

Analysis on Rankings among People, Budget and Technology

	People	Budget	Technology	Total
Number of Respondents who ranked as top concern	0	11	4	15
%	0%	73%	27%	100%

### 4.3 Chart

Analysis on Rankings among People, Budget and Technology





# BROAD COVERAGE

## FINDINGS

### Manufacturing Industry

Similar questions for the 20 manufacturers from mainland China on the biggest 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 3 factors (People, Budget and Technology) in deploying I.T. application in their company.

#### 4.4 Analysis on Participants by Perceived Competitiveness

The 20 manufacturers were prompted to indicate the biggest challenges they faced with technology adoption (1= Less challenging; 5=Most challenging). The findings were summarized in the following table. The findings indicated that Difficult to assess ROI ranked the highest (accounted for 54%), it was followed by User's recognition on application value is low (accounted for 44%) and Data integration (accounted for 41%).

#### 4.4 Table

Analysis on Major Challenges Perceived by Participants

Challenges for I.T. Applications	Number of Respondents	Number of Participants (Rated Challenging to Most Challenging)	%
Difficult to Assess ROI	13	7	54%
User's Recognition on Application Value is Low	16	7	44%
Data Integration	17	7	41%
Business Process Reengineering	18	7	39%
Lack of Industry / Government Support	13	5	38%
Shortage of Skilled IT People	17	6	35%
Limited Budget	19	4	21%
Difficult to Cope with Rapid Technological Changes	15	3	20%
Complexity of Application	15	3	20%



## BROAD COVERAGE FINDINGS

### 4.5 Analysis on Motivating Factors

The 20 manufacturers were prompted to rate the most important motivating factors when deciding to enhance or upgrade their technological capabilities and customer offering (1=Less important; 5=Most important). The findings were summarized in the following table. The results indicated that Improves operation efficiency/productivity ranked the highest (accounted for 95%), it was followed by Improves data quality (accounted for 79%) and Reduce human error (accounted for 67%).

#### 4.5 Table

Analysis on Motivating Factors

Motivating Factors	Number of Respondents	Number of Participants (Rated Important to Most Important)	%
Improves Operational Efficiency / Productivity	19	18	95%
Improves Data Quality	19	15	79%
Reduce Human Error	18	12	67%
Improves Customer Service	20	12	60%
Reduce Labor Costs	20	12	60%
Corporate Image	19	11	58%
Clear ROI	16	8	50%
Direct Customer Request	17	8	47%

### 4.6 Analysis on Rankings among People, Budget and Technology

The 20 manufacturers were further asked to rank on the three concern areas in deploying an I.T. application (People/Budget/Technology). Among respondents' provided information, the majority ranked Technology as the top concern (accounted for 70%), 20% of them ranked Budget and 10% of them ranked People as top concern. The findings were summarized in the following table.

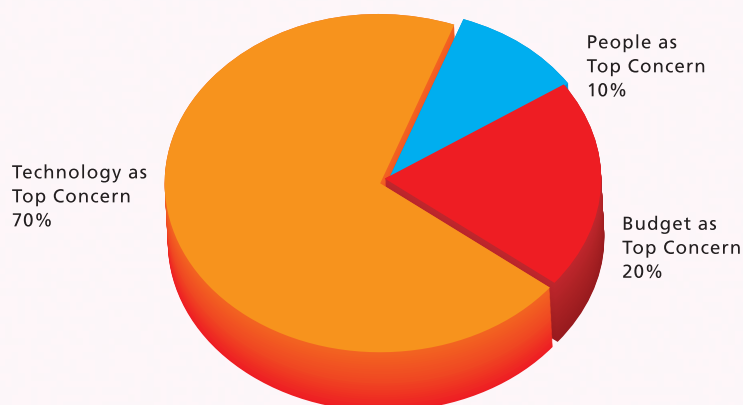
#### 4.6 Table

Analysis on Rankings among People, Budget and Technology

	People	Budget	Technology	Total
Number of Respondents who ranked as top concern	2	4	14	20
%	10%	20%	70%	100%

#### 4.6 Chart

Analysis on Rankings among People, Budget and Technology





# BROAD COVERAGE

## FINDINGS

### 5 Industry Trends/Characteristics

#### Trucking Industry

##### 5.1 Analysis on Industry Trends/Characteristics

In that section, the 5 truckers from Hong Kong were encouraged to express opinions on how their industry characteristics would affect their technology application needs in the future. The findings were categorized into Industrial Trend (Business Environment) and (Operating Cost). As this section comprises open-ended type questions, participants were allowed to suggest more than one opinion. Among the participants' provided information, the results indicated that the industry trends/characteristics were as follows:

##### **Industrial Trend (Business Environment)**

31% of them realized that Hong Kong logistic industry is a shrinking industry. It was followed by opinion stating that Shenzhen is replacing Hong Kong in logistic industry, which accounted for 24%.

##### **Industrial Trend (Operating Cost)**

Increasing cost of petrol (22%) was regarded as the main trend in terms of operation cost; it was followed by Decreasing profit margin (18%) and Global economy recession (9%).

##### 5.1(a) Table

##### Industrial Trend (Business Environment)

Industrial Trend (Business Environment)	%
Hong Kong Logistic Industry is a Shrinking Industry	31%
Shenzhen is Replacing HK (Yim Tin and Da Chan Bay)	24%
Sea is Replacing Land Transport	13%
Lack of Government Assistance	4%
HR Issue: Aging Problem	7%
Manufacturers Moving Northwards	11%
Believed that I.T. cannot Help	7%
Competition from Singapore	2%
Total	100%

##### 5.1(b) Table

##### Industrial Trend (Operating Cost)

Industrial Trend (Operating Cost)	%
Increasing Cost of Petrol	22%
Decreasing Profit Margin	18%
Global Economy Recession	9%
Strong RMB Exchange Rate	7%
Stringent Requirement on Vehicle Exhaust (Euro III, Euro IV)	7%
High Terminal Handling Charge	7%
PRC Customs Issue	6%
Green Lane Cannot Help	6%
Increase Investment in I.T.	4%
High Parking Rate	3%
High Truck Maintenance Cost	3%
New Labour Law Increase Operating Cost	1%
Weak US Currency	1%
Interest in e-Documentation Process	1%
Price Wars Within Industry	1%
High Warehouse and Container Yard Rate	1%
Total	100%



# BROAD COVERAGE

## FINDINGS

### Manufacturing Industry

#### 5.2 Analysis on Industry Trends/Characteristics

Likewise, in that section, manufacturers from mainland China were asked to give opinions on how their industry characteristics would affect their technology application needs in the future. In addition, participants were prompted to share if they would have I.T. strategy to adapt to such changes. Among participants' provided information, the results indicated that Increasing operation cost, decreasing profit margin was the mostly weighted industry trend (37%), it was followed by Industrial practitioners tend to expand market (11%).

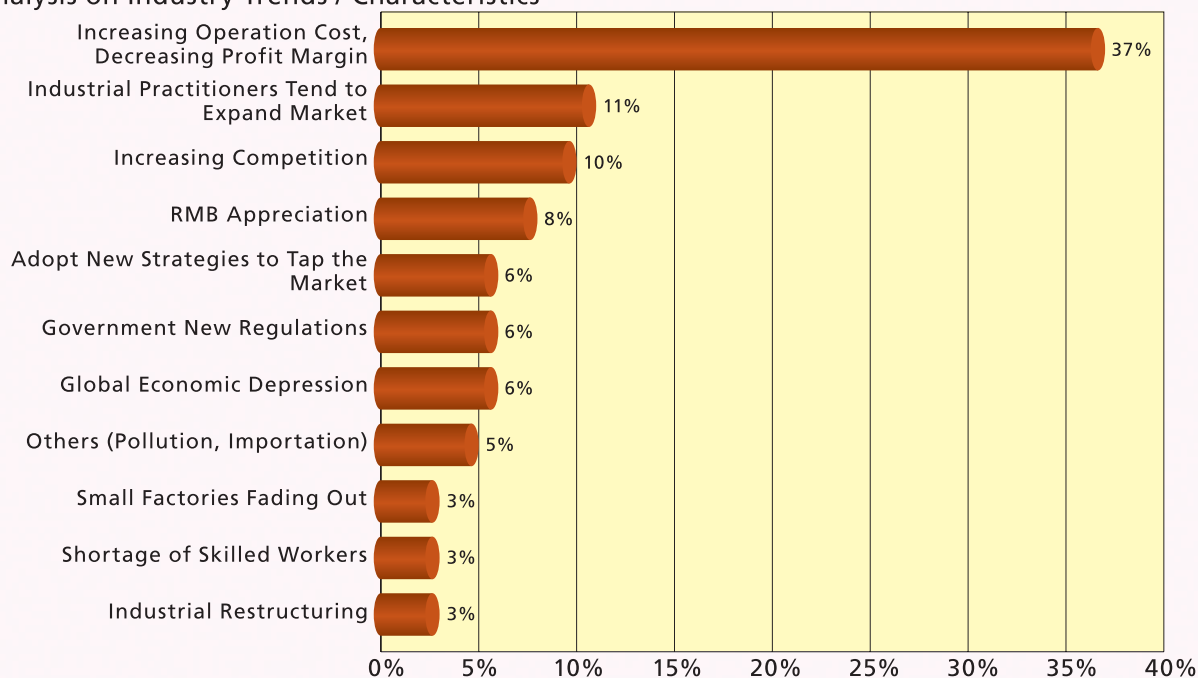
#### 5.2 Table

Analysis on Industry Trends/Characteristics

Industry Trends / Characteristics	%
Increasing Operation Cost, Decreasing Profit Margin	37%
Industrial Practitioners Tend to Expand Market	11%
Increasing Competition	10%
RMB Appreciation	8%
Global Economic Depression	6%
Government New Regulations	6%
Adopt New Strategies to Tap the Market	6%
Others (Pollution, Importation)	5%
Industrial Restructuring	3%
Shortage of Skilled Workers	3%
Small Factories Fading Out	3%
Total	100%

#### 5.2 Chart

Analysis on Industry Trends / Characteristics





## BROAD COVERAGE

### FINDINGS

#### 5.3 Analysis on I.T Strategies to Adapt the Changes

While facing new business environmental changes, 12 out of 20 manufacturers indicated that they did not have any I.T. strategies to adapt the market changes (accounted for 60%); whereas only 5 participants (accounted for 25%) stated that they would adopt new I.T. strategies.

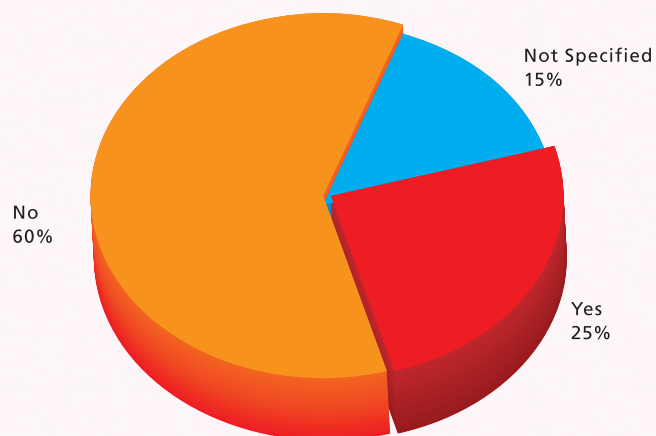
##### 5.3 Table

Analysis on I.T Strategies to Adapt the Changes

I.T. Strategies to Adapt the Changes	Number of Participants	%
Yes	5	25%
No	12	60%
Not Specified	3	15%
Total	20	100%

##### 5.3 Chart

Analysis on I.T Strategies to Adapt the Changes





# BROAD COVERAGE

## FINDINGS

### 6 Future I.T. Applications

#### Trucking Industry

In this section, the 15 truckers were invited to provide information on their current I.T. investment budget level and their future I.T. applications and were examined.

#### 6.1 Analysis on Current I.T. Adoption Cost

Participants were further asked to provide information on the percentage of the total investment in their I.T. adoption (Current I.T. investment cost to Revenue). 11 out of 15 respondents provided information and the results indicated that most of them invested 1-3% of revenue into I.T. adoption (accounted for 33%). Detailed findings were summarized in the following table.

6.1 Table

Analysis on Current I.T. Adoption Cost

Current Investment % to Revenue	Number of Participants	%
Less than 1%	1	7%
1% - 3%	5	33%
4% - 6%	4	27%
7%-9%	0	0%
Over 9%	1	7%
Not Specified	4	27%
Total	15	100%

#### 6.2 Analysis on Future I.T. Applications

The 15 truckers were asked to provide comments on their future I.T. strategic plan. As this section comprises open-ended type questions, participants were allowed to suggest more than one opinion. From participants' provided information, the findings suggested that Fleet management ranked the highest, which accounted for 18%; whereas Sales and Marketing/Business Intelligence ranked second, which accounted for 15%. It was followed by Communications which accounted for 13%, details refer to the following table.



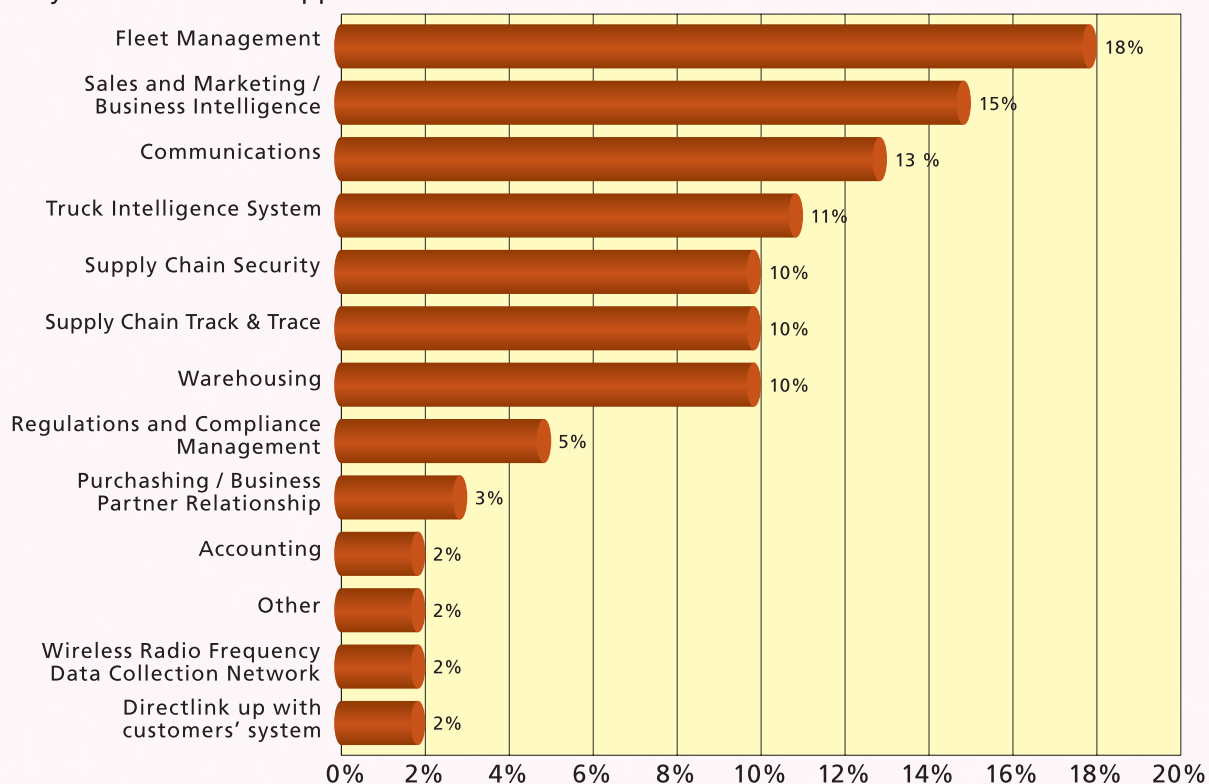
# BROAD COVERAGE

## FINDINGS

6.2 Table  
Analysis on Future I.T. Applications

Future I.T. Applications	%
Fleet Management	18%
Sales and Marketing / Business Intelligence	15%
Communications	13%
Truck Intelligence System	11%
Warehousing	10%
Supply Chain Track & Trace	10%
Supply Chain Security	10%
Regulations and Compliance Management	5%
Purchasing / Business Partner Relationship	3%
Direct link up with customers's system	2%
Wireless Radio Frequency Data Collection Network	2%
Other	2%
Accounting	2%
Total	100%

6.2 Chart  
Analysis on Future I.T. Applications





# BROAD COVERAGE FINDINGS

## Manufacturing Industry

### 6.3 Analysis on Current I.T. Adoption Cost

Likewise, in that section, manufacturers from mainland China were asked were asked to provide information on the percentage of the total investment in their I.T. adoption (Current I.T. investment cost to Revenue). 9 out of 20 respondents provided information and the results indicated that most of them invested less than 1% of revenue into I.T. adoption (accounted for 20%). Detailed findings were summarized in the following table.

6.3 Table  
Analysis on Current I.T. Adoption Cost

Current Investment % to Revenue	Number of Participants	%
Less than 1%	4	20%
1% - 3%	1	5%
4% - 6%	2	10%
7% or Above	2	10%
Not Specified	11	55%
Total	20	100%

### 6.4 Analysis on Future I.T. Applications

The 20 manufacturers were asked to provide comments on their future I.T. strategic plan. As this section comprises open-ended type questions, participants were allowed to suggest more than one opinion. From participants' provided information, the findings suggested that Production process control and management ranked the highest, which accounted for 23%; whereas Sales and Marketing/Customer Relationship ranked second with 16%. It was followed by Communications which accounted for 13%, details refer to the following table.

6.4 Table  
Analysis on Future I.T. Applications

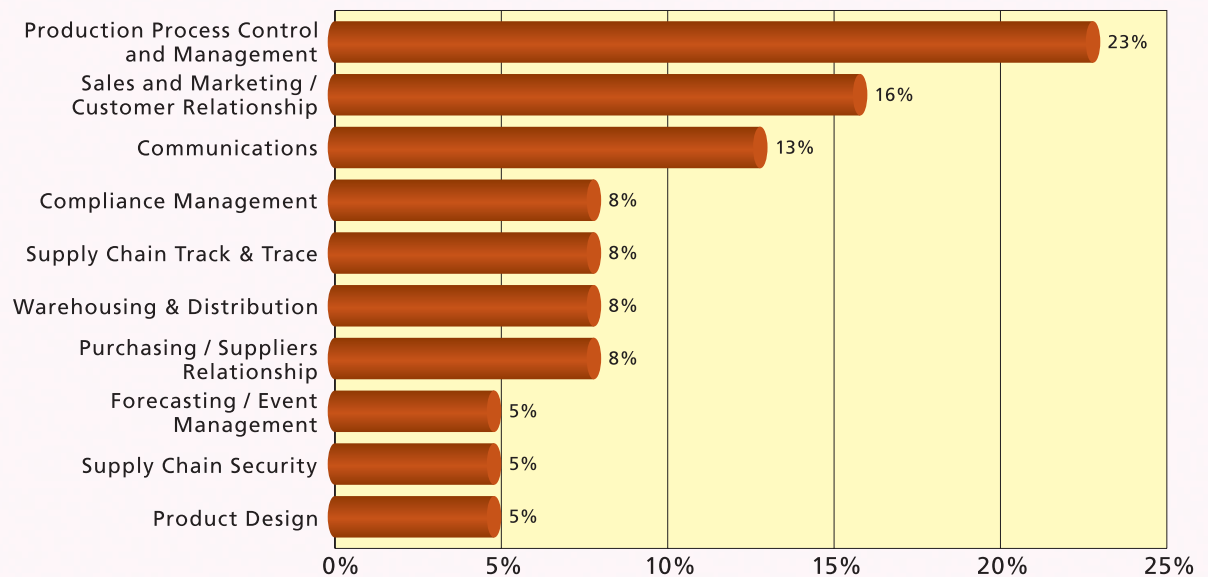
Future I.T. Applications	%
Production Process Control and Management	23%
Sales and Marketing / Customer Relationship	16%
Communications	13%
Purchasing / Supplier Relationship	8%
Warehousing & Distribution	8%
Supply Chain Track & Trace	8%
Compliance Management	8%
Product Design	5%
Supply Chain Security	5%
Forecasting / Event Management	5%
Others	100%



## BROAD COVERAGE FINDINGS

### 6.4 Chart

#### Analysis on Future I.T. Applications



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

The 20 manufacturers from mainland China were further asked to provide opinion on whether I.T. is able to enhance the company's competitiveness (1=Less Agreeable; 5= Most Agreeable). The finding indicated that 73% of the respondents ranked between levels 4 to 5.

### 6.5 Table

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

Agreeable Level	1	2	3	4	5
%	7%	0%	20%	23%	50%



# BROAD COVERAGE FINDINGS

## 7 R&D Demand & Aspiration

### Trucking Industry

In this section, the 15 truckers discussed their R&D demand and aspiration from government with our consultants; and their interests on government sponsored R&D program were also examined.

#### 7.1 Analysis on Current I.T. Adoption Cost

The 15 truckers were asked if they were interested in participating in R&D projects and their preferences on:

- If government is willing to support 90% over the total cost of such R&D project, are you willing to invest together with other companies within the industry the remaining amount and share the project deliverables; and
- If government is willing to support 50% over the total cost of such R&D project, are you interested in invest the remaining amount and own the IP rights of the project deliverables.

All the 15 respondents gave opinion and the findings were summarized in the following Table.

7.1 Table

Summary on Government Sponsorship R&D Scheme

Government Sponsored Scheme / Respondents	Number of Respondents	%
Interested in Participating in R&D Projects	10	67%
(A) Government Support 90% Scheme	6	60%
(B) Government Support 50% Scheme / Company Own the IP right	4	40%

#### 7.2 Analysis on Interested Areas on LSCM R&D Roadmap

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

##### RFID Hardware & System

3 out of 9 (33%) participants indicated that they are interested in Theme 1 "Low Cost RFID Tag Manufacturing Techniques" is set on easing the cost issue of adoption and deployment for RFID.

##### Networking & Infrastructure Technologies

7 out of 9 (78%) participants indicated that they were interested in both 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" and 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.

##### Applications & Decision Support Technologies

There were 9 participants provided information. 4 out of 9 (44%) participants indicated that they were interested in Theme 10 "Positioning Technologies and Optimization for Asset Tracking and Monitoring" will add to the capability of real-time cargo tracking.



# BROAD COVERAGE FINDINGS

7.2 Table  
Summary on Interested Areas on LSCM R&D Roadmap

RFID Roadmap	Number of Respondents	%
RFID Hardware & System		
Theme 1 "Low Cost RFID Tag Manufacturing Techniques" is set on easing the cost issue of adoption and deployment for RFID	3	33%
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	0	0%
Theme 3 "RFID Testing and Qualification" targets for helping users to test and select appropriate RFID solutions to best fit their use	2	22%
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	1	11%
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"	7	78%
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	78%
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	1	11%
Theme 8 "Enabling Technologies for Mobile Logistics" encourages innovative applications for distribution and delivery which are mobile in nature	0	0%
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	4	44%
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	1	11%



# BROAD COVERAGE

## FINDINGS

### Manufacturing Industry

#### 7.3 Analysis on Interested Areas on Government Support Areas

For the 20 manufacturers, they were asked to comments on Government support areas. Among them, 15 respondents shared their opinions whereas 5 had no specified answer. The results indicated that most of them were interested in Education/Share information platform area (accounted for 32%), it was followed by Policy Issue/Environment protection requirement (accounted for 21%). The findings were summarized in the following table.

7.3 Table  
Summary on Government Support Areas

Government Support Areas	%
Education / Share Information Platform	32%
Policy Issue / Environmental Pretention Requirement	21%
Financial Support	16%
R&D Initiative	11%
Explore Market	11%
Others ( HR / Traffic )	11%
Total	100%

#### 7.4 Analysis on Interested Areas on LSCM R&D Roadmap

Likewise, in this section, the 20 manufacturers were asked to indicate their interested areas of LSCM R&D roadmap. There were 14 participants out of 20 provided opinions and they were summarized as follows.

##### ***RFID Hardware & System***

5 out of 14 (36%) participants indicated that they are interested in 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”.

##### ***Networking & Infrastructure Technologies***

8 out of 14 (57%) participants indicated that they are interested in 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.

##### ***Applications & Decision Support Technologies***

There were 14 participants provided information. 6 out of 14 (43%) participants indicated that they were interested in Theme 10 “Positioning Technologies and Optimization for Asset Tracking and Monitoring” will add to the capability of real-time cargo tracking.



# BROAD COVERAGE

## FINDINGS

### 7.4 Table

Summary on Interested Areas on LSCM R&D Roadmap

RFID Roadmap	Number of Respondents	%
RFID Hardware & System		
Theme 1 "Low Cost RFID Tag Manufacturing Techniques" is set on easing the cost issue of adoption and deployment for RFID	4	29%
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	5	36%
Theme 3 "RFID Testing and Qualification" targets for helping users to test and select appropriate RFID solutions to best fit their use	4	29%
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	1	7%
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"	3	21%
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	8	57%
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	1	7%
Theme 8 "Enabling Technologies for Mobile Logistics" encourages innovative applications for distribution and delivery which are mobile in nature	1	7%
Theme 9 "Sensor-enabled Logistics Applications" will enable automation in cargo monitoring	5	36%
Theme 10 "Positioning Technologies and Optimization for Asset Tracking and Monitoring" will add to the capability of real-time cargo tracking	6	43%
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	1	7%



## BROAD COVERAGE RECOMMENDATIONS

### 8.1 Comparison of the Key Findings with LSCM Market Intelligence Report (Issue 1)

#### Manufacturing Industry

The LSCM R&D Centre had published **LSCM Market Intelligence Report (Issue 1)** in August 2008 to share initial findings which were based on information collected from 25 manufacturing companies. In this report, a new set of findings contributed from 20 more manufacturing companies from mainland China were analyzed and some consistent findings between the two sets of data were noticed and summarized. Nevertheless, still some variances could be spotted.

While comparing the research findings with Issue 1, it was noticed that the two groups of manufacturing companies were sharing some common opinions. In analysis of *Most time consuming process*, both group of respondents indicated that *Procurement of raw materials* and *Production* were the two most time consuming process within their operation. In addition, when asked the *Most costly process*, the two groups of respondents expressed the same findings again in which *Procurement of raw materials* and *Production* ranked as top two. The *Perceived challenges* and *Motivating factors* in adopting I.T. applications as indicated by the two groups of respondents also represented a large extent of consistency. For *Perceived challenges*, *Data integration* and *User's recognition on application value is low* both weighted within the top three challenges whereas in terms of *Motivating factors*, the two groups of respondents both expressed the same findings on the top three factors, they were *Improve operational efficiency*, *Improve Data quality* and *Reduce human error*.

We also found that technology was ranked as top concern among the three areas (People/Budget/Technology) when consider deploying an I.T. application, the rankings concluded from the two groups were coherent. Among various applications, Accounting (ACC) and Enterprise resource planning (ERP) were widely adopted by manufacturing companies.

Although the two set of data shared certain consistent findings, there were still some variances. For instance, there were different interpretations on the findings on *Future I.T. applications*. From Issue 1, the top five future applications as expressed by respondents were: *Product design*, *Forecasting/event management*, *Production process control and management*, *Compliance management* and *Business intelligence*; whereas from this study, the top five future applications weighted by respondents were *Production*, *Sales and marketing*, *Communications*, *Purchasing and Warehousing* and *Distribution*.

One of the possible reasons for such variances is the industry background of the participants. Different manufacturing industries require different I.T. applications for specific needs. In Issue 1, garment industry practitioners were the largest segment, which accounted for 32%; whereas for this report, Electronics practitioners were the largest industry segment, which accounted for 35%.

In general, given there were some variances between the two groups of respondents, the majority of them described their Current I.T. applications status as "*Full I.T. implementation with integration with other internal systems*".



# BROAD COVERAGE

## RECOMMENDATIONS

### 8.2 Identify the Current Position

#### Trucking Industry

It is crucial to identify the current position and problems faced by companies before deciding the strategic targeted position. Among the 15 truckers from Hong Kong, close to one-third of the respondents expressed that Hong Kong logistics industry is a shrinking industry (accounted 31%); they also believed that Shenzhen is replacing Hong Kong's position (accounted for 24%).

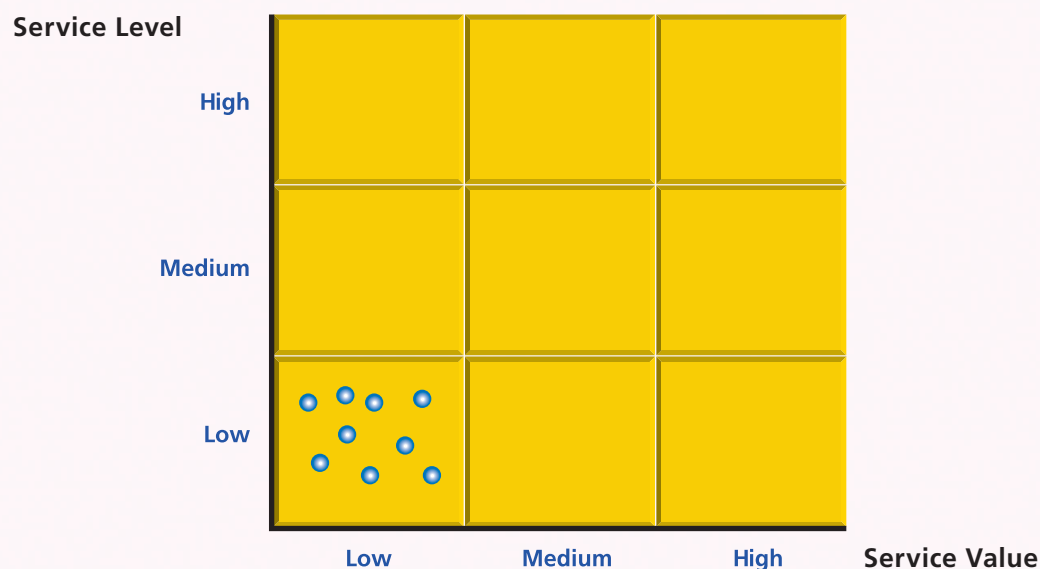
From technological aspect, the findings suggested that most of the local trucking industry practitioners had low I.T. adoption level and weak I.T. knowledge. The phenomenon was apparent in Section 3.2, which analyzed the adoption on I.T. applications. It was found that only 20% of the respondents were currently deploying *Containerized Logistic Management*; the adoption percentage on *eTR* and *DTTN* were as low as 13% and 0% respectively.

In Section 3.1, the findings further indicated that local trucking participants had a low usage of the industry specified applications, such as GPS(53%), FMS(47%), GPRS(40%) and TMS(33%). Participants agreed on Section 3.3 in which 73% of the respondents described themselves by "*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.)*".

If we look at respondents' business nature, 60% of the them were providing merely delivery service with emphasis on either *Local* or *Local & cross border transportation services*; only 40% of the respondents offer other value added services like warehouse and/or support activities for transportation (Section 1.1). There were relatively less demands for them to adopt relevant and advanced I.T. applications. In a nutshell, the current position of the Hong Kong trucking participants is in the status of providing low value delivery service with low I.T. application adoption level, which is inadequate for them to face business environmental changes and challenges.

#### 8.2a Diagram

Current Position of Participants (Trucking Industry) in Supply Chain Management





## BROAD COVERAGE RECOMMENDATIONS

### Manufacturing Industry

In Section 3.4, it was indicated that I.T. application adoption level of manufacturing companies was relatively high. For instance, ACC (90%), HR (85%), ERP (80%), SIM (80%), PO (75%), MRP (70%), and WMS (70%) were with adoption rate of over 70%. In Section 3.6, over 50% of respondents believed that they were “Full I.T. implementation with an integration with outer internal systems”; whereas over 50% of the respondents felt confident with their current technology solution Vs the industry today (Section 3.8).

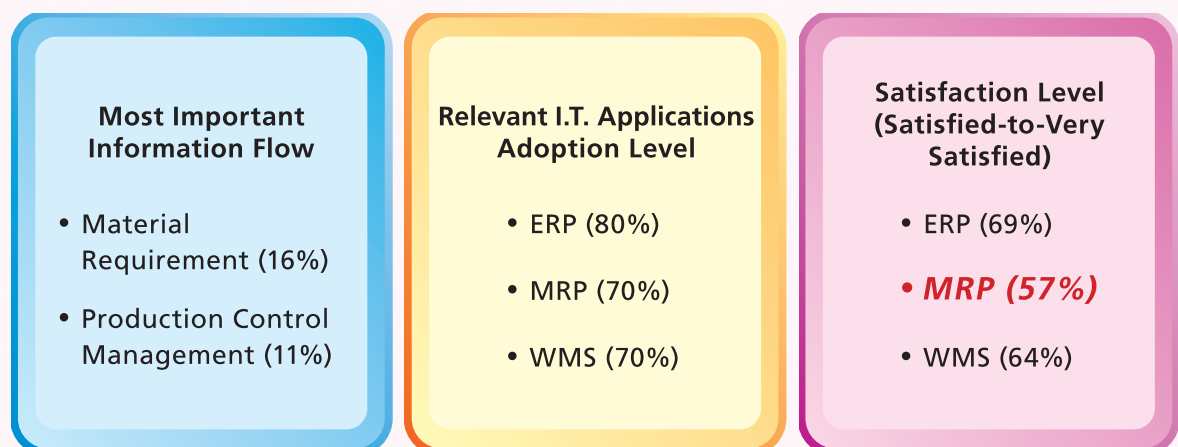
When asked how to face with unfavorable business environment, such as increasing operation cost, decreasing profit margin and increasing competition, they realized that they should expand business market and to increase competitiveness. In Section 6.5, the majority of the respondents (accounted for 73%) believed that I.T. can help enhancing company competitiveness. However, 60% of the respondents indicated that they did not have any I.T. strategies to adapt changes (Section 5.3). In addition, only 35% of the respondents indicated that they were using information platform to collaborate with business partners (Section 3.7). The rest 55% did not, whereas 10% is planning and not specified plan being articulated.

From that perspective, on one hand the manufacturing companies have relatively high I.T. adoption level; while on the other they could not fully utilize I.T. applications to achieve the optimum benefits. In Section 4.6, respondents expressed that the biggest concern in deploying an I.T. application was Technology (accounted for 70%), instead of Budge as top concern (accounted for 20%) and People as top concern (accounted for 10%). To explore their difficulties in I.T. adoption, in Section 4.4, it further spelt out the top three biggest challenges for I.T. adoption were Difficult to assess ROI, User’s recognition on application value is low and Data integration, they accounted for 54%, 44% and 41% respectively.

In addition, it was noteworthy to pinpoint that MRP was crucial to support the most important information in the manufacturing environment, with adoption level of 80% as indicated in Section 3.4. Despite the high adoption rate, however we found relatively low satisfaction rate of 57% among them. At this point, it will hinder them from pursuing a high operational efficiency.

#### 8.2b Diagram

Weak MRP Satisfaction Level





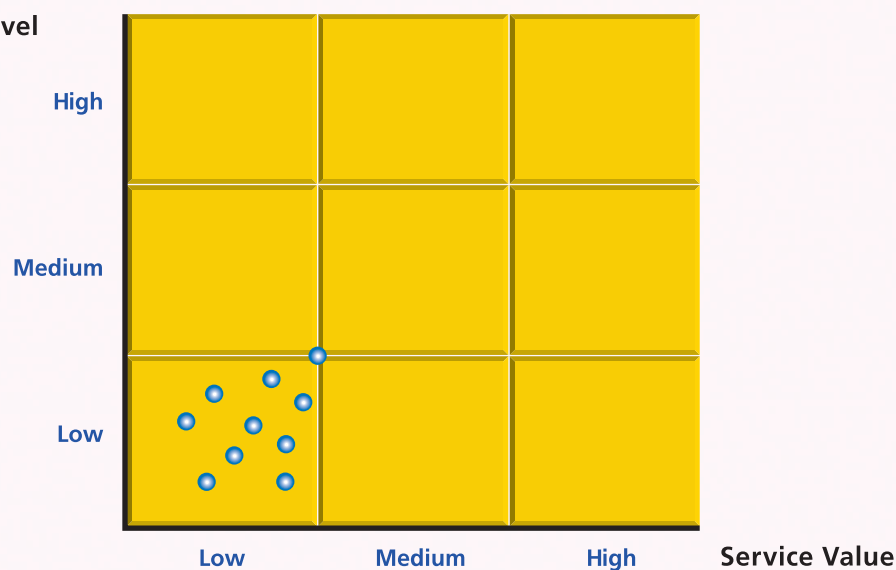
## BROAD COVERAGE RECOMMENDATIONS

In Section 3.5, over 501% of the manufacturing participants indicated that they were “Full I.T. implementation with integration with other internal systems”; only 5% stated that they were “Full I.T. implementation with an integration with both internal and external systems”. In fact, only 35% of them were currently using information platform to collaborate with business partners (Section 3.7). In order to enhance efficiency and competitiveness, manufacturers should focus also on integration with external system. Such process will require more advanced supply chain management tools/services. At this point, 3PLs who specialized in integrated warehousing and transportation services can help manufacturers with scaled and customized supply chain solutions based on market conditions and the demands and delivery service requirements for their products and raw materials.

### 8.2c Diagram

Current Position of Participants (Manufacturing Industry) in Supply Chain Management

Service Level





## BROAD COVERAGE RECOMMENDATIONS

### 8.3 I.T. Application to Enhance Competitiveness and Face New Challenges

#### Trucking Industry

In view of the motivating factors as expressed by the respondents, trucking companies ranked *Improve operational efficiency* and *customer service* as top two highest. While mapping these factors to related future I.T. applications as chosen by them, they included: *Fleet management*, *Sales and marketing/business intelligence*, *Communications*, *Truck intelligence system*, *Warehousing*, *Supply chain track & trace* and *Supply chain security* respectively. The results indicated that those future applications were of great demand but among the low usage applications they are currently using (8.3a Table).

8.3a Table

Motivating Factors & Future Applications Mapping (Trucking Industry)

Motivating Factors		Future T.T. Applications	
Improves Operational Efficiency / Productivity	93%	Fleet Management	18%
		Sales and Marketing / Business Intelligence	15%
		Communications	13%
Improves Customer Service	87%	Truck Intelligence System	11%
		Warehousing	10%
		Supply Chain Track & Trace	10%
		Supply Chain Security	10%



# BROAD COVERAGE

## RECOMMENDATIONS

### Manufacturing Industry

In regard to the respondents from manufacturing, similar mapping was summarized in below table. Their highest motivating factors in I.T. adoption were *Improves operational efficiency/ productivity and data quality and Reduce human error*; whereas their future I.T. applications included *Production process control and management, Sales and marketing/customer relationship and Communications*.

8.3b Table

Motivating Factors & Future Applications Mapping (Manufacturing Industry)

Motivating Factors		Future I.T. Applications	
Improves Operational Efficiency / Productivity	95%	Production Process Control and Management	23%
Improve Data Quality	79%	Sales and Marketing / Customer Relationship	16%
Redue Human Error	67%	Communications	13%

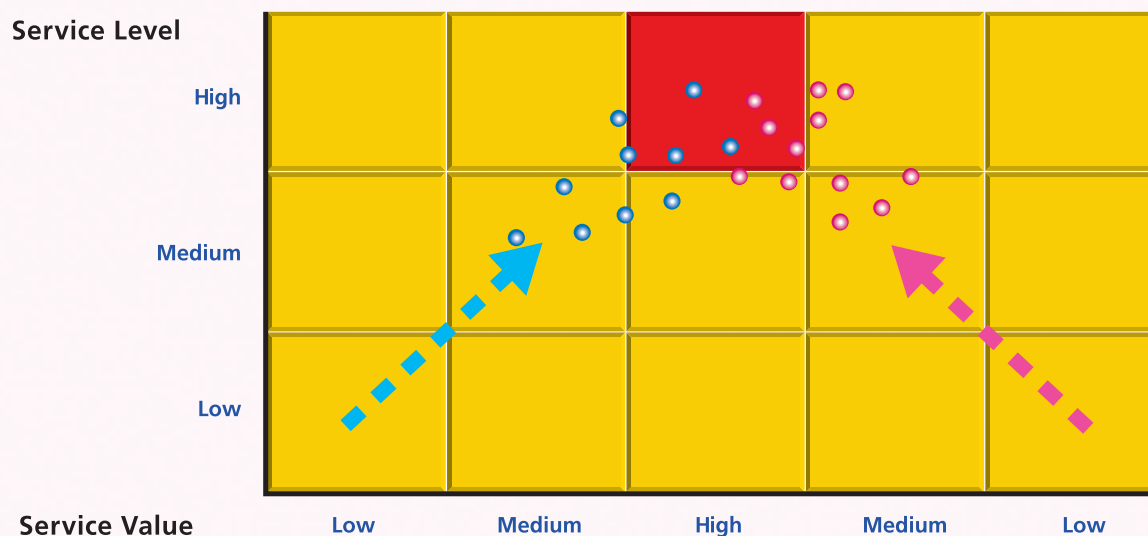
### 8.4 Strategically Shifting Position

By identifying companies' current position, motivating factors for adopting I.T. and future I.T. applications, it is recommended that the industry practitioners should consider to strategically shifting upwards by enhancing service to face new challenges.

For trucking industry, they should consider moving upwards from merely providing delivery service to more value added service (3PL) to achieve higher service level and higher service value. Such shift can help practitioners to expand market and increase profit margin. While for the manufacturers in Hong Kong and PRD, it is recommended that they should seek supply chain management services provided by competent 3PLs. As explained in Section 8.2, 3PLs could provide full spectrum of logistics and supply chain solutions which could enhance companies' competency in collaboration with both internal and external parties, it would also help enhancing companies' competitiveness and quality of services deliverables.

8.4 Diagram

Strategically Shifting Position





## BROAD COVERAGE RECOMMENDATIONS

### 8.5 LSCM to Facilitate Technology Adoption through Market-driven R&D

Industries were recommended to seek support from the LSCM R&D Centre as we are commissioned to provide a one-stop shop for technology transfer and commercialization. For years, the LSCM R&D Centre has been running and managing over 20 R&D projects that aim to break down the technology barriers in hardware, software, systems and network design and development for industries along the supply chain. For instance, the use of RFID technologies to allow manufacturing companies to improve shop-floor productivity and quality, reduce the wastes of manufacturing resources and improve the efficiency and e-seal as the key technology to streamline the customs clearance and work flow for cross-border trucking transportation are two examples of on-going project. For full list of our projects and R&D programs available for industry and research collaboration, please visit [www.lscm.hk](http://www.lscm.hk).



GLOBAL / CHINA WATCH



Informatization has become a hot development trend worldwide. It is also an important force in driving economic and social transformations. Practically, informatization refers to a course whereby information technology and products have gained widespread publicity and application, information resources being fully developed and utilized, and information technology continuing to produce greater effects on national economic development, social progress and living standard. Informatization has such a profound meaning in technological innovation and transformation, whilst the promotion and application of information technology is multilevel and multidimensional.

The development of Radio Frequency Identification (RFID) technology is closely related to the infrastructure of informatization. It is the key to realize economic growth, a well-off and harmonious society, a prerequisite for building a new style country and is an important opportunity to sustain continuing development in IT industry. China should greatly promote information processing and accelerate application of RFID which is part of the transformation of IT technology.

### **1. The Performance of China's Information Industry in First Half of 2008**

Despite the economic turmoil in China and worldwide this year with drastic price hikes of raw materials, global financial crisis and numerous natural disasters, China's information industry registered a stable and fast growth rate of 20 percent.

From January to July 2008, the sales revenue of the IT industry reached RMB3,140 billion, a rise of 20.7 percent compared to the same period in 2007. Among these, the manufacturing sector registered a 19.1 percent increase at RMB2,720 billion; the industry added value was amounted to RMB635.47 billion, up 22.6 per cent; the revenue from the software industry was at RMB419.91 billion, a surge of 32.4 percent. In the first half of 2008, the economic benefits of the electronics industry saw a rapid growth – an investment of RMB73 billion was recorded from January to May, which has realized business tax of RMB85.11 billion and a year-on-year growth of 33.5 percent. Major productions in the first half included: mobile phones were at 295 million units, a rise of 9.7 percent; micro-computers were amounted to 6,649.1 units, an increase of 23.2 percent (among them notebook computers were at 3,625.5 units, increased 33.3 percent and represented 72 percent of total production of micro-computers); digital cameras at 3,625.5 units, increasing 31.4 percent; integrated circuits at 20.2 units, surging 6.2 percent; colored TV sets at 39.066 million units, with plasma TV sets occupied 29 percent of the whole production, which was an increase of 60.5 percent.

From January to July 2008, China's software industry continued to maintain a rapid growth momentum with total revenue amounted to RMB419.91 billions, which was an increase of 32.4 percent year-on-year and 13.3 percent higher than the overall productions of the electronics industry.



Among revenues generated from China's software industry the software IT services saw the fastest growth with an accumulate revenue amounted to RMB78.08 billion, representing a rise of 44.7 percent and occupied 18.5 percent of total export revenues; outsourcing services were amounted to RMB8.9 billion, an increase of 88 percent year-on-year; the revenues of software products reached RMB182.17 billion, occupied 43.3 percent of the total software industry productions; the revenue of system assembly reached RMB87.9 billion, a rise of 27.6 percent year-on-year; the embedded system software was at RMB59.98 billion, an increase of 32.1 percent compared to the same period in 2007; the IC Design was valued at RMB11.78 billion, up 17.1 percent year-on-year but 15.3 percent slower than the average growth of the software industry. The diagram below indicates the production units and growth rates of electronics and IT products in the first six months of 2008.

Table 1 : Production Volume of Major Electronic Goods from January to June, 2008

Product Names	Units	Accumulate Units (Until June)	Growth Rate (%)
Mobile Phone (GSM CDMA)	Billion	0.295	9.7
Mobile Telecommunication Station Equipment	Thousand	7340	-7.5
TV:	Thousand	39810	14.0
Color TV	Thousand	39066	16.2
Rear Project TV	Thousand	5	-89.4
Plasma TV	Thousand	10306	65.8
Ion TV	Thousand	783	241.9
Micro-Computer:	Thousand	66491	23.2
Notebook Computer	Thousand	47988	33.3
Server	Thousand	1816	-41.2
Monitor:	Thousand	69486	2.9
LCD Display	Thousand	65064	14.6
Printer	Thousand	17232	-18.6
Electronic Components:	Billion	344.81	20.5
Chip Components	Billion	149.94	34.1
Color Picture Tube	Thousand	32707	6.0
Semiconductor Device	Billion	136.19	27.6
Semiconductor Integrated Circuit	Billion	20.2	6.2
Digital Camera	Thousand	36255	31.4



From January to July in 2008, China's foreign trade had developed steadily: the foreign trade of electronics IT industry reached RMB 504.89 billion, an increase of 21 percent and occupied 21 percent of the country's total. China's export of electronics products was amounted to US\$291.58 billion, a rise of 23.9 percent compared to the same period in 2007, occupied 36.3 percent of the country's total export. The import was valued at US\$213.3 billion, representing 31.4 percent of the country's total. From January to July, the trade deficit of electronics products was amounted to US\$78.28 billion, up 47.1 percent year-on-year and occupied 63.3 percent of the nation's total. Related IT products including notebook computers, colored TV sets and digital cameras saw their export volumes grow at more than 20 percent. From January to June in 2008, China's export of software products was valued at US\$4.95 billion, rising 45 percent year-on-year, but mobile phones, DVD / VCD recorders and printers saw slower growth. The following diagram describes the export situation of major electronics products in China at first half of 2008.

Table 2: Export Situation of Major Electronics Products in China from January to July, 2008

Product Names	Export Value (US\$ Billion)	Export Value (year-on-year, %)
Notebook Computer	34.71	28.0
Mobile Phone	20.5	11.3
Integrated Circuit	13.92	8.4
LCD Display Board	13.897	44.0
Monitor	10.95	13.9
Color TV	5.76	43.5
Digital Camera	3.91	11.6
Laser Disc Player	2.76	2.1
Printer	2.23	-1.7

## 2. Introduction to contents related to RFID in 2. "The Development Plan of the Golden Card Project and the Application of IC Card in China from 2008 to 2013"

Based on the "National Golden Card Project and Nationwide Applications of IC Card" (the first 10-Year Plan from 1993 to 2003), the Office of National Golden Card Project Coordination Leading Group, related departments and ministries and the pilot cities and provinces of Golden Card Project have compiled the "Development Plan of the Golden Card Project and National Applications of IC Card (2008 to 2013)" (hereinafter to be called as "The Plan").

The compilation of "The Plan" was begun in 2004, which was collaborated by the National Golden Card Office, the first batch of twelve pilot cities and provinces and related departments (especially the major card circulation departments of the seven largest industries). It was then after extensive request of opinions with 20 related departments, 26 corporation groups of different sectors and industry experts, with repeated revisions and corrections, and was deliberated by the Office of National Golden Card Project Coordination Leading Group at the Seventh Meeting of all members of the Board. The Plan was officially published and issued on January 24, 2008.



The article of "The Plan" contains five major sections. The first section is the review of the "Fifteenth", the second is the guided thinking and development goals, the third about major roles and focus of development, the fourth about the applications of IC cards, and the fifth about relevant policies and measures.

"The Plan" points out that in the next five years the Golden Card Project will enter an important and critical stage which will reach more people, confer greater benefits on society and build up a harmonized society of socialism. Particularly in the aspects of the National Golden Card Project and application of Smart IC card and implementation of RFID tagging in pilots, the Golden Card Project has broken through the initial purpose of IC card and informatization construction as the main scope of applications, and expands rapidly at the forefront of industrial and agricultural productions. It is more applicable and productive: from e-business and business management of governmental departments to simultaneous, dynamic and traceable information management of properties (including human beings and animals), its scope of application is therefore broader and closer to productivity, and is directly associated to people's livelihood and providing services to common and grass-roots people. It is of vital importance to reduce and eliminate unstable factors in the society, and to build a harmonized social structure.

The Golden Card Project is yet the remarkable social system project which helps to build a well-off community and informationized society. With the development of IT industry, the widespread application of IT technology and the role change of governmental management, the Golden Card Project is poised to become a vital tactic and strategy for the government to raise the standard of social service and improve people's livelihood.

"The Plan" has clearly indicated that by the end of 2013, the Golden Card Project will complete its second tenth-year business building target: thanks to magnetic stripe, IC card and RFID tags, the applications of all types of cards will become more common; infrastructural equipment of information, policy system and institutional environment will become immaculate; the autonomous power of creativity and core competitiveness in the purpose of information and communication for the Golden Card Project has significantly become stronger; the autonomous standard, core technology and intellectual property rights have become increasingly relevant and provides technology, products, application software, complete solutions and integrated information services for the Golden Card Project; economic and social benefits brought from the Golden Card Project will be obvious which is further beneficial to the general public and helps to promote social information processing for a solid technological and material foundation.

"The Plan" has also mentioned about the development objectives such as the integration of "one card multipurpose" of smart card and RFID pilots, leading and exploring of new applications, developing new products and application systems with the right markets, providing advanced technology, auxiliary products and information services for IC cards in different industries and regions, raising the power of technological support, giving value to the development of the IT service industry, enhancing safety protection of IC cards in its application and make sure that IC cards will be applied in a healthy and constructive manner.



"The Plan" has proposed development objectives for the RFID industry: with the building of RFID technology, industry and application service system as the objectives, and to explore and discover the innovative development model which is most suitable to the China market; insist on autonomous renovation and support standardization of RFID technology; encourage industry and application alliances to build and promote RFID technology in the China market; adopt an open attitude and be cooperative with international regimes, and to develop the RFID industry with autonomous innovative capabilities with a Chinese flair.

Using research & development of dual-core technology as the emphasis area, and breaking through the chip design, manufacturing skills, design and manufacturing skills of antenna, development of reader and manufacturing skills, application software, middleware and system integration technique and information service technique based in RFID – all these help to establish a complete industry chain.

With focused (conditional) industry pilots and typical application and demonstration as guidance, a third party information service system is established to support the application of RFID technology for cross departments (industries), which is applicable, market driven, and with a market environment that is fair, just and open.

It insists to take enterprises as the main body, to incorporate production with learning, research and applications, and to strengthen cooperation and coordination among departments and upstream and downstream entities in the supply chain. This helps to promote applications, scientific and innovative development, and continuing development of the RFID industry in China.

"The Plan" has formulated its major roles and development focus in the next five years:

- (1) Paying close attention to China's economic and social developments, construction of information infrastructure as well as the innovative progress of IC cards and RFID industry
- (2) The "one card, multi-purpose" IC card will come into effects. There will be a break through with the circulations of "Smart Card" that promotes the integration of information resources and shared service
- (3) Be actively expanding RFID pilots on steady progress, and top priority shall be given to the application standards
- (4) Accelerates the process of chip encapsulation in bank cards, and promotes the application, incorporation and mutual development of bank IC cards and industry IC cards

"The Plan" requires the IC cards (including RFID) to further promote and apply in the following areas: In telecommunications and network communications, it emphasizes user identifications of mobile communications via SIM and UIM cards, accomplishment of small amount e-payments and active development of IC cards in mobile communications for multi-purpose applications. In the area of building and public service, it strives to promote RFID technology in digitalized scenic spots, intelligent city transport, supply of building materials, applications in logistics management and promotes effective schemes for the certification of product safety. In public vehicle management, RFID enabled electronic car plates and intelligent transport system should be applied in certain pilot test areas. In addition, IC cards and electronic labels should be used



for rigid supervision of fire prevention equipment. In banking, a standardized and cross-sectoral standard should be applied to small amount payment, and should build a business model that benefits everyone. In sanitation, the medical and hygiene sector should implement a common and standardized criterion for the application of RFID enabled "multipurpose IC card". The medical IC card should gain wider recognition, increase safety in applications and build medical sanitation supervision and tracking system using RFID technology – which helps to promote application of RFID technology in the area of public hygiene. Human implanting of RFID tags will help to increase efficiency of healthcare service of the vulnerable groups such as the elderly and infants or patients with special needs. Demonstrations are to be conducted in areas and hospitals with better conditions. It is recommended to carry out pilots at ten hospitals in five different districts in order to conclude the capable application model. In food and pharmacy, technical solutions should take into account, as a series of technical problems exists in the production and circulation of food and pharmaceutical products. From the pilot tests, it helps to discover the feasible models of RFID technology in the application of food and pharmaceutical product safety. In transport and logistics, the applications of IC card and RFID technology in e-business, smart traffic, transport and logistics and marine management should be expanded. After implementing core RFID application technology in the transport sectors, the initial stage of the transport industry to share, link and interact will be undertaken,

and the common service system using IC card and RFID technology in the transport industry is basically formed – a clear positioning of body function, a positive regional interaction and a well coordination mechanism is gradually formed. With Circim-Bohai-Sea region, Yangtze Delta and Pearl Delta as the leading areas, the all rounded applications using IC card and RFID technology in the transport industry will promote further applications and development in other regions. In the making of city information processing, the twelve pilots in different provinces and cities of the Golden Card Project have proven well up to the task thanks to the choice of locations and great efficiency. People of the general public have benefited from the widely popular RFID enabled cards such as "One Card for all System of Rail Transit and Urban Transit", the multi-functional "Citizen Card" and "Public Assistance Purpose Social Security Card", and other RFID enabled multi-functional cards used in mobile phones.

### **3. Contents of the Key Projects in Advanced Manufacturing Technology 2008 "RFID Technology and Applications" of the National High-tech R&D Program (863 Program)**

On September 2, 2008, the Division of Advanced Manufacturing Technology under the Ministry of Science and Technology has issued the "Application Guide of the Key Projects in Advanced Manufacturing Technology 2008 (RFID Technology and Applications) - National High-tech R&D Program (863 Program)".



This issue was about the advanced manufacturing areas of “RFID technology and applications” and the Application Guide of the key Projects of Advanced Manufacturing Technology 2008. The implementation date is scheduled from 2008 to 2010 and the time limit is set for less than two years, with the Chinese government to invest RMB21.5 million on the project.

It also proposed to support for the schemes such as the “Safety Mechanism and Applications on Ultra-High Frequency of Air Protocol”, “Research and Industrialization of Ultra-High Frequency Reader Chips”, “Research and Industrialization of Mobile Communication Terminal with Ultra-High Frequency RFID Reading and Writing Capabilities”, “Research and Industrialization of RFID Products Applicable to Real Time Location Systems”, “Research and Development of Real Time Management Software on RFID Tagging Information”, “Application of RFID Technology in Tourist Spots, Exhibition Halls and Museums” and “Application of RFID Technology in the Tracking and Supervising of Export Products”.

The deadline for applications of these schemes is at 5pm of October 22, 2008.

#### **4. About Pilots of Informatization – Key Projects of the National Development and Reform Commission**

On March 2008, the National Development and Reform Commission has issued a circular of No. [2008] 618 “National Development and Reform Commission’s Notice of Pilots of Informatization for Organizations” which states that the pilot

work is proposed to cover seven areas that applies RFID technology. The main aim and focus of such work includes: “the promotion of autonomous and innovative technology in applications, the selection of suitable industries for developing autonomous and innovative RFID technology in the applications of pilot works, nurturing the RFID industry in China, promote informatization in the transportation sector, improvement of product logistics with lower energy consumption and improvement of quality and efficiency of national economy”. In addition, it has mentioned about the promotion of RFID applications, the effective realization of auto recognition and dynamic management of products without actual contact, heighten awareness of social management, efficiency and controlling power of product circulations, which in turns will push up industrialization of autonomous intellectual products of RFID technology and products in China. The emphasis of the pilot work is to encourage the transport, railway, postal and public security departments to develop constructions related to pilot works. One of these works is the making of electronic vehicle license based on RFID technology that helps to solve the problems of vehicle auto identification, dynamic monitoring, crib of car plates and counterfeiting, it also helps the public safety and transport departments to supervise vehicles efficiently. Secondly, the national network of auto pay pilot work on road and highway monitoring based on RFID technology. Thirdly, the pilot work of product movement management based on RFID technology, which helps to innovate business and management model.



### **5. State Administration of Grain's Key Projects under the National Key Technology R&D Program in the 11th 5-Year Plan – "Macro-control of Grain and Research & Demonstration of Key Information Protection Technology"**

In order to accomplish the "Opinions of the State Council of the People's Republic of China, on Improving the Policies and Measures (Promulgated by No.16 [2006] of the Ministry of National Development) and the "Plan of National Grain and Modern Logistics Development", and to increase the overall standard of information technology of the grain industry. According to the requirements set forth in the "Outline of National Plan for Mid-term to Long-term Science and Technology Development" and the "Opinions on China's Science and Technology Development in the Grain Industry in 11th 5-Year Plan" of the State Administration of Grain, it aims to modernize the grain industry with IT technology and increase macro-control of grain. In addition, Key Projects "Macro-control of Grain and Research & Demonstration of Key Information Protection Technology" under the National Key Technology R&D Program in the 11th 5-Year Plan were established, with the following four main areas to be covered. Firstly, the macro-control, application and demonstration of grain using IT technology. Secondly, collecting

information and price speculations of grain supply. Thirdly, the demonstrations of grain tracking and its applications. Fourthly, information collection of grain procurement, fast inspection technology and equipment.

From point three "demonstrations of grain tracking and its applications" above, additional details are as follow: (1) Research and development of electronic tagging technology of grain. Grain development in warehousing, stocking, logistics and processing with the use of exclusive RFID tags, electronic stripes and readers, as well as the integration skills using RFID technology to detect the quality of grain. The analysis of electronic tags, reader equipment and circulation equipment of grain today which enables to collect accurate and real-time information within the supply chain. (2) Research and development of equipment for grain tracking and circulating. The analysis is based on mobile intelligence of grain circulation with supervising and tracing technologies. As a result, information and services of grain circulations are fully realized, thanks to the data collected and embedded software. (3) Integration, application and demonstration of real-time information collected from grain circulation. (4) Integration technique and application demonstration of grain warehousing information integrating technology. (5) Key technology research of real-time grain logistics supervision. This project was granted RMB13.5 million.



## THE ADOPTION & APPLICATION OF RFID TECHNOLOGY IN RELEVANT INDUSTRIES IN CHINA

### 1. The Trial Run of “Electronic Gate” at Huanggang Custom in Shenzhen

Recently, the trial run of “Electronic Gate” for inspection and quarantine has been initiated. This has marked the readily use of “Electronic Gate” for strict inspection and quarantine at Huanggang Custom. The system will greatly improve the efficiency of inspection and quarantine work and accelerate the speed of custom clearance. An “Electronic Gate” is intended for a synchronous recording of single vehicle when crossing the border. The electronic card clipped on the vehicles can swiftly detect the signals from the base station of inspection and quarantine, and then transmit the relevant information back to the station. The system can immediately obtain information of a vehicle, such as the transport company which it belongs, the car plate number, the driver’s name, the validity date of the health card, outstanding fees and inspection and quarantine records. The Ministry of Inspection and Quarantine can thereby implement control, checking and ordering on the vehicles to facilitate effective passage management. To date, the Huangguan Bureau has installed electronic cards on 158 vehicles. With a certain trial run period, the average read rate of the small vehicles was 99.2% and trucks crossing the border was at 98.1%. It took less than one second for the information gathered from the e-Card and returned it to the drivers. Using the innovative RFID technology, the “Electronic Gates” system is proved to be effective and independent from other department at the Custom, thanks to its state-of-the-art multi-base stations, dual frequency and multi-channel wireless designs.

### 2. Hubei launched non-stop Electronic Toll Collection (ETC) on all Highways

An electronic toll collection (ETC) project involving all highways in Hubei Province has been due to start as of the end of October in 2008. The first batch of six toll stations will be completed and start operation this year. The first six toll stations will be installed at the Wujiagang station on the Chutian highway,

the Wuhanxi station on the Jingzhu highway, and at the Huangpo and Fuhe stations on the Daihuang highway. For the time being, the ETC traffic lanes are undergoing reconstruction projects of safety islands, road signs and wire channel. It is said that there are 2,400 kilometers of highway in Hubei province now. After the completion of the system, vehicles equipped with the electronic tags and electronic payment card will be able to pass through the toll booths without stopping. All toll fares will be collected automatically. Similar systems are already in use on highways in Shanghai, Anhui, and Zhejiang provinces.

### 3. Jinan uses RFID Technology to facilitate Tax Procedures

The National Tax Bureau of Jinan City has installed 31 units of ARM machines at the tax service offices and administration examination centers near Liberation Pavilions for the general public for tax payment. There are two types of ARM machines with self application and self ticketing functions. They help to realize applications of six types of self tax applications, including: special invoice certification, IC Card copy-and-registration tax, invoice renewal, invoice sales, and tax consultation. With an application of a RFID tag at the tax institutes, taxpayers can process taxation matters at ARM machines within two or three minutes.

### 4. News from World Expo Shanghai

News from 2008 World Expo Shanghai Informatization Seminar has revealed that Shanghai will ride on the opportunity of the World Expo to develop large-scale applications of wireless city, RFID and video monitoring for economic advancement. All tickets of the World Expo Shanghai 2010 will adopt RFID technology. Apart from paper-based RFID ticket, RFID-enabled mobile phones will also be used for ticketing. According to an expert from China Mobile Shanghai World Expo Project Management Office, the World Expo Shanghai helps to promote applications of RFID with mobile phones. It provides a great opportunity for future mobile payment applications based on RFID-enabled mobile phones.



## THE ADOPTION & APPLICATION OF RFID TECHNOLOGY IN RELEVANT INDUSTRIES IN CHINA

### 5. RFID Public Platform helps Shangdong to streamline industry business process

Recently, the public research platform of Shangdong RFID industry base, also known as "RFID Public Demonstration, Research & Development and Testing Platform", was established by the Shangdong Standardization Research Institute. This public platform connects resources at government, industry, academic, research, capital and usage, helping local enterprises to develop new RFID based products.

### 6. Twelve non-stop highway toll booths to be operated in Anhui

Beginning 2009, twelve non-stop toll stations on four highways that connect Jiangsu Province and Zhejiang will be operated within Anhui Province. Vehicles that have installed sensory cards and have prepaid toll fees can be able to pass through the toll booths without stopping. All toll fares will be collected automatically. The whole procedure takes about 3 seconds.

### 7. Beilun in Zhejiang Province uses RFID technology for a "Harmonious Yet Safe Fishing Industry"

In order to further enhance safety in the fishing industry, Beilun District in Zhejiang Province has been actively building five defensive systems to create a "harmonious yet safe" fishing industry. All fishing boats with speed of 60 mph are equipped with RFID chips and Automatic Identification System (AIS) to avoid boat collisions. In addition, UBD-S-1 satellite equipment has been furnished.

### 8. Tracking and monitoring of live pigs and vegetables supplied to Hong Kong with RFID technology

As introduced under "Shenzhen-Hong Kong Innovation Circle" at the China High-Tech Fair, a joint R&D project between Shenzhen and Hong Kong on applying RFID in tracking

food supplied to Hong Kong is in progress. The project is scheduled to complete by the end of 2009 and will consider applying to live pigs and vegetables supplied to Hong Kong. Afterwards, the technology will be promoted to other food categories.

### 9. Xiamen established Cross-Strait Tri-Regional RFID Alliance

The Cross-Strait Tri-Regional RFID Alliance was established in the Cross-Strait Integrated Circuits Summits held in September. With the establishment of this Alliance, the three regions aim to setup a common platform for sharing of standards, resources and market. At the same time, combining the advanced technology and management concepts from Taiwan and Hong Kong and the strong market demands from Fujian Province, the Alliance targets to leverage projects to develop enterprises and further drive R&D of core technology in order to achieve the ultimate goal of potent enterprises in the three regions.

### 10. Hangzhou plans to build Food Safety Tracking System

Recently, Hangzhou Municipal Bureau Of Agriculture has drafted the "Notice of Development of Agricultural Product Quality and Safety Tracking Management", which proposed that vegetables and pork will become the first batch of agricultural products under tracking management, and extend to other agricultural products such as seafood, tea leaves and fruits. Hangzhou Municipal Trade Bureau suggested to follow the electronic tracking practices in Beijing and Shanghai. The tracking system may cost up to RMB12 million. Before the Olympic Games, Beijing invested RMB18 million on the construction of the city's integrated food safety information tracking center. With regards to the poultry tracking system, pigs, cows and ducks are required to wear ear tags or foot rings for identification, with readers to add information along the supply chain to build up the database. With this technology, any piece of food from the market can be traced back to the farm.

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 – TRUCKING

### 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
  - ♦ Business Nature (e.g. Trucking, Warehousing, Freight Forwarding, etc.)

### 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*

- This work flow diagram outlines typical workflow of your industry, say how you prospect / satisfy your customers, deliver your services as per customer's instruction, plan and control logistics process, manage information / document flows as well as cargo distribution to your customers. 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?
- What inefficient areas you think can be improved?
- What are the critical areas in your business processes while collaborating with other business partners along the supply chain, such as terminals, carriers, customers, customs, etc.?
- What is the pain point(s) you see in your business processes in complying with relevant governmental and industrial regulatory authorities? e.g. Road Manifests, Customs Clearance, etc.

### 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? Why or why not (Section C)? Who is / are the service providers? And what about the service model?
- How does information technology fit in the above processes? (e.g. CRM for sales & marketing, Fleet Management System for trucking operations, GPS for track and trace, ERP for logistics management, EDI with external parties via DTTN, etc.)
  - ♦ If RFID is checked as one of the possible I.T. solutions, please also ask the following questions:
    - How specifically RFID technology is related to you?
    - How do you perceive the value of RFID brought to you and to the industry (or the entire supply chain) at large?
- Awareness of Containerized Logistics Management – Smart Container:
  - ♦ Explain three Containerized Logistics Management, namely:
    - E-Seal
    - Container Tag (RFID)
    - On-board intelligent device (container black box)
  - Brief introduction to these three technologies.
    - i If any one of Containerized Logistics Management is checked as one of the possible I.T. solutions, please also ask:
      - ♦ How specifically Containerized Logistics Management is related to you (e.g. when and where to apply, in custom, yard management, provision of extra container track and trace service level to client)?
      - ♦ How do you perceive the value of Containerized Logistics Management brought to you and to the industry (or the entire supply chain) at large?



# APPENDIX A

## DISCUSSION GUIDE – TRUCKING

ii If Containerized Logistics Management is **NOT** in use, please ask:

✦ Have you heard about Containerized Logistics Management and its applications (Y / N), if YES, how did you get this info (e.g. request from customer / supply chain partner)?

- Are you using information platform (HK, Mainland China and Overseas) to collaborate with your business partners? (e.g. DTTN, Savi.net, etc.)

If Yes, what platform you have used?

If No, why and how you communicate with your business partners?

- 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)

- How competitive are you with the current technology solutions Vs the industry today? (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.)
  - ♦ 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)

- ♦ data integration
- ♦ limited budget
- ♦ difficult to assess ROI
- ♦ difficult to cope with rapid technological changes
- ♦ shortage of skilled IT 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
- ♦ direct customer request
- ♦ reduces labor costs
- ♦ improves data quality
- ♦ clear ROI
- ♦ reduce human error
- ♦ corporate image
- ♦ other (please specify)

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

- ♦ Price
- ♦ People
- ♦ Technology



# APPENDIX A

## DISCUSSION GUIDE – TRUCKING

### 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 some hot issues / trends of your industry now? (threats, opportunities, new customer's requirements, etc.)
  - ♦ For instance, how you perceive the impact of outbound migration of manufacturing from GD to outer provinces?
  - ♦ What impact the new labour law has been exerted on your business?
- How is this transformation going to affect your business process?
- Do they cast any implications on your technology application needs? If so, what are they and why?
- Do you have any IT strategy to adapt to these changes? If so, what are they?

### Section E:

#### Future I.T. Applications

In this section, we ask participant what their future I.T. strategic plan is.

- In order to cope with future business environment and customer's requirements, what kinds of I.T. solutions your company plans to implement? If NO, why?

**Show a list of potential application areas for participant to comment**

- What business applications and how you will automate them with technology in future?
  - ♦ Sales and Marketing / Customer Relationship
  - ♦ Purchasing / Business Partner Relationship
  - ♦ Fleet Management
  - ♦ Job Assignment and Truck Scheduling Intelligence
  - ♦ Warehousing & Distribution
  - ♦ Communication with internal & external parties (e.g. Portal Technology and Electronic Document Exchange)

- ♦ Supply Chain Track & Trace
- ♦ Supply Chain Security
- ♦ Regulation Compliance Management
- ♦ Business Intelligence
- ♦ Others

- What do you expect the % of the total cost in your IT adoption?
- What is your current spending (in terms of % and / or absolute amount)?
- Do you agree IT able to enhance competitiveness? (Score 1 to 5, 5 is most agreeable)

### Section F:

#### R&D Demand & Aspiration

In this section, we ask participant what industry / government support are needed in IT 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?
- Are you interested in participating in R&D projects if such R&D project can resolve your business problems and improve your company competitiveness?
- If government is willing to support 90% over the total cost of such R&D project, are you willing to invest together with other companies within the industry the remaining amount and share the project deliverables? Can you think about the possible themes / topics for such joint R&D project?
- If government is willing to support 50% over the total cost of such R&D project, are you interested to invest the remaining amount and own the IP rights of the project deliverables?
- Do you think the function and long-term goal of the LSCM R&D Centre contributes to strengthening Hong Kong's economic competitiveness? If not, why?



# APPENDIX B

## DISCUSSION GUIDE - MANUFACTURING

### 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
- Business Nature (e.g. Toy, Watch, Garment, Electronic Component)

### 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*

- This work flow diagram outlines typical workflow of your industry, say how you prospect / satisfy your customers, design your products, plan and control production, manage material flows as well as finished goods distribution to your customers. 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?
- What are the critical areas in your business processes while collaborating with other business partners along the supply chain, such as suppliers, buyers, 3PL, 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? Why or why not (Section C)? Who is / are the service providers? And what about the service model?
- How does information technology fit in the above processes? (e.g. CRM for sales & marketing, ERP for production & logistics management, EDI with external parties via DTTN, etc.)
  - ♦ If RFID is checked as one of the possible I.T. solutions, please also ask the following questions:
    - How specifically RFID technology is related to you?
    - How do you perceive the value of RFID brought to you and to the industry (or the entire supply chain) at large?
- Are you using information platform (HK, Mainland China and Overseas) to collaborate with your business partners? (e.g. DTTN, Savi.net,
- 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)
- How competitive are you with the current technology solutions Vs the industry today? (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?
- What are the improvements you have noticed?



# APPENDIX B

## DISCUSSION GUIDE - MANUFACTURING

### 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 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)

  - ♦ data integration
  - ♦ limited budget
  - ♦ difficult to assess ROI
  - ♦ difficult to cope with cope with rapid technological changes
  - ♦ shortage of skilled IT 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
- ♦ direct customer request
- ♦ reduces labor costs
- ♦ improves data quality
- ♦ clear ROI
- ♦ reduce human error
- ♦ corporate image
- ♦ other (please specify)
- Please rank the following concern areas on an I.T. application:
  - ♦ Price
  - ♦ People
  - ♦ Technology

### 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 some hot issues / trends of your industry now? (threats, opportunities, new customer's requirements, etc.)
  - ♦ For instance, how you perceive the impact of outbound migration of manufacturing from GD to outer provinces?
  - ♦ How would you see the business loss to the emerging manufacturing countries, such as Vietnam, Indonesia, etc?
  - ♦ What impact the new labour law has been exerted on your business?
- 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? If so, what are they and why?
- Do you have any IT strategy to adapt to these changes? If so, what are they?



# APPENDIX B

## DISCUSSION GUIDE - MANUFACTURING

### Section E:

#### Future I.T. Applications

In this section, we ask participant what their future I.T. strategic plan is.

- In order to cope with future business environment and customer's requirements, what kinds of I.T. solutions your company plans to implement? If NO, why?

**Show a list of potential application areas for participant to comment**

- What business applications and how you will automate them with technology in future?
  - ♦ Product design
  - ♦ Sales and marketing / Customer relationship
  - ♦ Purchasing / Supplier relationship
  - ♦ Production planning
  - ♦ Production process control and management
  - ♦ 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
- What do you expect the % of the total cost in your IT adoption?
- What is your current spending (in terms of % and / or absolute amount)?

### Section F:

#### R&D Demand & Aspiration

In this section, we ask participant what industry / government support are needed in IT 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?
- Are you interested in participating in R&D projects if such R&D project can resolve your business problems and improve your company competitiveness?
- If government is willing to support 90% over the total cost of such R&D project, are you willing to invest together with other companies within the industry the remaining amount and share the project deliverables? Can you think about the possible themes / topics for such joint R&D project?
- If government is willing to support 50% over the total cost of such R&D project, are you interested to invest the remaining amount and own the IP rights of the project deliverables?
- Do you think the function and long-term goal of the LSCM R&D Centre contributes to strengthening Hong Kong'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

信息化是当今世界发展的大趋势，是推动经济社会变革的重要力量。信息化实际上是信息技术和产品在全社会得到广泛推广应用的过程，是信息资源得到充分的开发和利用的过程，是信息技术在国家经济发展、社会进步与百姓生活品质提高过程中日益发挥更大作用、做出更多贡献的能力提升过程。信息化是一场意义深刻的科技创新和变革，而信息技术的推广应用又是多层次、全方位的。

射频识别 (RFID) 技术的发展，离不开我国信息化建设的基础设施。大力推进信息化，加快应用射频识别 (RFID) 在内的资讯技术改造提升传统产业是贯彻落实科学发展观的具体体现，是实现经济增长方式转变的关键环节，是全面建设小康社会、构建社会主义和谐社会和建设创新型国家的迫切需要和必然选取，也是实现信息产业持续发展的重要机遇。

#### (一) 2008年上半年中国信息产业执行情况

今年国内外经济形势错综复杂，原材料价格大幅上涨，全球性的金融风暴，国内连续遭遇严重自然灾害的情况下，中国资讯产业依旧保持了平稳较快发展，增速在20%左右。

2008年1-7月，电子信息产业实现销售收入3.14万亿元，同比增长20.7%，其中制造业完成2.72万亿元，增长19.1%；工业增加值6354.7亿元，增长了22.6%；软体业销售收入4199.1亿元，增长32.4%；2008年上半年电子产业经济效益增长较快：1-5月完成投资730亿元，实现利税851.1亿元，同比增长33.5%。主要产品产量：上半年生产手机2.95亿部，增长9.7%；微型电脑6649.1万台，增长23.2%，其中笔记型电脑电脑生产4798.8万部，增长33.3%，占微机比重达72%；数码相机3625.5万台，增长31.4%；积体电路产量202亿块，增长6.2%；色彩电视机3906.6万台，其中液晶电视增长60.5%，占色彩电视总量的29%。

2008年1-7月，我国软体业继续保持快速增长，完成业务收入4199.1亿元，同比增长32.4%，高出电子产品制造业13.3个百分点。

中国软体产业收入构成中，软体资讯服务增长最快，1-7月累计完成收入780.8亿元，同比增长44.7%，占软体业比重为18.5%；其中软体出口及外包服务收入89亿元，同比增长88%；软体产品收入1821.7亿元，同比增长31.2%，占软体业的比重为43.4%；系统集成收入879亿元，同比增长27.6%；内嵌式系统软体完成收入599.8亿元，同比增长32.1%；IC设计完成收入117.8亿元，同比增长17.1%，低于软体全工业增速15.3个百分点。表1是2008年上半年我国主要电子资讯产品产量的资料。



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表1：2008年1-6月主要电子资讯产品产量

产 品 名 称	单 位	本月累计	同比增长%
移动通讯手持机 (GSM CDMA)	亿部	2.95	9.7
移动通讯基站装置	万信道	734	-7.5
电视机	万台	3981	14.0
其中：色彩电视机	万台	3906.6	16.2
背投电视机	万台	0.5	-89.4
液晶电视机	万台	1030.6	65.8
等离子电视机	万台	78.3	241.9
微型电子计算机	万部	6649.1	23.2
其中：笔记本计算机	万部	4798.8	33.3
服务器	万部	181.6	-41.2
显示器	万部	6948.6	2.9
其中：液晶显示器	万台	6506.4	14.6
打印机	万部	1723.2	-18.6
电子元件	亿只	3448.1	20.5
其中：片式元件	亿只	1499.4	34.1
色彩显像管	万只	3270.7	6.0
半导体分立器件	亿只	1361.9	27.6
半导体集成电路	亿块	202	6.2
数码相机	万台	3625.5	31.4

对外贸易增势平稳：1-7月电子资讯产业对外贸易总额达到5048.9亿美元，同比增长21%，占全国外贸总额的20.9%。电子产品出口2915.8亿美元，同比增长23.9%，占全国出口总额的比重为36.3%；进口2133.0亿美元，占全国的比重为31.4%。1-7月电子产品实现外贸顺差782.8亿美元，同比增长47.1%，占全国外贸顺差的63.3%。出口增速较快的主要是笔记本计算机、彩电、数码相机等，增速均超过20%。1-6月我国软体出口49.5亿美元，同比增长45%。但移动电话、激光视盘机 (DVD、VCD)、打印机等增速较缓。下表是2008年上半年我国主要电子产品出口情况的资料。

表2：2008年1-7月主要电子产品出口情况

产 品 名 称	出口额 (亿美元)	出口额同比增长 (%)
笔记本计算机	347.1	28.0
移动电话 (手机)	205	11.3
集成电路	139.2	8.4
液晶显示板	138.97	44.0
显示器	109.5	13.9
彩电电视机	57.6	43.5
数码照相机	39.1	11.6
激光视盘放像机	27.6	2.1
打印机	22.3	-1.7



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#### (二)《国家金卡工程全国IC卡应用 (2008-2013年)发展规划》涉及 RFID部分的内容介绍

在“国家金卡工程全国IC卡应用规划”(1993至2003年,即第一个十年规划)的基础上,国家金卡工程协调领导小组办公室组织各相关部委和金卡工程试点省市共同编制了《国家金卡工程全国IC卡应用(2008-2013年)发展规划》(以下简称《规划》)。

《规划》编制工作始于2004年,国家金卡办组织参与国家金卡工程建设的相关部门(特别是7个工业性大卡发行部门)和首批12个试点省市启动了《规划》编制工作。经广泛征求20多个相关部门、26个工业性集团公司和业界专家意见,认真研讨,反复修改,多次完善,并通过国家金卡工程协调领导小组召开第七次全体成员会议的认真审议,国家金卡工程协调领导小组签发后,《规划》已于2008年1月24日正式印发、颁布实施。

《规划》全文主要分为五大部分,第一部分“十五”回顾;第二部分指导思想与发展目标;第三部分主要任务与发展重点;第四部分重点领域IC卡应用;第五部分相关政策措施。

《规划》指出,未来五年是金卡工程建设向更广领域、纵深发展的关键阶段,也是金卡工程以人为本,进一步涉及民生、普惠大众,为社会主义和谐社会做出更多贡献的时期。特别是国家金卡工程智能IC卡新型应用及RFID电子标签应用试点工作的启动,使金卡工程建设突破了原来以部门(大行业)IC卡应用和城市信息化建设为重点应用网域的范围,迅速延伸到工农业生产第一线;从以政府部门的电子政务及业务管理为重点,扩展到对物品(含人、动物)的实时、动态、可追溯的信息管理,因此其应用范围更广、更加贴近生产力,并直接涉及民生、服务于百姓、服务于基层,对减少和化解不安定因素,构建社会主义和谐社会发挥着日益重要的作用。

金卡工程仍是全面建设小康社会和国家信息化建设的重大社会系统工程。随着信息产业的发展和信息技术的广泛应用,以及政府管理职能的转变,金卡工程将是政府提高社会服务水平和改善民生的重要手段和措施,并将在促进产业架构调整和发展方式转变以及信息安全保障中发挥越来越重要的作用。

《规划》明确提出,到2013年末,金卡工程完成第二个十年建设的战略目标是:基于磁条卡、IC卡和RFID电子标签等介质的各类卡应用系统进一步普及;信息基础设施、政策体系与制度环境建设更趋完善;为金卡工程提供配套的信息与通讯产业的自主创新能力与核心竞争力显著增强,拥有的自主标准、核心技术和知识产权日益增加,为金卡工程提供技术、产品、应用软体、整体解决方案和综合信息服务的能力及资讯安全保障水平大幅提高;金卡工程建设带来的经济与社会效益更加显著,为进一步普惠大众及推进社会信息化程式奠定坚实的技术与物质基础。

《规划》还提出IC卡产业发展目标,其中强调要结合智能卡“一卡多用”和RFID应用试点,引导和开拓新的应用网域、开发适销对路的新产品和应用系统,为IC卡在各工业和地方的应用提供先进技术、配套产品和信息服务,提高技术支撑能力,重视信息服务业建设和加强IC卡应用中的信息安全保护,保障IC卡应用健康深入发展。

《规划》对RFID产业提出的发展目标是:以构建RFID技术、产业与应用服务体系为目标,从实际出发探讨符合我国国情的创新发展型态;坚持自主创新,支援RFID技术标准制定、核心技术产品研发、鼓励产业联盟、应用联盟建设,推动RFID技术在中国的应用;坚持开放,加强国际合作,走自主创新与开放兼容相结合的具有中国特色的RFID产业与应用发展之路。



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以共性核心技术研发为重点。主要突破RFID的晶片设计与制造技术、天线设计与制造技术、读写器开发与生产技术、应用软体、中间件与系统集成技术,以及基于RFID的信息服务技术,打造完整产业链。

以重点 (有条件的) 工业试点与典型应用示范启动。面向应用,市场主导,建立参与国际市场竞争的公平、公正、开放的市场发展环境;建立支援RFID技术应用的跨部门 (工业) 的第三方资讯服务体系。

坚持以企业为主体,产学研用相结合,加强部门间和产业链上下游间的合作与协调,促进我国RFID产业与应用的科学发展、创新发展与可持续发展。

《规划》制定了今后五年的主要工作与发展重点。

1. 紧紧围绕经济社会发展和信息化建设大局,谋划IC卡与RFID产业的创新发展;
2. 实现IC卡“一卡多用”,在发行“多功能卡”方面要有实质性突破,促进信息资源的整合与服务共用;
3. 坚持标准先行,积极稳妥地推进电子标签应用试点;
4. 加快银行卡芯片化程式,促进银行IC卡与工业性IC卡应用的结合与共同发展;

《规划》要求IC卡包括RFID在以下重点网域进一步推动应用。在**电信及网路通讯网域中**,强调基于移动通讯用户身份认证卡 (SIM卡和UIM卡),实现小额电子支付,积极拓展通讯IC卡多功能应用。在**建设及公用服务网域中**,要推动RFID技术在数字化景区、城市智能交通,以及建筑材料供给及物流管理中的应用,为产品安全认证提供有效的技术手段。坚持“先试点、后推广”的原则和发展型态。在**公安网域车辆管理中**,要在部分地区应用RFID技术开展汽车电子车牌及智能交通系统的应用试点与示范工作,此外还要利用IC卡及电子标签加强对消防器材的监管,有效提高应急处理能力。在**银行网域中**,要制定统一的、跨工业的小额支付应用标准,探索并建立互利的商业型态。在**卫生网域中**,要在医疗卫生工业建立“多功能IC卡”和RFID的通用型态与统一标准。要提高医疗IC卡的可识别性及应用安全性,建立RFID医疗卫生监督与追溯体系,

推动RFID在公用卫生网域中的应用;应用RFID植入人体技术,提高对老幼等弱势人群及特殊病种的健康服务效率。在有条件的地区或应用基础较好的医院进行示范,拟选取5个地区的10家医院,推进IC卡与RFID电子标签的应用试点,总结出基本可行的应用型态。在食品、药品监管网域中,要通过技术攻关,解决RFID技术在食品、药品生产与流管网域应用中存在的一家族技术问题;通过应用试点,探索RFID技术在食品、药品安全追溯中的应用型态。在**交通与物流网域中**,要加大IC卡和RFID技术在电子政务、智能交通、运输与物流、海事管理等网域的应用;完成一批交通工业急需的RFID应用关键技术研究,与标准的制定,为交通工业IC卡和RFID应用的规格化和规模化提供支撑,初步实现交通工业资讯共用和互联互通;基本建立面向交通工业的IC卡和RFID应用共性服务体系,逐步形成主体功能定位清晰、区域良性互动、协调发展的格局,以环渤海地区、长三角、珠三角为龙头,带动其他区域的应用和发展,实现IC卡和RFID技术在交通工业的全面推广应用。在**城市资讯化建设中的应用**要结合金卡工程首批12个试点省市的IC卡应用规划,因地制宜、突出重点,认真抓好涉及民生、普惠大众的IC卡及RFID电子标签应用试点工程建设,如:城市交通一卡通,集多功能于一体的市民卡、社保卡,以及基于手机的多功能卡及RFID应用等。

### (三) 关于国家“863计划”先进位造技术网域2008年度“射频识别 (RFID) 技术与应用”的重大项目课题

二〇〇八年九月二日科技部863计划先进位造技术网域办公室发布《国家高技术研究发展计划 (863计划) 先进位造技术网域2008年度“射频识别 (RFID) 技术与应用”重大项目课题申请指南》。

本次发布的是先进位造网域重大项目“射频识别 (RFID) 技术与应用”2008年度启动课题的申请指南,实施年限为2008-2010年,拟国拨2150万元人民币,课题支援年限原则上不超过2年。



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拟对“超高频RFID空中介面安全机制及其应用”、“超高频 (UHF) 读写器晶片的研发与产业化”、“具有超高频RFID读写功能的移动通讯终端机开发与产业化”、“适用于实时定位系统的RFID产品研发及其产业化”、“RFID标签动态资讯实时管理软体的研究与开发”、“RFID技术在旅游景区、展览馆、博物馆的应用”以及“RFID技术在出口商品品质追溯与监管中的应用”等课题进行支援。

课题申请受理的截止日期为2008年10月22日17时。

#### (四) 国家发改委关于组织信息化试点工作的项目

2008年3月,发改办高技[2008]618号文《国家发展改革委办公厅关于组织开展信息化试点工作的通知》中指出,开展资讯化试点工作拟在包括无线射频技术应用等七个网域重点开展试点工作。该工作的主要目标和重点工作就是“基于近年来我国在无线射频技术 (RFID) 产业化方面取得的成果,以推动自主创新新技术新应用为目标,选取有条件的工业开展自主创新RFID技术的应用试点工程建设,培育我国RFID产业,有效发挥信息化在交通运输、物品流通网域的节能、降耗作用,提高国民经济执行品质和效率。”推广无线射频技术 (RFID) 应用,有效实现物品的无接触自动识别与动态管理,提高社会管理、生产流通的效率和精准控制能力,带动我国自主知识产权的无线射频技术与产品的产业化。

试点工程重点是鼓励交通、铁道、邮政、公安等部门开展相关应用试点工程建设。一是基于无线射频技术的车辆电子牌照试点工程,重点解决车辆自动识别、动态监测、车牌套用与防虚拟等方面的问题,实现公安交通管理部门对车辆的精准管理。二是基于无线射频技术的路网动态监测和高速公路全国联网自动收费试点工程。三是基于无线射频技术的物品动态管理试点工程,创新业务和管理型态。

#### (五) 关于国家粮食局“十一五”国家科技支撑计划重点项目——《粮食巨集观调控资讯保障关键技术与示范》

为落实《国务院关于完善粮食流通体制改革政策措施的意见 (国发〔2006〕16号)》和《国家粮食现代物流发展规划》,提升粮食工业的整体资讯化技术装备水平,按照《国家中长期科学和技术发展规划纲要》和国家粮食局《“十一五”粮食科技发展指导意见》的要求,以资讯技术带动粮食产业现代化发展和提高粮食巨集观调控能力为目标,设立“十一五”国家科技支撑计划重点项目“粮食巨集观调控资讯保障关键技术与示范”。主要设定了以下四个课题,课题1:粮食宏观调控应急资讯技术与应用示范;课题2:粮食供应量信息采集与价格预测技术;课题3:粮食流通追踪技术装置与应用示范;课题4:粮食收购信息采集及快速侦测技术与装置。

在该项目课题3“粮食流通追踪技术装置与应用示范”中,研究内容要求是:(1) 粮食电子标签关键技术与装置开发。开发粮食入库、仓储、物流、加工过程中专属射频识别电子标签、电子封条和读写设备,研究粮食品质感应器与射频技术的集成技术;研究电子标签读写设备与现有粮食流通设备的集成,能够在粮食流通过程中实时、准确采集流通数据。(2) 粮食流通动态追踪技术研究及装置开发。研究基于移动智能装置的粮食物流过程的监控与追踪技术,开发粮食流通讯息采集和服务内嵌式软体,实现粮食流通信息移动采集与服务。…开发面向运输过程的粮食流通信息智能终端,具有粮情侦测、追踪、储存、无线传输、RFID资讯读写等功能。研究粮食流通讯息移动传输协定和数据交换处理标准。(3) 粮食物流实时监控信息集成与应用示范。(4) 粮库资讯集成技术与应用示范。(5) 粮食电子交易保障关键技术研究。本课题国拨经费1350万元。其余申请单位按1:1比例自筹。



## APPENDIX D

### ORIGINAL TEXT OF

### "THE ADOPTION & APPLICATION OF RFID

### TECHNOLOGY IN RELEVANT INDUSTRIES IN CHINA"

#### 我国相关行业对RFID技术的采纳与应用情况

原文：中国RFID产业联盟

1. 深圳皇岗口岸“电子闸口”开始试运行。近日，深圳皇岗口岸检验检疫“电子闸口”开始试执行，这标志着一个严密的检验检疫“电子口岸”即将在皇岗口岸建成使用，该系统的使用将大大提高检验检疫工作效率，加快口岸通关速度。

所谓“电子闸口”，就是当车辆出入境时，车载电子卡能迅速感应检验检疫基站讯号，并把电子卡的相关资讯传递给基站，系统即刻获取车辆所属运输公司、车牌号码、司机姓名、健康证的有效期、扣费情况及监控检验检疫业务办理情况等信息，检验检疫部门根据这些资讯及时对出入境车辆实施布控、稽查、发布有关检验检疫指令，指引司机靠台、办理检验检疫业务，从而实现有效的通道管理。目前，皇岗局已在158辆出入皇岗口岸的车辆上装载了车载电子卡，通过一段时间的试执行，检验检疫部门对出入境的小（客）车的平均读取率达99.2%，对出入境货车的平均读取率达98.1%，且从采集车载电子卡资讯到将引导资讯回馈给车主的时间不到1秒，说明系统执行有效。系统采用当今先进的有源RFID技术，通过多基站、双频段、多信道方式建立无线的、独立的、不依赖于口岸其他单位的“电子闸口”。

2. 湖北省高速公路不停车收费系统（ETC）正式建设。今年10月底，湖北省高速公路不停车收费系统（ETC）正式开工建设，首批试点装载的ETC收费站将于年内建成并投入试执行，分别为楚天高速的伍家岗、京珠高速的武汉西、岱黄高速的黄陂、府河等6个收费站。目前，ETC车道的安全岛改造、标牌制作和线缆导管正在紧张施工中。据悉，湖北省高速公路通车里程已达2400多公里，交通流量迅速增长带来收费站拥堵问题。不停车收费系统建成后，申请装载了电子标签和电子支付卡（鄂通高速联名储值卡）的客车，在通过收费站时，将无需停车领卡、交卡和缴费，而是由ETC系统自动完成进出口信息记录和出口扣费工作，从而大大提高车道的通行效率。目前，上海、安徽、浙江等地高速公路已试行该收费系统。

3. 济南利用电子标签在家就可办理纳税申报。目前，济南市国税局在全市各基层局办税服务厅和位于解放阁附近的行政审批中心布置了31台ARM机。这种机器分为自助申报和自助售票两种，可以实现各种种纳税申报、专属发票认证、IC卡抄报税、发票验旧、发票销售、涉税业务咨询6项自助办税功能。纳税人只要向税务机关申请一个电子身份识别标签，就能通过ARM机办税。通过这种装置只要带上电子身份识别标签、IC卡，花上两三分钟发票就到手了。
4. 上海世博会的信息。从2008世博资讯化研讨会上获悉，上海将借助世博会的契机，带动包括无线城市、RFID和视讯监控等多项热点信息化应用规模化、经济化发展。2010年世博会门票将全部采用RFID技术，除开含有RFID标签的纸质门票外，具备RFID功能的手机也可具备门票功能。中国移动上海世博会项目管理部一位专家认为，通过世博会，带动RFID功能在手机上的应用，将使RFID获得一个很好的普及契机，有利于未来开通各项基于RFID技术的手机支付应用。
5. RFID公用平台助山东抢占产业先机。近日，山东RFID（射频识别）产业基地的公用研发平台——“RFID公共示范、研发与测试平台”由省标准化研究院组建完成。这一公共平台将连接政、产、学、研、资、用六方资源，服务并推介省、市RFID企业，帮助企业孵化RFID技术新产品。
6. 安徽车辆往来长三角高速路将收费不停车。2009年元月份起，并不是在安徽境内所有高速推广不停车收费系统，而是先选择在连线安徽省与江苏、浙江的四条高速公路在交界处采用不停车收费系统。届时收费站将开通12个不停车收费通道，驾车者在高速路上开车时，只要车上安装了感应卡并预存费用，选择不停车收费专用道3秒钟即可快速通过收费站，通行费从卡中自动扣除。
7. 浙江北仑区利用RFID技术打造“和谐、平安渔业”。为进一步夯实渔业安全生产基础，北仑区积极构筑五大防控体系，打造“和谐、平安渔业”。他们健全科技支撑体系，继续实施“科技兴安”战略。渔船渔港安全救助信息系统建设，全区60匹马力以上渔船RFID电子标签身份识别卡、AIS渔船防碰撞系统和UBD-S-1船载卫星设备已于开捕前全部安装完毕。



## APPENDIX D

### ORIGINAL TEXT OF

### "THE ADOPTION & APPLICATION OF RFID TECHNOLOGY IN RELEVANT INDUSTRIES IN CHINA"

8. 供港生猪蔬果将实施电子监管。从高交会“深港创新圈”的项目展示中了解到，深港联合资助的基于无线射频技术 (RFID) 食品安全保障工程正积极进行研发，将于2009年底完成，并将考虑首先应用到供港生猪、蔬果，之后进一步全面推广。
9. 两岸三地RFID (射频识别) 产业联盟工作机构设在厦门。9月在海峡两岸集成电路产业高峰论坛上，两岸三地RFID (射频识别) 产业联盟正式成立。两岸三地RFID产业联盟成立后，通过三地间标准共享、资源共用、市场共有的方式，引进、消化、吸收台湾、香港地区的先进技术与管理理念，结合福建省庞大的市场需求，以项目实施带动产业发展，以产业发展带动核心技术的研发与投入，最终必然从整体上做大做强三地 RFID产业。
10. 杭州酝酿筹建食品安全追溯系统。近日，杭州市农业局起草了《关于开展农产品质量安全追溯管理工作的通知》提出，蔬菜和猪肉，将成为首批追溯管理的农产品，然后逐步向水产、茶叶、水果等多种农产品延伸。市贸易局认为，可以借鉴北京、上海的做法，建立电子化的追查方式，据测算，建立这套系统的费用将是1200万左右。在奥运会之前，北京就花了1800多万建立起了全市统一的食品安全追溯数据中心。比如，在畜禽追溯系统方面，给猪、牛、鸭等畜禽产品佩戴耳标、脚环等能承载畜禽信息的标志物，在屠宰、流通、销售环节应用IC卡等电子标签，层层加载信息，形成数据库。有了这个技术，在菜场买了一块肉，就可以知道它是在哪里生产、在哪里屠宰、哪家公司运过来的。



# APPENDIX E

## MEMBERSHIP APPLICATION FORM



**Act Now!**  
Apply Centre Membership  
on or before  
31 March 2009 to enjoy  
Annual Membership  
Fee Waiver!

### Centre Membership Scheme

#### Promotional Terms and Conditions:

1. The promotional period is between 1 April 2008 and 31 March 2009 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 2009. Next membership year will be started on 1 April 2009, 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 Administration Department of the LSCM R&D Centre.
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 (Annex 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:



創新科技署  
Innovation and  
Technology Commission



HONG KONG  
R&D Centres  
香港研發中心



# 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 Office at (852) 2299 0551 quoting your reference number or email us at [membership@lscm.hk](mailto: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](http://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](mailto: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 Office at (852) 2299 0551 quoting your reference number or email us at [membership@lscm.hk](mailto: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
<b>Individual Membership</b>	<b>Individual participates as an ordinary member.</b> Members' Benefit <ul style="list-style-type: none"> <li>• Entry to international networks of companies and researchers</li> <li>• Have preference to participate in LSCM R&amp;D Centre's organized events (e.g. training, conference)</li> </ul>	<b>Free</b>
<b>Company / Institute Membership</b>	<b>Company / institute participates as an ordinary member, e.g. small or medium sized enterprise, venture capitalist, R&amp;D organizations and universities.</b> Members' Benefit <ul style="list-style-type: none"> <li>• Entry to international networks of companies and researchers</li> <li>• Access to LSCM R&amp;D Centre's project portfolio and information, provided that project confidentiality is not comprised</li> <li>• Have preference to participate in LSCM R&amp;D Centre's organized events (e.g. training, conference)</li> <li>• Access to membership networks and member area on website</li> <li>• Have preference to participate / sponsor / co-organize in LSCM R&amp;D Centre's events</li> <li>• Company name listed on LSCM R&amp;D Centre website</li> <li>• Have rights to display "Member of LSCM R&amp;D Centre" on business card and other various functions, occasions, materials and applications subject to approval</li> </ul>	<b>HK\$2,000</b>
<b>Technology / Solution Provider Membership</b>	<b>Companies that provide solutions and technologies to end-user companies. They will have preference to participate / speak / sponsor / co-organize in Centre's events.</b> Members' Benefit <ul style="list-style-type: none"> <li>• Entry to international networks of companies and researchers</li> <li>• Access to LSCM R&amp;D Centre's project portfolio and information, provided that project confidentiality is not comprised</li> <li>• Have preference to participate in LSCM R&amp;D Centre's organized events (e.g. training, conference)</li> <li>• Access to membership networks and member area on website</li> <li>• Have preference to participate / sponsor / co-organize in LSCM R&amp;D Centre's events</li> <li>• Company name listed on LSCM R&amp;D Centre website</li> <li>• Have rights to display "Member of LSCM R&amp;D Centre" on business card and other various functions, occasions, materials and applications subject to approval</li> <li>• Opportunity to champion new Supply Chain Management enabling technologies</li> <li>• Eligible to participate in providing consulting and solutions to LSCM R&amp;D Centre community</li> </ul>	<b>HK\$10,000</b>

### 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 Office at 2299 0551 quoting your reference number or email us at [membership@lscm.hk](mailto: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2009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2008年4月1日起至2009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2009年3月31日止。新一年度之研发中心会员会籍将于2009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/方案供货商

#### 甲部(一)——申请人资料 (只供「公司/学院」和「技术/方案供货商」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  
☐ 硬件供货商  
☐ 软件供货商  
☐ 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/方案供货商)
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，但必须给予本研发中心之行政部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、发出邀请函及刊物、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



HONG KONG  
R&D Centres  
香港研發中心



# 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/解决方案供货商：

机构会籍适用于所有为用户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. 细心阅读附载于申请表格上的申请人须知，以了解申请会籍的要求。
3. 将填写妥的表格连同商业登记副本及会费\*，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 与本中心办公室联络，并报上参考编号，或致电邮往 [membership@lscm.hk](mailto:membership@lscm.hk) 与本中心联络。

\*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](http://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. 提交已填写妥的表格，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看编号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副本至 (852) 2299 0552 或电邮至 [membership@lscm.hk](mailto: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 与本中心办公室联络，并报上参考编号，或致电邮往 [membership@lscm.hk](mailto:membership@lscm.hk) 与本中心联络。

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 / 解决方案供货商	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，年费将不予退还。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欲收取若干资料，请以书面通知本中心。未获接纳入会人士的个人资料，将于六(6)个月销毁。

###### 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><b>以个人名义成为基本会员。</b></p> <p>会员可享权益</p> <ul style="list-style-type: none"> <li>• 打开公司和研究的国际网络</li> <li>• 拥有优先权参与本研发中心举办之活动(例如培训、会议)</li> </ul>	全免
公司/学院	<p><b>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。</b></p> <p>会员可享权益</p> <ul style="list-style-type: none"> <li>• 打开公司和研究的国际网络</li> <li>• 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</li> <li>• 拥有优先权参与本研发中心举办之活动(例如培训、会议)</li> <li>• 登入会员网络及会员专用网页</li> <li>• 拥有优先权参与/赞助/合办本研发中心的活动</li> <li>• 公司名字可刊登于本研发中心之网页</li> <li>• 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</li> </ul>	港币2,000元
技术/方案供货商	<p><b>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。</b></p> <p>会员可享权益</p> <ul style="list-style-type: none"> <li>• 打开公司和研究的国际网络</li> <li>• 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</li> <li>• 拥有优先权参与本研发中心举办之活动(例如培训、会议)</li> <li>• 登入会员网络及会员专用网页</li> <li>• 拥有优先权参与 / 赞助 / 合办本研发中心的活动</li> <li>• 公司名字可刊登于本研发中心之网页</li> <li>• 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</li> <li>• 有机会使用新的供应链管理应用技术</li> <li>• 可参与提供顾问服务和方案予本研发中心</li> </ul>	港币10,000元

申请程序
<ol style="list-style-type: none"> <li>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。</li> <li>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。</li> <li>3. 填妥会员申请表后，连同商业登记证副本和会费*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。</li> <li>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。</li> <li>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。</li> <li>6. 有关会员申请查询，请致电2299 0551联络本中心办公室，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<a href="mailto:membership@lscm.hk">membership@lscm.hk</a>查询。</li> </ol>

\* 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**

Room 202, Level 2, Block B, Cyberport 4,  
100 Cyberport Road, Hong Kong

Telephone : (852) 2299 0551

Facsimile : (852) 2299 0552

Email : [info@lscm.hk](mailto:info@lscm.hk)

Website : [www.lscm.hk](http://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

電話 : (852) 2299 0551

傳真 : (852) 2299 0552

電郵 : [info@lscm.hk](mailto:info@lscm.hk)

網址 : [www.lscm.hk](http://www.lscm.hk)