





# 推動物流業及香港中小企落實數碼轉型執行能力

Empower the logistics industry and Hong Kong enterprises to implement digital transformation and achieve competency in Hong Kong



此項目由香港付貨人委員會主辦並由香港特別行政區政府 工業貿易署「工商機構支援基金」撥款資助

This project is organised by The Hong Kong Shippers' Council and funded by the Trade and Industrial Organisation Support Fund of the Trade and Industry Department, HKSAR Government.

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### **About The Hong Kong Shippers' Council**

In 1961, The Federation of Hong Kong Industries created the Freight Joint Committee which lead to the creation of the Hong Kong Shippers' Council in 1967 and became a government-subvented organisation in 1976.

Consisting of 16 trade associations, the Council serves to protect and promote the interests of Hong Kong exporters and importers, traders and manufacturers in matters relating to the transportation of merchandise by sea, land and air.

Additionally, the Council works to maintain a level playing field between shippers and service providers, such as shipping lines, airfreight carriers, logistics service providers and freight forwarders.

The Council represents Hong Kong shippers overseas and is a member of regional and international shippers' councils, including the Global Shippers' Alliance, the Asian Shippers' Council, the Cross Strait Shippers' Alliance, the Federation of ASEAN Shippers' Councils (FASC).

Together, these organisations work side-by-side in shaping the regulatory environment on issues relating to the shipping and transportation of goods on a local, regional, and global level.

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### 1.1 Executive Summary

The project "Empower the logistics industry and Hong Kong enterprises to implement digital transformation and achieve competency in Hong Kong" is organized by the Hong Kong Shippers' Council, executed by the Hong Kong Productivity Council, and funded by the "Trade and Industrial Organisation Support Fund" of the Trade and Industry Department of the Hong Kong Special Administrative Region Government. The aim is to promote digital transformation and seize new opportunities for Hong Kong's logistics industry and SMEs closely related to the logistics supply chain, including manufacturing, trade and import/export, wholesale, and retail sectors. The project provides digital transformation information, practical cases, and recommendations to enhance the digital literacy of industry practitioners.

The project started from 2023, through the kick-off conference, SMEs surveys and interviews, eight thematic seminars, two local study missions in Hong Kong and a dissemination seminar, sharing current digital technologies and practical solutions related to supply chain logistics, and offering practical advice to SMEs. This report summarizes the digital transformation challenges and considerations faced by SMEs interviewed in the logistics supply chain operations and provides simple digital solutions to help them plan future digital transformation roadmaps and facilitate easier implementation.

We hope this report can serve as an additional reference for the industry and local SMEs. It introduces some popular digital technologies suitable for Hong Kong SMEs, as well as government and local organization funding schemes and information channels in a simplified checklist format. This will help SMEs better understand digital transformation and assist them in enhancing supply chain efficiency and business models.



### 1.2 Project Background

Globalization has promoted economic and trade cooperation between countries, encouraging businesses to expand their operations and move towards internationalization. With market globalization, the rapid development of e-commerce, and changes in consumer lifestyles and consumption patterns, the demand for logistics services from consumers and businesses has become increasingly diverse and high-standard. Logistics service providers need to offer comprehensive supply chain management services to both international enterprises and SMEs, tailoring high-value-added services to enable businesses to focus on developing their core operations and seize global market opportunities. Local traditional enterprises also need to keep pace with the times by incorporating digital solutions into their traditional business processes to enhance the efficiency of the entire production process and supply chain.

A close integration of stakeholders in the supply chain is crucial for efficient collaboration and information exchange. Close interaction with partners and end-to-end tracking of processes help to create transparency and optimize resource utilization.

Although most SMEs understand that digital transformation and innovation are crucial for maintaining business competitiveness and sustainability in today's world, limited resources and a workforce (especially long-serving employees who have not received training in digital technology) with weak knowledge of digital transformation make it challenging for these businesses to actually implement meaningful changes.

This project aims to enhance the logistic industry and its stakeholders (Hong Kong enterprises) from different levels to learn how to choose cost-effective tools, adopt digital transformation, and apply these technologies. It will enable them to choose suitable digital application tools and service providers wisely, and integrate these into their existing logistic work platforms even though they are not IT professionals. The key success of digital transformation could only be realized if every stakeholder in the supply chain is implementing its own digital transformation plan and collaborating with each other.

### 1.3 Project Objectives

This project aims to realize digital transformation applications to achieve the following objectives:

- 1. To develop the logistic industry and Hong Kong enterprises' capabilities to implement digital transformation and Logistics 4.0 solutions, as a mean to maintain competitiveness and sustainability.
- 2. To cultivate and further raise awareness of digital transformation knowledge among the industry and logistics-related stakeholders, leverage technology to realise synergies and make business transformation implementable.
- 3. To enhance the efficiency of the logistics supply chains through digital transformation, bring back vitality to the industry by expanding the demand for logistics services.

### 1.4 Project Content

- i. Logistic process interviews with 50 enterprises to understand their logistic processes and pain points in the supply chain operation;
- ii. An industry research report to summarise the key findings of the logistic process interviews and make recommendations on digital transformation of the logistic processes in the supply chain;
- iii. A kick-off conference to introduce the project;
- iv. Eight thematic seminars to introduce the digital solutions for the logistic processes in the supply chain;
- v. A dissemination seminar to report the project outcome;
- vi. Two local study missions to showcase the adoption of technologies in the production and logistic processes;
- vii. Project webpages to disseminate project information and deliverables; and
- viii. Promotional activities, including eDMs and online advertisements.



### 1.5 Project Timeline



For highlights of each seminar, please refer to the video recordings on the webpage.



https://www.hkshippers-tsf.org



### 1.6 Project Benefits





**Enhance digital transformation maturity** 



Improve employee execution capabilities and innovation



Reduce logistics costs and human resources

### 1.7 Methodology of Logistic Process Interviews

### **Logistics Process Interviews**



Completed interviews and follow-ups with 50 SMEs across 4 target groups:



Manufacturing and Wholesale



Retail



**Logistics** 



Import and Export Trade



### **Logistics Process Interviews**

- Through interviews, identify pain points in the logistics workflows of SMEs.
- The Steering Committee provides recommendations for the interviewed SMEs to reference and implement improvements.
- The Productivity Council follows up on the transformation progress of the enterprises to understand the results of improvements or the reasons for any issues.
- Compile findings into an industry research report.







## Chapter 2 – Current logistic landscape and upcoming trend in logistic supply chain, challenges and opportunities

### 2.1 Current logistic landscape and upcoming trend in supply chain

The logistics landscape is constantly evolving, driven by advancements in technology, changing consumer demands, and global economic shifts. Here are some key trends and insights about the current and upcoming logistics supply chain landscape:

### **Current Logistics Landscape:**

#### 1. Digital Transformation:

- Automation and Al: The use of automation and artificial intelligence is increasing efficiency and accuracy in logistics. Automated warehouses, self-driving vehicles, and Al-driven demand forecasting are becoming more common.
- IoT and Real-Time Tracking: Internet of Things (IoT) devices are being used for real-time tracking of shipments, which enhances visibility and transparency across the supply chain.

#### 2. E-commerce Boom:

 The rapid growth of e-commerce has significantly increased the demand for efficient and reliable logistics services. This has led to the development of more sophisticated last-mile delivery solutions.

#### 3. Sustainability:

• There is a growing emphasis on sustainable practices within the logistics industry. Companies are looking to reduce their carbon footprint through the use of electric vehicles, optimizing routes, and adopting green warehousing practices.

#### 4. Globalization and Trade Dynamics:

 The logistics landscape is heavily influenced by global trade policies, tariffs, and geopolitical events. Companies need to be agile and adaptable to navigate these complexities.

### **Upcoming Trends:**

#### 1. Blockchain Technology:

Blockchain is expected to revolutionize the logistics industry by providing secure and transparent transaction records. This can enhance trust and efficiency in supply chain operations.

### 2. Advanced Analytics and Big Data:

The use of big data and advanced analytics will enable more precise demand forecasting, inventory management, and route optimization. This will help in reducing costs and improving service levels.

#### 3. Collaborative Logistics:

There will be an increase in collaborative logistics networks where multiple companies share resources and information. This can lead to better utilization of assets and reduce operational costs.

#### 4. Robotics and Drones:

The use of robotics in warehouses and drones for delivery is expected to grow. These technologies can significantly speed up operations and reduce labor costs.

#### 5. Customization and Personalization:

As consumer expectations continue to rise, logistics providers will need to offer more customized and personalized services. This includes flexible delivery options and tailored supply chain solutions.

#### 6. Resilience and Risk Management:

The COVID-19 pandemic highlighted the importance of supply chain resilience. Companies will invest more in risk management strategies and diversify their supply chains to mitigate disruptions.

#### 7. 5G Technology:

The rollout of 5G technology will enhance connectivity and data transfer speeds, enabling more efficient and real-time communication across the supply chain.

In summary, the logistics industry is undergoing significant transformation driven by technology and changing market dynamics. Companies that can leverage these trends and adapt to the evolving landscape will be well-positioned for success.

### 2.2 Challenges and Opportunities faced by Hong Kong SMEs

Hong Kong SMEs (Small and Medium Enterprises) face a unique set of challenges and opportunities in the rapidly evolving business landscape. Here's an overview of some of the key challenges and opportunities:

### **Challenges:**

#### 1. Resource Constraints:

- Limited Financial Resources: SMEs often have limited access to capital, making it difficult to invest in new technologies, expand operations, or weather economic downturns.
- Human Resources: Recruiting and retaining skilled talent, especially in areas like digital technology and logistics, can be challenging for SMEs.

### 2. Digital Transformation:

- Knowledge and Skills Gap: Many SMEs struggle with the knowledge and skills required for digital transformation. Employees, especially those with long tenure, may lack training in new technologies.
- Integration Issues: Integrating new digital tools with existing systems and processes can be complex and costly.

### 3. Market Competition:

- Intense Competition: SMEs face stiff competition from larger companies with more resources and established market presence.
- Global Competition: With globalization, SMEs must compete not only locally but also with international players.

### 4. Regulatory Compliance:

- Complex Regulations: Navigating the regulatory landscape, including trade laws, tariffs, and local business regulations, can be particularly challenging for SMEs.
- Compliance Costs: Ensuring compliance with various regulations can be costly and time-consuming.

### 5. Supply Chain Disruptions:

 Vulnerability to Disruptions: SMEs are often more vulnerable to supply chain disruptions caused by geopolitical events, natural disasters, or pandemics.



#### **Opportunities:**

#### 1. Digitalization and Innovation:

- Adopting Digital Tools: Leveraging digital tools and technologies can help SMEs streamline operations, improve efficiency, and enhance customer experiences.
- E-commerce Growth: The growth of e-commerce presents significant opportunities for SMEs to reach new markets and customers.

### 2. Government Support:

- Subsidies and Grants: Various government programs and initiatives offer financial support, training, and resources to help SMEs innovate and grow.
- Policy Support: Policies aimed at fostering a favorable business environment can benefit SMEs.

#### 3. Niche Markets:

- Specialization: SMEs can capitalize on niche markets by offering specialized products or services that larger companies may overlook.
- Customization: The ability to offer personalized and customized solutions can differentiate SMEs from larger competitors.

#### 4. Global Expansion:

- Export Opportunities: With the right strategies, SMEs can tap into international markets and diversify their customer base.
- Trade Agreements: Leveraging free trade agreements and international partnerships can open new avenues for growth.

#### 5. Sustainability:

- Green Initiatives: Embracing sustainable practices can not only reduce costs but also appeal to environmentally conscious consumers and partners.
- Corporate Social Responsibility (CSR): Building a strong CSR profile can enhance brand reputation and customer loyalty.

#### 6. Agility and Flexibility:

- Quick Adaptation: SMEs often have the advantage of being more agile and quicker to adapt to market changes compared to larger organizations.
- Innovation: The ability to innovate and experiment with new ideas can lead to unique products and services.

#### Conclusion:

While Hong Kong SMEs face several challenges, they also have numerous opportunities to thrive in the current business environment. By embracing digital transformation, leveraging government support, and focusing on niche markets and sustainability, SMEs can overcome obstacles and achieve sustainable growth. Adaptability, innovation, and strategic planning will be key to navigating the challenges and seizing the opportunities ahead.



**Chapter 3 – Key findings of Logistic Process Interviews** 

The Hong Kong Shippers' Council and the Hong Kong Productivity Council successfully conducted questionnaire surveys and interview follow-ups with 50 small and medium-sized enterprises (SMEs) from several major industries in Hong Kong between November 2023 and January 2025. The focus of the analysis was to assess the capabilities and attitudes of Hong Kong SMEs towards digital transformation, with particular attention to the progress and enhancements in their logistics supply chain procedures. After completing the surveys and logistics procedure interviews, the team summarized the challenges and considerations faced by participating SMEs in their digital transformation journey. The Interviews aimed to assist SMEs in analyzing their current digital transformation progress and future direction, while also helping them broaden their perspectives and maintain competitiveness.

Through this report, local SMEs can gain valuable references by introducing digital technologies, as well as government and local institutional funding programs and pathways suitable for them. This will enable SMEs to better grasp the knowledge of digital transformation and assist them in improving the efficiency of their logistics supply chains and business models.

### 3.1 Research Methodology

The interviews were conducted in questionnaire surveys and interviews. The primary criterion for selecting participating SMEs was to gather stakeholders from diverse industry backgrounds, ensuring a more varied sample and enhancing the reference value of the analysis results.

#### Selection Criteria:

- 1. Target groups include: Logistics industry (freight, warehousing, third-party logistics, transportation companies, etc.), manufacturing, wholesale, retail, import and export trade companies, etc.
- 2. Companies that directly apply and need to engage with logistics companies to handle their businesses.
- 3. SMEs that have initiated preliminary digital transformation but are encountering difficulties in the process.

The project team conducted evaluations and analyses from February to November 2024 on the capabilities and conditions of participating companies in areas such as background scale, resource planning, warehouse management, transportation management, talent training, and information network security systems. The team engaged with 50 companies through in-person meetings, phone calls, or video conferences to conduct questionnaire surveys and interviews. The first round of data collection and follow-up was carried out by the project team and the participating companies. Respondents included management, logistics line personnel, and procurement administrative staff from 50 different enterprises, spanning retail, wholesale, manufacturing, trade suppliers, and logistics companies.

Based on the individual needs of the companies, the project team proposed effective digital transformation solutions, training courses, or government support programs to enhance or improve daily administrative operations, talent training, logistics procurement, production line operations, and network security risks.

From April to December 2024, the project team conducted a second round of follow-ups with these 50 SMEs through in-person meetings, phone calls, or video conferences to review and understand whether the companies had trialed digital transformation solutions or encountered any difficulties. Based on the interview data and the topics of most interest to SMEs and the industry at the time, the project team organized 8 thematic seminars and 2 local study missions for the participating companies to attend.

### 3.2 Analysis of Research Results

### 1. Target Groups of Enterprises:

Target groups of enterprises	Number of enterprises
Manufacturing and wholesale	10
Trading (Import & Export)	15
Retail	15
Logistics companies	10

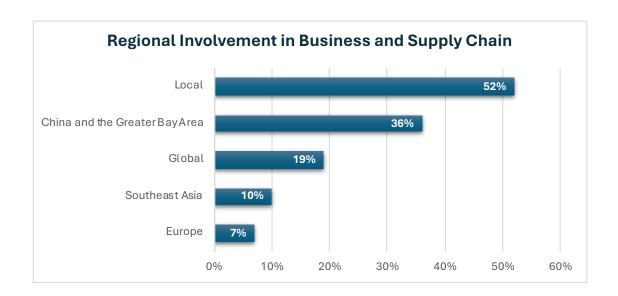
**Business Types of Participating Companies** 



Respondents came from 50 different companies, including logistics and freight, import and export trade, manufacturing and wholesale, and retail sectors.

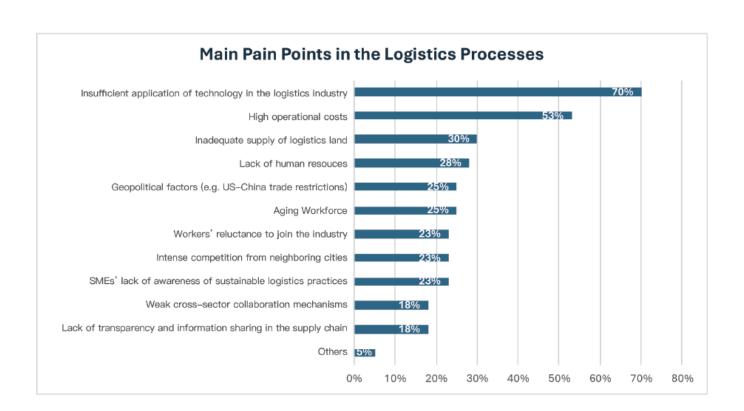
### 2. Regional Involvement in Business and Supply Chain

Business Regionality	Percentage
Local	52%
China and the Greater Bay Area	36%
Global	19%
Southeast Asia	10%
Europe	7%



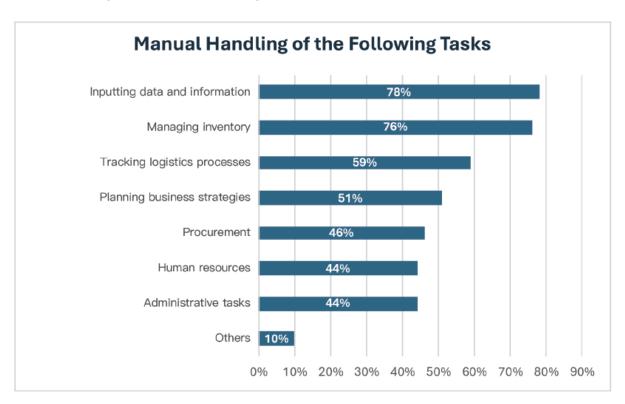
### 3. Main Pain Points in Logistics Processes

Insufficient application of technology in the logistics industry	70%
High operational costs	53%
Inadequate supply of logistics land	30%
Lack of human resources	28%
Geopolitical factors (e.g. U.SChina trade restrictions)	25%
Aging workforce	25%
Workers' reluctance to join the industry	23%
Intense competition from neighboring cities	23%
SMEs' lack of awareness of sustainable logistics practices	23%
Weak cross-sector collaboration mechanisms	18%
Lack of transparency and information sharing in the supply chain	18%
Others	5%
(e.g. Insufficient technology training, Investment and funding support)	



### 4. Manual Handling of the Following Tasks:

Inputting data and information	78%
Managing inventory	76%
Tracking logistics processes	59%
Planning business strategies	51%
Procurement	46%
Human resources	44%
Administrative tasks	44%
Others: (e.g. Communicating with customers)	10%

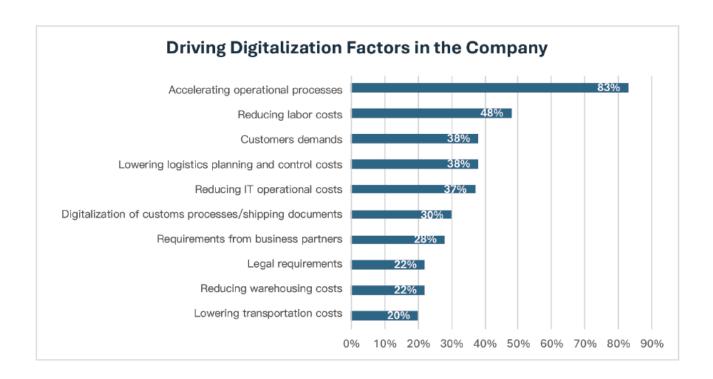


### 5. Use of Data Analysis to Assist Daily Operations

Among the 50 companies surveyed, 32% indicated that they regularly use data analysis to assist in their daily operations. Within this group, 6% reported using Excel as their primary analysis tool, while 7% utilize ERP (Enterprise Resource Planning) systems. Additionally, 5% rely on their company's proprietary software, 2% use WMS (Warehouse Management Systems), and 3% employ FM3000 (Freight Management 3000) operating system for analysis. On the other hand, the remaining 69% of the companies stated that they do not use or are unfamiliar with utilizing data analysis to support their daily operations.

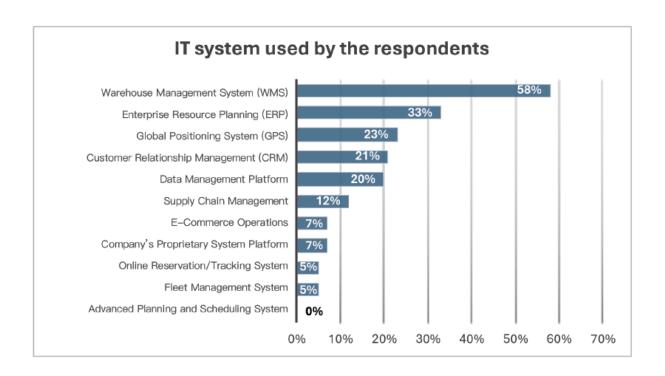
### 6. Driving Digitalization Factors in the Company

Accelerating operational processes	83%
Reducing labor costs	48%
Customer demands	38%
Lowering logistics planning and control costs	38%
Reducing IT operational costs	37%
Digitalization of customs processes/shipping documents:	30%
Requirements from business partners	28%
Legal requirements	22%
Reducing warehousing costs	22%
Lowering transportation costs	20%



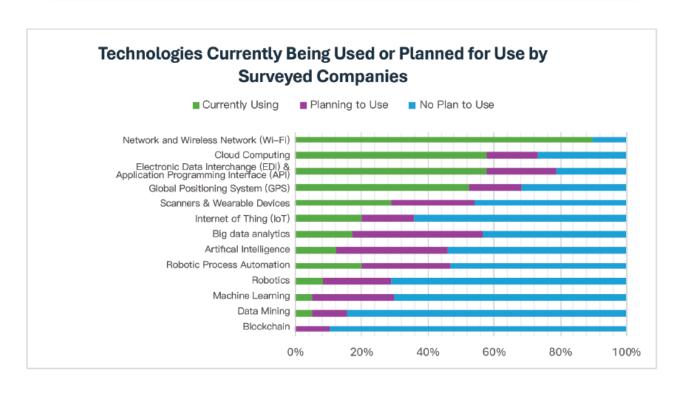
### 7. IT systems used by the respondents

58%
33%
23%
21%
20%
12%
7%
7%
5%
5%
0%



## 8. Technologies Currently Being Used or Planned for Use by Surveyed Companies

	Currently Using	Planning to Use	No Plan to Use
Network and Wireless Network (Wi–Fi)	59.1%	0%	6.8%
Cloud Computing	34.1%	9.1%	15.9%
Electronic Data Interchange (EDI) & Application Programming Interface (API)	25%	9.1%	9.1%
Global Positioning System (GPS)	22.7%	6.8%	13.6%
Scanners & Wearable Devices (Smart Glasses / Watches, AR, etc.)	15.9%	13.6%	25%
Internet of Thing (IoT) (sensor, etc.)	11.4%	9.1%	36.6%
Big data analytics	9.1%	20.5%	22.7%
Artificial Intelligence (AI)	6.8%	18.2%	29.5%
Robotic Process Automation (RPA)	6.8%	9.1%	18.2%
Robotics	4.5%	11.4%	38.6%
Machine Learning	2.3%	11.4%	31.8%
Data Mining	2.3%	4.5%	36.7%
Blockchain	0%	4.5%	38.6%



## 9. Regarding the Use of the Above Digital Technologies, Respondents Expressed the Following Concerns

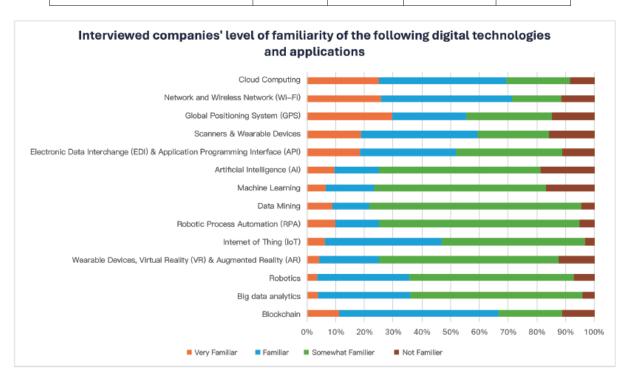
- a. Lack of Active Cooperation from Drivers and Warehouse Staff
- b. Concerns About Product Damage: Companies worry that using technologies like RFID (Radio Frequency Identification) tags or robotic arms might negatively impact or damage their products.
- c. Inadequate Integration with Overall Operations:

  The technologies are not well-linked to the entire operational workflow, limiting their effectiveness.
- d. Challenges Related to Data Centers:

  High requirements for electricity and warehouse safety in data centers. Uncertainty about whether the technology can be transformed into a product for external customer use.
- e. High Initial Investment in Technology Development: Significant financial and human resource investments are required during the initial technology development phase.
- f. High Costs and Uncertain Outcomes: Concerns about the high costs of implementation and whether the expected results will be achieved.
- g. Companies prefer to thoroughly understand the suitability of the technology before committing to its implementation.
- h. Desire for comprehensive technical assistance and funding support to facilitate adoption.
- i. Issues with EDI (Electronic Data Interchange): Instances where EDI systems fail to send data, leading to delays in shipments.

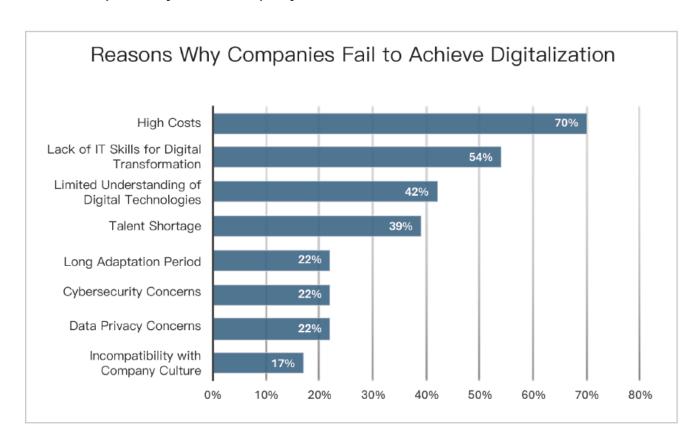
## 10. Respondents' Level of Familiarity of the Following Digital Technologies and Applications

	Very Familiar	Familiar	Somewhat Familiar	Not Familiar
Cloud Computing	20.5%	36.4%	11.4%	2.3%
Network and Wireless Network (Wi-Fi)	20.5%	36.4%	6.8%	2.3%
Global Positioning System (GPS)	18.2%	15.9%	18.2%	4.5%
Scanners & Wearable Devices(Smart Glasses / Watches, AR, etc.)	13.6%	29.5%	18.2%	2.3%
Electronic Data Interchange (EDI) & Application Programming Interface (API)	11.4%	20.5%	22.7%	2.3%
Artificial Intelligence (AI)	6.8%	11.4%	40.9%	6.8%
Machine Learning	4.5%	11.4%	40.9%	11.4%
Data Mining	4.5%	6.8%	38.6%	13.6%
Robotic Process Automation (RPA)	4.5%	6.8%	31.8%	6.8%
Internet of Thing (IoT) (sensor, RFID, electronic label, etc.)	4.5%	29.5%	36.4%	2.3%
Wearable Devices, Virtual Reality (VR) & Augmented Reality (AR)	2.3%	11.4%	34.1%	6.8%
Robotics	2.3%	20.5%	36.4%	9.1%
Big data analytics	2.3%	18.2%	34.1%	9.1%
Blockchain	2.3%	11.4%	36.4%	11.4%



## 11. Reasons Why Surveyed Companies Have Not Effectively Achieved Digital Transformation:

High Costs	70%
Lack of IT Skills for Digital Transformation	54%
Limited Understanding of Digital Technologies	42%
Talent Shortage	39%
Long Adaptation Period	22%
Cybersecurity Concerns	22%
Data Privacy Concerns	22%
Incompatibility with Company Culture	17%

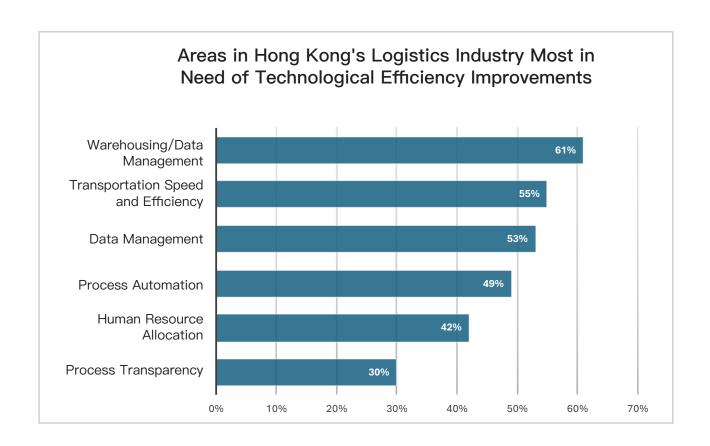


## 12. How the Government Should Support the Logistics Industry in Digital Transformation:

•	Enhance support for industry associations/training institutions to provide	85%
	smart logistics-related training for practitioners	
•	Facilitate interaction and exchange between the industry and logistics	80%
	technology suppliers (such as organizing expos, lectures, and seminars)	
•	Strengthen promotional efforts to attract young individuals with an IT	42%
	background to join the industry	
	Attract external talents with an IT background to come to Hong Kong	36%

## 13. Which of the following areas in the Hong Kong logistics industry is most in need of technological improvement to enhance efficiency:

Warehousing/Data Management	61%
Transportation Speed and Efficiency	55%
Data Management	53%
Process Automation	49%
Human Resource Allocation	42%
Process Transparency	30%



### **14. Methods of Conducting Warehouse Management:**

Manual Entry	50%
Centralized Computer Management	35%
Manual Entry & Centralized Computer Management	15%



### 15. The Extent of Using Manual Entry in Warehouse Management:

Rarely used & Not used 61% Will use 28% To a large extent 11%



## 16. The Extent of Using Centralized Computer Management in Warehouse Management:

Will use 45.5% To a large extent 27.3% Rarely used 27.3%

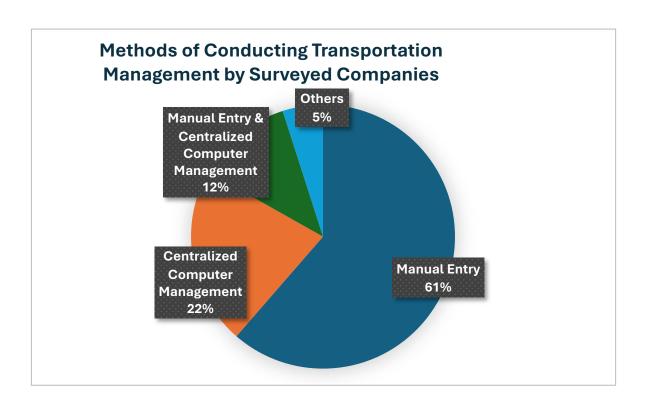


## 17. The following are the digital technologies used by respondents for warehouse management:

- Radio Frequency Identification (RFID)
- Wireless Fidelity (Wi-Fi)
- QR Code
- Warehouse Management System (WMS)
- 2D Barcode
- Personal Digital Assistant (PDA)
- Barcode Reader
- Self-Developed System

### 18. Methods of Conducting Transportation Management by surveyed companies:

Manual Entry	61%
Centralized Computer Management	22%
Manual Entry & Centralized Computer Management	12%
Others: (e.g. Offline Communication)	5%

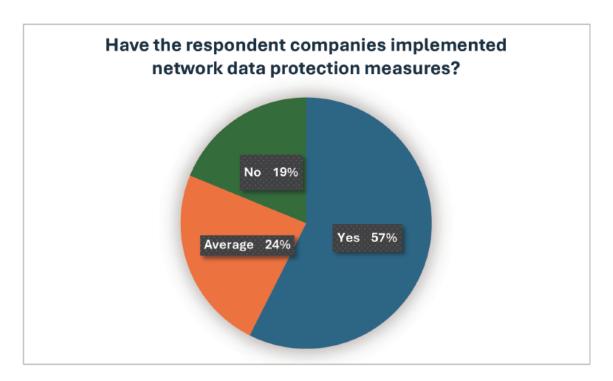


## 19. The following are the digital technologies used by respondents for transportation management:

- Warehouse Management System (WMS)
- Cloud Computing
- Enterprise Resource Planning (ERP)
- Radio Frequency Identification (RFID)
- Personal Digital Assistant (PDA)
- Inventory Management System (IMS System)
- Self-Developed System

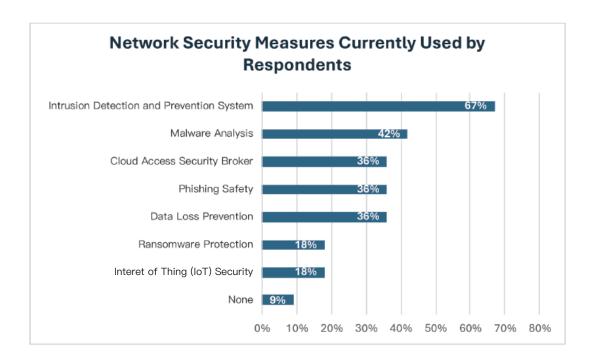
## 20. Have the respondent companies implemented network data protection measures?

Yes 57% Average 24% No 19%



### 21. Network Security Measures Currently Used by Respondents:

Intrusion Detection and Prevention System	67%
Malware Analysis	42%
Cloud Access Security Broker	36%
Phishing Security	36%
Data Loss Prevention	36%
Ransomware Protection	18%
Internet of Thing (IoT) Security	18%
None	9%



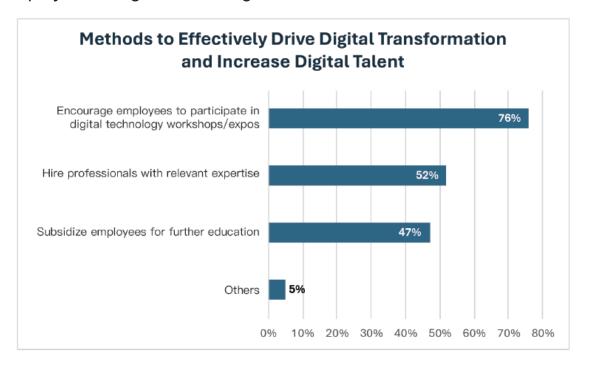
## 22. Methods to Effectively Drive Digital Transformation and Increase Digital Talent:

Encourage employees to participate in digital technology 76% workshops/expos

Hire professionals with relevant expertise 52%

Subsidize employees for further education 47%

Others: Engage technology consulting firms to train employees in digital technologies, etc.



5%

## 23. Most Desired Capabilities to Enhance Through Digital Transformation Training:

- End-to-end process management
- Enhance cargo handling productivity and the competitiveness in the industry
- Data mining, data analytics, and PowerBI utilization
- Understanding of cutting-edge technologies, professional knowledge and future strategic planning in warehouse and transportation management
- Process automation and information security
- Artificial intelligence and big data analytics
- Improved collaboration between the company and warehouses
- Streamlining processes for efficiency
- Warehouse management
- Learn about International transportation, logistics management, customs clearance, free trade agreement(FTA), authorized economic operator(AEO) and trade single window(TSW) principle

### 24. Most Needed Digital Technologies in Hong Kong's Industry:

- Using AI to solve/assist with sorting and transportation issues
- Using data input automation to solve/assist with invoice processing problems
- Using AR or AI to solve/assist with warehouse and transportation management issues
- Using digital systems to solve/assist with labor cost issues
- Supported by funded transformation projects and have employee upskilling programs to address digital transformation challenges
- Leveraging technology to improve warehouse management and transportation tracking
- Using data analytics to address business challenges
- Establishing big data centers and cultural life systems to support the sustainable growth of SMEs in the transportation and logistics industry

## 25. Shortcomings and Areas for Improvement in the Logistics Processes of Respondent Companies:

- Insufficient automation
- Low level of digitalization, coupled with a shortage of warehouse and transportation drivers and an aging workforce
- High costs
- Existing logistics/warehouse infrastructure only achieves an elementary level
- Insufficient application of cutting-edge technologies in the logistics industry
- Lack of closed-loop visual management in logistics processes
- Electronic services
- Data analysis
- Lack of IT skills required for digital transformation
- Current systems fail to provide comprehensive services, and works need to be completed across multiple platforms
- Unification of regional and national policies are required to support international market expansion
- Companies currently rely on manual cargo handling. It is hope that robotic arms/small robots for moving cargo can be used to reduce employee strain and workplace injuries

(Note: The surveyed companies may choose more than one option or refuse to answer, so the total percentage may be greater or less than 100%)

### 3.3 Summary

The 50 surveyed companies come from the logistics, trading (import/export), retail, manufacturing, and wholesale sectors. Over 80% of the respondents identified insufficient technological application in the logistics industry and high operational costs as their main pain points. More than 70% of respondents indicated that they still rely on manual data entry and inventory management. 80% of respondents stated that accelerating operational processes to reduce manual handling time is the primary factor driving their companies to undergo digital transformation.

Nearly 60% of the interviewed companies use Warehouse Management Systems (WMS) and network and wireless networks (Wi-Fi) as their main adopted technologies, followed by 33% using Enterprise Resource Planning (ERP) systems and 34.1% utilizing cloud technologies. This preference is due to the respondents' greater familiarity with these digital technologies and applications. Conversely, nearly 50% of respondents indicated that they are not very familiar with or do not understand technologies such as Artificial Intelligence, Machine Learning, and Data Mining, making them hesitant to adopt these technologies in their business processes. Additionally, 70% of the surveyed companies believe that high costs are a significant barrier to effective digital transformation.

Approximately 60% of companies have implemented cybersecurity measures, with intrusion detection and prevention systems being the most commonly used. However, 10% of companies do not use any cybersecurity measures. Concerns about cybersecurity (22%) and data privacy (22%) also contribute to their hesitation towards digital transformation.

More than 80% of companies agree that to support the digital transformation of the logistics industry, the government should enhance support for industry associations or training institutions to provide smart logistics-related training for practitioners and organize expos, seminars, and workshops to facilitate interaction between the industry and logistics technology suppliers. This project aims to achieve similar goals by organizing various activities to equip the logistics industry with the knowledge required for digital transformation, with a view to improving workflows and efficiency through new technologies.



### 4.1 Case Sharing of HK enterprises on digital transformation

### **Company A – Logistics company focused on air freight service**

### 1. Company Background:

Company A is a logistics company focused on air freight, mainly transporting goods to Europe. It is a small enterprise with around 20 employees and one office in Hong Kong. The company primarily outsources warehouse management services, and its current IT systems are also outsourced to IT companies. They utilize Cargobase to handle electronic bills and other receipts, while using Ezycargo for shipping management.



### 2. Current Technology and Pain Points:

- (1) Inconsistency between Cargobase, Access programs, and outsourced warehouse company's database: At present, Company A employs outsourced warehouse management company to monitor goods. However, the bills processing interface used by both parties are different. To process the bills, they rely on the warehouse company emailing bills, then manually changing file names and saving to the company's internal system.
- (2) Complex file processing: Suppliers/partners use different bill formats, making it difficult to process all kinds of bills in one system. The company still needs to print the bills, manually sign, and then scan them into the company system. File naming conventions are inconsistent, making it hard to retrieve needed results. Although some receipts are received in list format and can be converted to Excel electronically, conversion errors related to typographical occur that require manual adjustments.

- (3) Accountant relies on manual calculation and entry: Each time an invoice is received, it must be scanned to the computer and calculated manually. Some bills requiring approval must be printed and given to the accountant. If the accountant cannot process them promptly, the whole process will be delayed, and such a process relies heavily on one party's operations.
- (4) Existing website cannot meet business needs: The website cannot allow customers to fill out forms or get quotes online, relying only on email communication with customers. This hinders effective business processing and expansion. Customers are also unwilling to fill out electronic forms, reducing the efficiency of company in recording and processing orders.
- (5) Inadequate human resource management system: The current Info-Tech HRMS System cannot effectively process leave applications, attendance tracking, and so forth. In the end, Excel is still required for manual entry.
- (6) Insufficient promotional tools: No image editing and other software to handle the business, making the promotional materials ineffective in attracting new customers.

#### 3. Recommendation

(1) Adopting an Enterprise Resource Planning (ERP) System

The ERP system can integrate various human resource management functions, such as recruitment, employee data management, payroll and benefits management, training and development, etc. This allows the HR department to centrally manage and control all HR-related information and processes on a unified platform, improving work efficiency and accuracy.

The ERP system can also centrally store and manage HR-related data. This way, the HR department can easily access and share employees' personal and work information, including contracts, attendance records, performance evaluations, etc. This helps improve information accuracy, consistency, and real-time access, while promoting collaboration and communication across departments.

The ERP system can automate and standardize various HR management processes, reducing manual work and cumbersome paper-based processing. For example, the system can automate the recruitment process of applications, interviews, selection, and onboarding procedures, saving time and costs while reducing errors and omissions.

The ERP system provides powerful data analysis and reporting capabilities, helping the HR department better understand and manage human resources. The system can generate various reports, such as HR metrics, employee performance evaluations, training effectiveness, etc., assisting management in making wiser decisions and formulating effective strategies.

#### (2) Sales and Invoice Management Platform

There are several platforms that generate quotations, invoices and receipts through Al. Al can also convert billing numbers, amounts and other information on handwritten bills into computerized text through Optical Character Recognition (OCR) technology, thus reducing manual input time and improving efficiency. The platform can also generate various data analysis reports to help overview sales records, so as to make better judgment and formulate sales strategies that are more in line with the needs of the market.

### (3) Digitalization of Operation Processes

It is recommended to adopt various digital technology platforms to optimize resource allocation, including order integration, electronic signatures, and QR code scanning functions. These digital tools can facilitate automated processes and enhance overall productivity. For example, the Konica Minolta Logistics Console solution can organize bills and price lists on a digital platform, making the entire operation process digitalized. Company can also use FreightAmigo – a e-market with one-stop logistics supply chain. This tool allows you to easily compare and manage freight quotations. The entire process, including quotation, booking, and payment, can be completed in less than four minutes. Moreover, there is no need to manually process freight documents, as placing an order on the FreightAmigo platform will automatically create freight documents. This not only saves employees' time but also greatly reduces the chance of manual errors, improving the efficiency of the entire supply chain management.

### (4) Reconstructing the Company Website

It is recommended that the company reconstruct its website and add various features, including an online registration platform, instant messaging channels, etc., to replace the reliance on email communication. The company can also create a form with a specific format and upload it to the website for customers to download or fill out, allowing order data to be clearly displayed and recorded internally. For forms creation tool, they can use the paid version of Adobe PDF Acrobat, which not only effectively edits PDF files but can also create forms to organize and present the data in an orderly manner. By creating forms within a PDF, information can also be arranged in rows and columns, making data easier to understand and analyse. This improves the readability and usability of the data. Self-editing function in the backend should be allowed to enable regular updates to the website information.

### (5) Graphic Design Software:

Canva is an online graphic design tool that provides an intuitive and user-friendly platform for users to create various graphic design projects, including posters, business cards, social media graphics, presentations, flyers, etc. Canva has a rich set of pre-designed templates and graphic elements, as well as a simple and direct drag-and-drop interface, allowing users to easily design and edit. Users can choose images from the built-in image library, add text, adjust layouts and colors, and apply various effects and filters to create professional-looking graphic design works. Canva also provides team collaboration features, allowing multiple users to collaborate on designing and editing projects together. In addition, Canva offers paid premium features, such as more image and template choices, brand design tools, etc., to meet more professional and personalized design needs. The basic version of Canva is free. If company wants to get more features and higher quality images, it can purchase the upgraded Teams version.

#### (6) Artificial Intelligence Software:

It is suggested to use artificial intelligence software to generate general letters, emails and other documents. If company needs more professional assistance, it can subscribe to GPT-4.5 in Poe, which can generate templates, provide proofreading and polishing, and generate personalized content for letter writing. The software can already meet the needs of most enterprises. It also has extensive knowledge and language understanding capabilities, which can generate fluent and coherent text content, as well as provide suggestions that comply with grammar and spelling rules. If company wants to use AI tools to generate images, it can use leonardo.ai by inputting prompts. There is a free trial every day where company can generate images for free.

### Company B - food manufacturer and wholesaler / online platform retailing

### 1. Company Background:

Company B primarily operates in the food industry. It is one of the manufacturers and wholesalers in Hong Kong. It built a refinery product line and produces fresh, high-quality food daily, and has its own fleet of vehicles. In addition to Hong Kong, it sells products globally, including in mainland China, the US, Europe and South East Asia. Company B has applied for various projects under Hong Kong Productivity Council and other funding schemes, such as design and establish an intelligent, high-speed packaging system. This system fully automates the production processes, allowing a single production line to handle multiple different product sizes. This automated production line replaces manual labor, which increases the productivity and quality of the products.

### 2. Current Technology and Pain Points:

- (1) Inefficient data processing: The current data input and management methods are relatively traditional, with complex processes requiring many people. Additionally, the existing data processing procedures cannot effectively predict future trends or present data systematically, failing to leverage large amounts of data to drive business development and expand customer reach.
- (2) Aging workforce: The company is facing an aging workforce issue. As employees get older, they may face skill mismatches. For the new technologies and tools required for digital transformation, older employees may need additional training and learning to adapt to new job requirements. Without proper training and support for older employees, this skills gap could negatively impact digital transformation efforts.





#### 3. Recommendation

#### (1) Using Big Data to Manage Operational Information

Data Collection and Integration: Company B can use big data technologies to collect, integrate, and organize data from various sources. This includes gathering data from the refinery production processes, such as raw material usage, production efficiency, and energy consumption. At the same time, it can also collect sales data from food retailers, including product sales volumes, customer purchase records, and inventory levels. By integrating data from different sources into a unified database, it would be much easier for Company B to manage and access the data.

Data Analysis and Insights: Company B can leverage big data analytics to extract valuable insights from large datasets. For example, it can analyze refinery production data to identify optimal processes and energy-saving measures. It can pinpoint bottlenecks and efficiency issues in production and recommend improvements. Similarly, Company B can analyze food retailer sales data to understand popular products, consumer preferences, and sales trends. These insights can help Company B formulate more effective business strategies and optimize production and sales processes.

Market Trend Forecasting: Big data analytics can also help Company B predict market trends and demand changes. By analyzing market data, social media data, and other relevant sources, it can gain insights into product demand, competitive dynamics, and consumer behavior. For instance, it can analyze social media comments and feedback to understand consumer attitudes and expectations toward products. This data can forecast market trends and adjust product supply chains, sales strategies, and market positioning accordingly to meet demand and gain a competitive edge.

Customer Relationship Management: Big data can help Company B improve customer relationship management. By analyzing customer data, it can gain deep insights into customer preferences, purchasing behaviors, and customer value. The company can identify loyal and potentially valuable customers and provide personalized products and services to meet its needs. Additionally, Company B can use big data to monitor customer feedback and ratings, allowing it to respond promptly to demands and improve product quality and service levels. This can strengthen customer relationships, increase satisfaction, and drive business growth.



#### (2) Improving Human Resource Management

Employee Training and Development: The company should invest in employee training and development programs to enhance digital skills and knowledge among the existing workforce. This can be achieved through internal and external training courses, or engaging digital experts as consultants. Through training, employees can learn and master digital tools, technologies, and processes to improve efficiency and productivity.

Recruitment of Young Digital Talent: The company can actively recruit young talent with digital expertise and knowledge. These individuals may have a deeper understanding of new technologies and digital trends, allowing them to quickly adapt to the digital work environment. They can bring fresh perspectives, innovation, and assist in driving the digital transformation process.

Cross-departmental Collaboration and Knowledge Sharing: The company should encourage cross-departmental collaboration and knowledge sharing. This fosters mutual learning and knowledge exchange between employees of different age groups. Young digital talents can collaborate with older employees to share their digital knowledge and skills. Meanwhile, older employees can share their extensive experience and expertise with young talents, creating a complementary learning environment.

External Partnerships and Technology Collaborations: The company can establish technology partnerships with external collaborators, such as innovation institutes or digital transformation consultants. Through these partnerships, the company can leverage their expertise and resources to drive digital transformation and address the aging workforce challenge.



## Pilot Subsidy Scheme for Third-party Logistics Service Providers (TPLSP)

With a view to maintaining competitiveness of Hong Kong's logistics sector, the Government of the Hong Kong Special Administrative Region (the Government) launched the "Pilot Subsidy Scheme for Third-party Logistics Service Providers" (the Pilot Scheme) on 12 October 2020 to encourage the adoption of technology by the logistics sector for enhancing efficiency and productivity.

The Pilot Scheme also covers the purchase of screening equipment including X-ray machines and Explosive Trace Detection (ETD) equipment under the Regulated Air Cargo Screening Facilities (RACSFs) Scheme accepted by the Civil Aviation Department.

The Transport and Logistics Bureau (TLB) has engaged the Hong Kong Productivity Council (HKPC) as the Implementation Partner to serve as the Secretariat for the Pilot Scheme. A Management Committee (MC) comprising members from the trade, industrial and professional sectors has been set up to assess and approve applications.

For more details:

https://bee.hkpc.org/tc/funding-schemes/tplsp/

## Professional Training on Smart and Green Logistics Scheme (PTSGLS)

With a view to helping the logistics sector to nurture more professional talents and to encourage in-service practitioners to equip themselves with up-to-date knowledge to support the industry to upgrade and transform itself towards the direction of green and smart logistics, the Government launched the Professional Training on Smart and Green Logistics Scheme (PTSGLS, the Scheme) on 8 January 2024 under the Maritime and Aviation Training Fund (MATF). To diversify course options for logistics industry practitioners, with effect from 4 October 2024, the Scheme has been enhanced to include courses that operate on a self-financing basis. Hong Kong registered companies or educational institutions offering or wishing to offer training courses that are non-profit or self-financing and are directly related to smart and green logistics and related technologies may apply to have their relevant courses registered as pre-approved courses under the Scheme.

Also, to streamline administration of the Scheme, courses deemed suitable for enhancing the knowledge of industry practitioners in smart and green logistics will be put on a list of pre-approved courses under the Scheme, from which eligible industry practitioners may select relevant courses and apply for refund under the Scheme for up to 80% of the course fees after satisfactory completion of a pre-approved course, subject to a funding cap of HK\$30,000 per applicant.

The Transport and Logistics Bureau (TLB) has engaged the Hong Kong Productivity Council (HKPC) as the Implementation Partner to serve as the Secretariat for the Scheme. The Scheme is overseen by the Steering Committee of the PTSGLS under the Subcommittee on Industry Development (SID) under the Hong Kong Logistics Development Council (LOGSCOUNCIL).

For more details:

https://bee.hkpc.org/tc/funding-schemes/ptsgls/

## Logistics Promotion Funding Scheme (LPFS)

With a view to providing support to rebrand the modern logistics industry as "Smart, Innovative, High-end" to attract more young people to join the industry, as well as to promote the strengths of Hong Kong as an international premier logistics hub to both local and overseas companies, The Government of the Hong Kong Special Administrative Region (the Government) launched the Logistics Promotion Funding Scheme (the Scheme) on 8 January 2024 under the Maritime and Aviation Training Fund to support and encourage local organisations and professional bodies to promote the logistics industry with the focus on modern and smart logistics through organisation of promotional projects.

The Transport and Logistics Bureau (TLB) has engaged the Hong Kong Productivity Council (HKPC) as the Implementation Partner to serve as the Secretariat for the Scheme. The Scheme is overseen by the Subcommittee on Infrastructure and Promotion (SIP) under the Hong Kong Logistics Development Council.

For more details:

https://bee.hkpc.org/tc/funding-schemes/lpfs/

## Dedicated Fund on Branding, Upgrading and Domestic Sales (BUD Fund)

- Expanding Business to Mainland China, Free Trade Agreement (FTA), and/or Investment Agreement Markets
- Maximum Funding: HKD 7 million
- Funding Ratio: 50% of the total approved expenses
- First Installment: 75% of the approved funding

For more details:

https://www.bud.hkpc.org/index.php/zh-hant

## New Industrialisation Funding Scheme (NIFS)

- Establishing a New Smart Production Line in Hong Kong
- Maximum Funding: HKD 45 million (up to 3 projects can be applied simultaneously)
- Funding per Project: 1/3 of the approved expenses or HKD 15 million

For more details, please visit:
Official Website of the Funding Scheme:
https://www.itf.gov.hk/tc/funding-programmes/facilit
ating-technology/nifs/

SME ReachOut - Self-Service Funding Station: https://https://smereachout.hkpc.org/DcPD9XQpyF77 /Funding-Kiosk/details/New-Industrialisation-Funding -Scheme

## SME Export Marketing Fund(EMF)

- Export Promotion Activities to Expand Overseas Markets
- Maximum Funding: HKD 1 million
- Funding per Activity: 50% of the total approved expenses or HKD 100,000
- First Installment: 75% of the approved funding

For more details:

https://smereachout.hkpc.org/NZX2j7ispyZE/Funding -Kiosk/details/SME-Export-Marketing-Fund

## **Enterprise Support Scheme (ESS)**

- Funding for Internal Research and Development (R&D) Projects
- Maximum Funding per Project: HKD 10 million
- Funding Ratio: 50% of the total approved expenses
- Cash Rebate: Eligible enterprises can apply for a 40% cash rebate

For more details:

https://smereachout.hkpc.org/kpNMX4b9x3xA/Funding-Kiosk/details/Enterprise-Support-Scheme

## Digital Transformation Support Pilot Programme (DTSPP) – Training Sponsorship Scheme

To drive digital transformation in SMEs in the F&B, retail (excluding F&B), tourism or personal services industries (the sectors) and deepen their understanding of ready-to-use basic digital solutions, HKCMCL launches DTSPP Training Sponsorship Scheme for Trade Associations in the sectors to organize tailor-made digital transformation training programmes, in response to the demand of decision-makers and practitioners for effective training.

#### Eligibility

Applicant must be a Trade Association in the Food and Beverage, Retail (excluding Food and Beverage), Tourism or Personal services industries.

Applicant must be incorporated in Hong Kong under the Business Registration Ordinance (Cap. 310) with substantial business operation in Hong Kong.

Regarding the details of application eligibility, please read: Guides and Notes (ENC.RF.072)

For more details: https://dtspp.cyberport.hk/zh-hk/training2/

# New Industrialisation and Technology Training Programme (NITTP)

New Industrialisation and Technology Training Programme (NITTP) is a funding programme under the HKSAR Government's Technology Talent Scheme. It aims at subsidising local companies on a 2:1 matching basis to train their staff in advanced technologies, especially those related to "New Industrialisation". The maximum annual funding is HK\$500,000 for each eligible company. 50% of the approved training grant can be released to the companies upon request before course completion.

Approved New Industrialisation and Technology Training Programme (NITTP) offers up to 2/3 course fee reimbursement upon successful applications.

#### **NITTP Training Grant Application**

Companies should submit their NITTP training grant application for their employee(s) via https://nittp.vtc.edu.hk/rttp/login at least five weeks before course commencement. Alternatively, application form could be submitted to the Secretariat in person, by post, by fax or by email to nittp@vtc.edu.hk together with supporting documents.

For more details: https://nittp.vtc.edu.hk/tc

## Digital Transformation Support Pilot Programme (DTSPP)

The Digital Transformation Support Pilot Programme (the "Programme") was launched to provide local small and medium enterprises ("SMEs") with subsidies on a one-to-one (1:1) matching basis in order to assist SMEs in applying ready-to-use basic digital solutions. A provision of HK\$500 million has been set aside by the Government of the Hong Kong Special Administrative Region (the "Government") for implementing the Programme.

SMEs applying for funding under the Pilot Programme must belong to the Food and Beverage ("F&B"), Retail (excluding Food and Beverage)\*, Tourism or Personal Services Industry sectors, and must be registered in Hong Kong under the Business Registration Ordinance (Cap. 310) or being hawkers with valid fixed-pitch hawker licence under the Hawker Regulation (Cap. 132Al) with substantive business operation in Hong Kong. They must not be listed companies, statutory bodies or non-governmental organisations subvented by public funding.

Hong Kong Cyberport Management Company Limited ("HKCMCL") is the Secretariat of the Programme. For any queries about the Programme, please contact HKCMCL through the channels listed in https://dtspp.cyberport.hk/contact.

The Programme aims to achieve the objective of expediting the pace of digital transformation of SMEs by providing subsidies on a 1:1 matching basis to SMEs in adopting pre-assessed off-the-shelf digital solutions in targeted solution categories.

The Programme targeted solution categories as below:

Digital Payment Solutions and Shopfront Sales: To assist enterprises in automating their payment and calculation workflows, and support electronic payment to open up new payment channels. Systems of this category may also include in-store self-service sales solutions such as self-ordering systems and vending machines. The systems may automatically generate reports through marketing data, allowing enterprises to analyse their business and providing them with a basis for making business decisions.

Online Promotion: To develop company websites and social media pages for enterprises, or to help them promote their business through online search engines and social media.

Customer Management and Loyalty Solutions Systems: This category may support sales promotion activities such as electronic membership programmes and electronic coupons. The systems may also provide functions such as customer support, case management and knowledge base, and provide reports to allow enterprises to effectively view, analyse and manage sales activities, targets, potential customers identified and related follow-up work, so that enterprises can enhance interactions with existing and potential customers, and centrally store customer information and contact records.

For more details, please visit: https://dtspp.cyberport.hk/contact

## 4.3 Technology solutions



## Application programming interface (API)

API stands for Application Programming Interface. In the context of APIs, the word Application refers to any software with a distinct function. Interface can be thought of as a contract of service between two applications. This contract defines how the two communicate with each other using requests and responses.

## Transport management system (TMS)

A TMS is often a subset of a larger supply chain management system that is focused specifically on transportation operations. In essence, a TMS is the underlying operating platform for any logistics operation or supply chain.

Shippers of all sizes must keep track of their supply chain. It's impossible to identify what's going well and where they need to improve without a clear, consolidated view.

TMS is the most effective (and common) approach for carriers to gather critical data and acquire network awareness.

## Robotic process automation (RPA)

Robotic Process Automation (RPA) is an emerging software tool that plays a crucial role in enhancing digital productivity. Robots simulate tasks that users frequently perform in an office environment, automating these routine computer tasks, and can even execute work in the background virtually. By using RPA to replace some highly repetitive but logical manual works, businesses can accelerate their operational efficiency. According to a survey published by Deloitte in 2018, 53% of companies reported having implemented RPA. This technology is now widely applied in various fields such as public services, finance, logistics, manufacturing, and healthcare.

In the logistics supply chain, many processes often involve repetitive tasks between computer programs and information systems, such as data management, data collection, sending and receiving emails, and data comparison. Manual operations not only consume a significant amount of work time and manpower but are also prone to errors. RPA software can replace logistical personnel in performing daily repetitive tasks, such as procurement tasks in the purchasing department, bookkeeping and report generation in the accounting department, and resume screening in the human resources department, greatly speeding up the workflow.

## Radio Frequency Identification (RFID)

Radio frequency identification (RFID) is a cutting-edge technology that harnesses radio waves to identify and monitor objects or people effortlessly without physical contact. This innovative system comprises three essential elements:

RFID tags, which are tiny devices that store data;

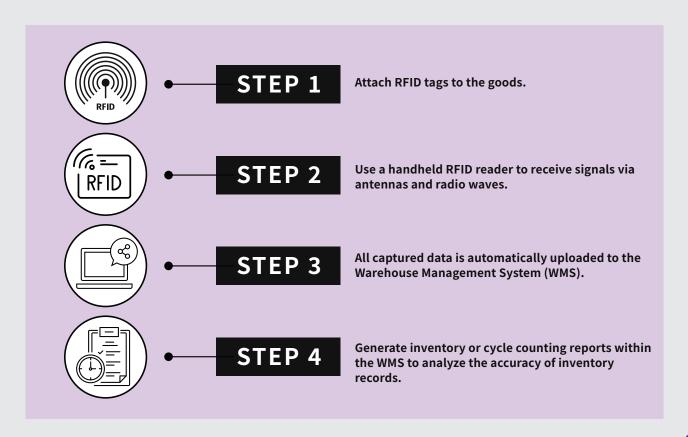
RFID readers, which wirelessly communicate with the tags;

A backend system, which manages and processes the collected information.

RFID technology finds applications across industries, providing benefits such as automated data capture, improved inventory management, enhanced supply chain visibility, and increased operational efficiency. Top companies such as Walmart, Amazon, Siemens, DHL, Ford Motor Company, Johnson & Johnson, and Airbus have already embraced RFID technology to streamline business operations.

RFID technology is extensively utilized in supply chain tracking to enable the real-time visibility and traceability of goods throughout the supply chain process. RFID tags attached to individual items or shipping containers contain unique identification codes that can be scanned and tracked at various checkpoints. RFID readers placed at key locations, such as warehouses, distribution centers, and transportation hubs, capture the tag information, providing accurate inventory levels, location, and movement data.

This technology allows for efficient inventory management, reduced stockouts, improved order accuracy, and enhanced supply chain efficiency. By leveraging RFID in supply chain tracking, businesses can optimize their logistics operations, minimize errors, improve forecasting, and ensure timely delivery, ultimately leading to cost savings and improved customer satisfaction.



## Warehouse management system (WMS)

Warehouse management system (WMS) is software that helps companies manage and control daily warehouse operations, from the moment goods and materials enter a distribution or fulfillment center until the moment they leave. WMS software systems are a key component of supply chain management and offer real-time visibility into a company's entire inventory, in warehouses and in transit. In addition to inventory management, a WMS offers tools for picking and packing processes, resource utilization, analytics, and more.

A good WMS system can help by streamlining every facet of warehouse management – from receiving, put-away, pick and pack, and shipping processes to inventory tracking and replenishment. It organizes all of these activities from a single interface. Warehouse management systems also integrate with other tools, including basics like barcode scanning and RFID labeling, more advanced robotics and augmented reality (AR) wearables, and other mission-critical solutions, such as transportation management systems (TMS), ERP, and logistics software.

#### Benefits of WMS:

- Improved operational efficiency
- Reduced waste and costs
- Real-time inventory visibility
- Improved labour management
- Better customer and supplier relationships

## **Cloud computing**

Cloud computing can either be classified based on the deployment model or the type of service. Based on the specific deployment model, we can classify cloud as public, private, and hybrid cloud. At the same time, it can be classified as infrastructure-as-a-service (laaS), platform-as-a-service (PaaS), and software-as-a-service (SaaS) based on the service the cloud model offers.

#### miniGPT

miniGPT is an on-premise solution and provides a seamless experience leveraging your organization's collective intelligence while safeguarding sensitive data through local server storage.

## Enterprise Resource Planning (ERP)

Enterprise resource planning (ERP) is a software system that helps organizations streamline their core business processes—including finance, HR, manufacturing, supply chain, sales, and procurement—with a unified view of activity and provides a single source of truth.

Most or all of an organization's data should reside in the ERP system to provide a single source of truth across the business. For example:

- Finance requires ERP to quickly close the books
- Sales needs ERP to manage all customer orders
- Logistics relies on well-running ERP software to deliver the right products and services to customers
- Procurement utilizes ERP to source goods and services and manage supplier relationships
- Accounts payable uses ERP to pay suppliers correctly and on time
- Management needs instant visibility into the company's performance to make timely decisions
- Banks and shareholders require accurate financial records, so they count on reliable data and analysis made possible by an ERP system

A few examples of industry-specific ERP use cases:

#### Manufacturers

Discrete, batch, and continuous process manufacturers rely on ERP to meet product quality goals, manage asset utilization, control overtime costs, and more. Manufacturers also gain end-to-end inventory control by monitoring stock movements, pinpointing top and underperforming products, and managing procurement more efficiently.

#### **Wholesalers**

Wholesalers, importers, direct store delivery, and 3PL/4PL firms want to reduce distribution costs, increase inventory turns, and shorten order-to-cash time. To achieve these goals, they need integrated inventory management, logistics functionality, and customized automated processes.

#### Retailers

Retail underwent a significant transformation when brick-and-mortar stores merged with e-commerce and other digital sales channels. Consistent, integrated data is crucial for providing self-service options for identifying, configuring, purchasing, and shipping products. ERP also helps retailers reduce cart abandonments, improve website conversions, and boost average order value.

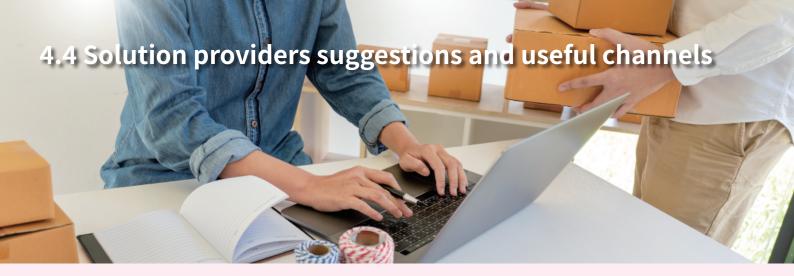
Many organizations—especially smaller ones—often start out using simple, standalone tools to manage their business processes, such as QuickBooks or Excel spreadsheets. Adopting an ERP system might feel unnecessary, like an extra complication. However, as a business of any size matures and expands, these management tools may become inefficient and unsustainable, holding back scalability and hindering optimization.

Here are some common signs that a company has outgrown its management tools and is ready for a modern ERP system:

- 1. Too much time spent on day-to-day tasks
- 2. Difficulty accessing critical business data
- 3. Runaway business processes
- 4. Lack of standardized processes and duplicate data sets
- 5. Too many missed opportunities

#### Benefits of ERP:

- 1. Higher productivity Streamline and automate core business processes so people throughout the organization can do more with fewer resources.
- 2. Deeper insights Eliminate information silos, gain a single source of truth, and get fast answers to mission-critical business questions.
- 3. Accelerated reporting Fast-track business and financial reporting and easily share results to act on insights and improve performance in real time.
- 4. Lower risk Maximize business visibility and control, ensure compliance with regulatory requirements, and predict and prevent risk.
- 5. Simpler IT Use integrated ERP applications that share a database to simplify IT and give everyone an easier way to work.
- 6. Improved agility Identify and react to new opportunities with efficient operations and ready access to real-time data.



- Digital DIY https://ddiy.hkpc.org
- Hong Kong Computer Emergency Response Team Coordination Centre https://www.hkcert.org
- SME ReachOut www.smereachout.hkpc.org
- Biz Expands Easy (BEE)
   Platformhttps://bee.hkpc.org
- HKPC Academy www.hkpcacademy.org
- CyberDefender https://cyberdefender.hk
- T-box (Transformation Sandbox) https://smesupport.hktdc.com/en/s/tbox
- Digital Academy https://academy.hktdc.com
- DTSPP
   https://dtspp.cyberport.hk/zh-hk/solution-list-digit al-payment-solutions-and-shopfront-sales-hk/
- FreightAmigo
   One-stop digital supply chain finance platform www.freightamigo.com
- Supply Chain Logistics Management Solutions from SAP https://www.sap.com/hk/products/scm/supply-cha in-logistics.html

- ERP Solutionhttps://www.sap.com/hk/products/erp/what-is-erp.html
- YOOV
   Integrated Business Management kind of No-Code System Development Systems, meeting the comprehensive work needs of business AI-Powered OCR Solution Transform Documents into Data with AI Precision www.yoov.com
- Widerworld
   Business, digital transformation solutions and trainings
   www.widerworld.com
- Amazon Web Services –
  free training and digital courses
  https://aws.amazon.com/training
- Hong Kong Export Credit Insurance Corporation www.hkecic.com
- Kingdee ERP Provides Solutions for Various Industries https://kingdee.com.hk
- Yonyou –
   solutions about supply chain management
   https://yonyou.com.hk

## Free resources / other channels:

## LogTech Expo

To help local logistics SMEs keep abreast of the latest technological trends in the industry, support the logistics sector in nurturing more professionals for upgrading and transformation, and encourage the development of the industry towards smart and green logistics by making good use of government funding support.

The expo will feature exhibition booths and seminars that showcase logistics technology, introduce training on smart and green logistics and provide on-site support for application for government funding schemes. Participants can also join thematic guided tours and interactive experience sessions. Expert speakers will explore with participants through panel discussions on how to make the best use of government funding for enterprises to upgrade and transform towards smart and green logistics to enhance efficiency and productivity.

For more details, please visit: https://logtechexpo.hkpc.org

## Successful stories of digital transformation

Digital DIY Portal has collected more than 250 successful cases in various industries. Enterprises can have a deeper understanding of the specific circumstances of each case, the implementation process and the results it has brought, so that they can grasp the practical methods of digital transformation and formulate their digital strategies that better meets their own needs.

To learn more about the successful stories, please visit: https://ddiy.hkpc.org/en/success-stories

## Free AI chatbot/tools

#### Poe

https://poe.com/

Companies can use the AI chatbots on Poe to ask questions, write or translate articles, and assist with content marketing.

#### Canva

https://www.canva.com/en\_gb/

It is an easy-to-use graphic design tool. Companies can use it to create posters, images for Instagram and Meta etc.

## **Paid tools**

Companies can choose suitable paid subscription plans according to their needs and budget to facilitate their work progress and productivity.

## Midjourney

https://www.midjourney.com/home

It can quickly generate diverse and high-quality AI images based on text prompts or instructions, making it suitable for companies that frequently need to generate images.

## **MOOCs** (Free online Courses)

www.mooc.org

Massive Open Online Courses (MOOCs) are free online courses available for anyone to enroll. MOOCs provide an affordable and flexible way to learn new skills, advance your career and deliver quality educational experiences at scale.

Millions of people around the world use MOOCs to learn for a variety of reasons, including: career development, changing careers, college preparations, supplemental learning, lifelong learning, corporate eLearning & training, and more.

#### Conclusion

There are many free and paid versions of AI chatbot/tools available. The free versions of the above AI chatbot/tools can, to some extent, assist companies in improving their workflow and efficiency.

## **Consulting Firm Websites/Reports**

## **McKinsey Insights**

Provides forward-looking industry analysis for businesses and management.

## **Digital BCG**

Assists enterprises in transitioning to digital, technology, and data-driven models.

## **Deloitte Technology**

Offers industry insights for the technology, media, entertainment, and telecommunications (TMET) sectors.

## **Acknowledgments**

## **Project Steering Committee**

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## **List of Collaborating Organizations**

Hong Kong Small and Medium Enterprises Association Limited The Hong Kong General Chamber of Small and Medium Business Limited The Chinese Manufacturers' Association of Hong Kong The Hong Kong General Chamber of Commerce Hong Kong Logistics Association Limited Hong Kong Sea Transport and Logistics Association Limited The Hong Kong Chinese Importers' and Exporters' Association Federation of Hong Kong Industries The Chartered Institute of Logistics and Transport in Hong Kong The Institute of Purchasing & Supply of Hong Kong Limited Hong Kong Association of Freight Forwarding and Logistics Limited The Chinese General Chamber of Commerce The Chamber of Hong Kong Logistics Industry Limited The Hong Kong Food Council Limited Hong Kong Logistics Management Staff Association Hong Kong Container Terminal Operators Association Limited Hong Kong O2O E-commerce Federation Limited The Jewellers' and Goldsmiths' Association of Hong Kong Limited (In no particular order.)





































#### **Statement**

This project report is for general and explanatory purposes and for reference only, the Hong Kong Shippers' Council and Hong Kong Productivity Council reserve the right to change the project report under any circumstances and the final interpretation right. We have tried our best to ensure the accuracy of the information in this report. We will not be liable for any expenses or losses caused by the content of this report. The content of this project report has been carefully edited to provide accurate information, but if there is any outdated, erroneous or missing information, we do not assume any legal liability, obligation or responsibility. All relevant information, photos, conclusions or suggestions published on this project report do not represent our recommendations, positions, views, guarantees or endorsements. The pictures published in this report are for reference only. When making any decisions about services, products or other matters based on the information in this report, you should verify the accuracy and completeness of the relevant information. The information in this report is as of February 2025. Please contact us if you have further inquiries.

此項目由香港付貨人委員會主辦,並由香港特別行政區政府工業貿易署「工商機構支援基金」 撥款資助



## 有關香港付貨人委員會

香港付貨人委員會始源於「香港貨運聯席委員會」,於一九六七年命名為「香港付貨人委員會」,並在一九七六年正式註冊成立。

本會之創辦及團體會員共16名,委員會的目的及宗旨是維護及促進香港出入口商在海、陸、空貨物運輸方面的利益,保障付貨人能在公平對等的情況下,與貨運服務經營者如船公司、航空公司等商議運費。委員會是一獨立組織,享有國際聲譽,公開接受有關機構和公司申請加入成為會員。

本會是全球付貨人聯盟(GLOBAL SHIPPERS'ALLIANCE)、亞洲付貨人聯盟(ASIAN SHIPPERS'ALLIANCE)、亞洲付貨人委員會(ASIAN SHIPPERS'COUNCIL)、海峽兩岸貨主聯盟(CROSS STRAIT SHIPPERS'ALLIANCE)、亞細安配貨人理事員會(FASC)的成員。本會與海外付貨人組織保持緊密的接觸和合作,致力建立一個規管的架構,在本地、區內及全球層面上規管貨運事官。

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- 5. 鳴謝
- 6. 聲明



## 1.1 內容摘要

「推動物流業及香港中小企落實數碼轉型執行能力」項目由香港付貨人委員會主辦,香港生產力促進局執行,並由香港特別行政區政府工業貿易署「工商機構支援基金」撥款資助,旨在推動本港物流業界及與物流供應鏈息息相關的香港中小企,包括製造業、貿易出入口、批發及零售業界如何實踐數碼轉型並掌握新機遇,為業界從業員提供數碼轉型資訊、實踐案例及建議,以提升從業員數碼素養能力。本項目由2023年開始進行,透過項目啟動研討會、公司問卷調查及訪問、8場主題研討會、2場本地企業考察交流及項目成果分享會等,向業界分享現今與供應鏈物流有關的數碼技術、實務方案及為中小企提供實用建議。

此報告總結了早前參與訪問的中小企業於物流供應鏈運作所面對的數碼轉型困難及考慮因素,並提供適切簡易數碼方案,以協助他們規劃未來的數碼轉型路線圖及易於執行。期望此報告可為業界及本地中小企提供多一個參考,以簡易清單方式介紹一些適合香港中小企應用的流行數碼科技技術、政府及本地機構資助基金及資訊途徑,讓中小企更能掌握數碼轉型知識及協助他們提升物流供應鏈效率及營商模式。



## 1.2 項目背景

全球化發展促進了國際之間的經濟及貿易合作,促使企業擴展其業務版圖並邁向國際化。隨着市場國際化、電子商貿快速發展及市民生活消費模式轉變,消費者及商家對物流服務需求漸趨多樣化及高規格要求,物流服務供應商需要為國際化企業以至中小企提供全面的供應鏈管理服務,度身訂造高增值服務,讓企業能夠專注發展其核心業務,抓緊全球市場的商機。本地傳統企業亦需追上時代步伐,把傳統業務流程加入數碼化方案,才可提升整個生產流程及供應鏈的效率。

供應鏈中各利益相關者的緊密整合對於高效協作和資訊交流至關重要。與 合作夥伴的密切互動以及對流程的端到端追蹤有助於創造透明度並優化資源 利用。

雖然大部分中小企也明白現今數碼轉型及創新對於保持業務競爭力及持續性十分重要,但礙於資源有限及其員工(特別是年資長但沒受過數碼科技知識培訓的群組)對數碼轉型知識薄弱,因此對於企業真正實踐業務轉型是舉步難行。

此項目旨在提升物流行業及其供應鏈持分者(香港企業)在不同層面上學習如何選擇具成本效益的工具。即使他們不是專業數碼科技人才,亦能實行數位化轉型,並精明地應用這些技術及選擇合適的數碼工具和方案服務供應商,結合到他們現有的物流工作平台。只有各供應鏈持分者都實行數位化轉型計畫並相互合作,才能成功實現數碼轉型。

## 1.3 項目目的

本項目旨在介紹數碼轉型應用,以實現以下目標:

- 1. 提升物流業及香港中小企實踐數碼轉型及物流4.0方案的執行能力並保持競爭力。
- 培養和提高從業員及供應鏈持份者數碼轉型的意識,以及利用技術實現協同效應,實現數碼轉型的目標。
- 3. 通過數碼轉型技術提高物流供應鏈效率,擴大物流服務需求,為行業注入新活力。

#### 1.4 項目內容

- i. 訪談調查50間企業,以了解他們的物流運作流程及在供應鏈運作上 遇到的痛點;
- ii. 一份行業研究報告,總結訪談調查的主要成果及就供應鏈中物流運作 流程的數碼轉型提出建議;
- iii. 一場項目啟動研討會,簡介項目;
- iv. 八場主題研討會,介紹供應鏈中物流運作流程的數碼方案;
- v. 一場項目成果分享會,報告項目成果;
- vi. 兩次本地考察團,以展示如何在生產及物流運作流程中採用新科技;
- vii. 項目網頁,發佈項目資訊和成果;及
- viii. 宣傳活動,包括電郵宣傳及網上廣告。



## 1.5 項目時間表



#### 各場研討會精彩內容可參閱網頁內短片錄影



https://www.hkshippers-tsf.org



## 1.6 項目預期帶來的效益

## 項目帶給中小企及業界從業員的效益



提高數碼轉型成熟度



提升員工執行能力及創新



節省物流成本和人力資源

## 1.7 物流流程訪談研究方法

## 物流流程訪談



已完成訪問及跟進50間來自以下4個目標界別的中小企



製造和批發



零 佳



物流



淮出口貿易



## 物流流程訪談

- 1 透過訪談了解中小企物流 工作流程中的痛點
- 2 督導委員會提出建議供受訪 中小企參考及進行改善
- 3 生產力局跟進企業轉型情況 了解改善成果或問題原因
- 4 集結成行業研究報告





第2章 - 物流供應鏈現況、趨勢、挑戰和機遇

#### 2.1 物流供應鏈概況及未來趨勢

物流行業在不斷演變,這主要受到技術進步、消費者需求變化和全球經濟轉變的影響。以下是當前和未來物流供應鏈格局的一些主要趨勢分析:

## 物流供應鏈現況:

### 1. 數碼轉型

- 自動化和人工智能:自動化和人工智能的使用正在提高物流的效率和準確性。自動化倉庫、自駕車輛和人工智能驅動的需求預測變得越來越普遍。
- 物聯網和實時追蹤:物聯網(IoT)設備正在用於對貨物進行實時追蹤,這增強了整個供應鏈的可視性和透明度。

## 2. 電子商貿急速發展

■電子商貿的快速增長顯著增加了對高效和可靠物流服務的需求。這促進了 發展更精密的最後一哩運送方案。

## 3. 可持續發展

物流行業越來越重視實踐可持續發展。公司正在通過使用電動車輛、優化 路線和採用綠色倉儲來減少碳足跡。

#### 4. 全球化貿易

■ 物流格局深受全球貿易政策、關稅和地緣政治事件的影響。公司需要靈活 應對,以適應這些複雜情況。

### 物流業未來趨勢:

#### 1. 區塊鏈技術

區塊鏈預計將通過提供安全和透明的交易記錄來徹底改變物流行業。這可以 提升供應鏈運作的可信性和效率。

#### 2. 進階分析與大數據

使用大數據和進階分析將提供更精確的需求預測、庫存管理和優化路線。 這有助降低成本並提高服務水準。

#### 3. 物流協作

協作物流網路將會增加,多家公司會共用資源和資訊。這提高資產利用並降低 運營成本。

#### 4. 機械人及無人機

倉庫機械人和用於配送的無人機預計將會增加。這些技術可以顯著加快營運 並降低勞動力成本。

### 5. 定製化及個人化

隨著消費者期望的不斷提高,物流供應商將需要提供更多定制化和個性化的 服務。這包括靈活的配送選項和量身定制的供應鏈解決方案。

### 6. 供應鏈韌性及危機管理

COVID-19疫情突顯了供應鏈韌性的重要性。公司將投資更多於風險管理策略,並通過多元化供應鏈來減輕干擾的影響。

### 7.5G技術

5G技術的推廣將提升連線能力和資料傳輸速度,使供應鏈中的即時通信更加高效。

在技術和不斷變化的市場環境推動下,物流業正經歷重大轉型。公司若能夠 利用這些趨勢並適應不斷變化的環境,將處於成功的有利位置。

#### 2.2 香港中小企面對的挑戰和機遇

香港中小企業(小型和中型企業)在快速變化的商業環境中面臨一系列獨特的挑戰和機遇。以下是一些主要挑戰和機遇的概述。

## 挑戰:

#### 1. 資源限制

- 有限的財務資源:中小企業通常難以獲得充足的資本,這使得它們難以投資於新技術、擴展業務或應對經濟衰退。
- 人力資源:對中小企業來說,招聘和留住尤其是在數位技術和物流等領域 熟練的人才,是一個挑戰。

#### 2. 數碼轉型

- 知識和技能差距:許多中小企業在數碼轉型所需的知識和技能方面存在困難。特別是那些工作年資較年長的員工,可能缺乏新技術的培訓。
- 整合問題:將新的數位工具與現有系統和流程整合可能是複雜且昂貴的。

#### 3. 市場競爭

- 激烈競爭:中小企業需與資源更豐富、市場地位更穩固的大公司進行激烈 競爭。
- 全球競爭:隨著全球化的推進,中小企業不僅要在本地競爭,還必須與國際企業競爭。

## 4. 遵從法規

- 複雜法規:應對包括貿易法、關稅和地方商業法規在內的監管環境,對中小企業來說尤其具有挑戰性。
- 合規成本:確保遵守各種法規可能會花費大量成本和時間。

## 5. 供應鏈干擾

■ 易受干擾:中小企業通常更容易受到地緣政治事件、自然災害或疫情導致的供應鏈干預。



## 機遇:

## 1. 數位化和創新:

- Ⅰ 採用數位工具:利用數位工具和技術可以幫助中小企業簡化運營、提高效率並改善客戶體驗。
- 電子商務增長:電子商務的增長為中小企業開拓新市場和吸引新客戶提供 了重大機遇。

#### 2. 政府支持:

- 補貼和資助:各種政府計劃和措施提供財政支持、培訓和資源,幫助中小企業創新和發展。
- 政策支持:旨在營造有利商業環境的政策可以使中小企業受益。

### 3. 小眾市場:

- 專業化:中小企業可以通過提供大公司可能忽略的專業產品或服務用於小眾市場。
- 定制化:提供個性化和定制化解決方案的能力可以使中小企業在競爭中脫 穎而出。

#### 4. 全球擴展:

- 出口機會:通過正確的策略,中小企業可以進入國際市場並多元化其客戶基礎。
- 貿易協定:利用自由貿易協定和國際合作夥伴關係可以開闢新的增長途徑。

## 5. 可持續發展:

- 綠色舉措:採用可持續實踐不僅可以降低成本,還能吸引環保意識強的消費者和合作夥伴。
- 企業社會責任(CSR):建立強大的企業社會責任形象可以提升品牌聲譽和 客戶忠誠度。

## 6. 敏捷性和靈活性:

- 快速適應:與大型組織相比,中小企業通常具有更高的靈活性和更快的市場適應能力。
- 創新:創新和嘗試新想法的能力可以帶來獨特的產品和服務。

## 結論:

雖然香港中小企業面臨諸多挑戰,但它們在當前商業環境中也有許多發展的機會。通過擁抱數碼轉型、利用政府支持、專注於小眾市場和可持續發展,中小企業可以克服障礙,實現可持續增長。適應能力、創新精神和戰略規劃將是應對挑戰並抓住未來機遇的關鍵。



香港付貨人委員會及香港生產力促進局於2023年11月至2025年1月期間成功向50間來自幾個香港主要行業的中小企進行問卷調查及訪談跟進,就香港中小企對數碼轉型的能力和態度評估作分析,亦特別針中小企在物流供應鏈上有關程序的轉型提升情況作進一步訪談跟進。完成有關問卷調查及物流流程訪談後,總結參與中小企業面對的數碼轉型困難及考慮因素,協助他們分析現時公司的數碼轉型進展情況及未來方向,亦可協助中小企擴闊視野及保持競爭力。

我們期望透過報告為本地中小企提供參考,介紹部分適合香港中小企應用的數碼科技技術、政府及本地機構資助基金及途徑,讓中小企更能掌握數碼轉型知識及協助他們提升物流供應鏈效率和營商模式。

## 3.1 研究方法

研究採用問卷調查及訪談。選擇參加中小企的主要準則是集合不同背景的 行業持分者,令採樣更多樣化及使分析結果更具參考價值。

#### 選擇準則:

- 1. 目標群組包括:物流行業 (貨運、倉庫、第三方物流、運輸公司等)、製造業、 批發、零售、出入口貿易公司等等。
- 2. 有直接應用及需要接觸物流公司去處理業務。
- 3. 有展開初步數碼轉型但在報行上遇到困難的中小企

項目小組於2024年2至11月就參與公司的背景規模、資源規劃、倉庫管理、 運輸管理、人才培訓及信息網絡安全系統等方面的能力及情況作評估及分析。 項目小組與50間公司分別以親身約見、電話或視像等形式進行問卷調查及訪談。 項目小組及受訪公司會先進行第一輪之問卷調查資料收集及跟進。受訪者來自 50家不同的企業,包括零售批發、製造商、貿易供應商、物流公司的管理層及 物流線負責人員或採購行政人員等。

項目小組因應公司個別需要提出有效的數碼轉型方案建議、培訓課程或政府支援計劃,以提升或改善公司的日常行政營運、人才培訓、物流採購、生產線運作及網絡安全風險等等。

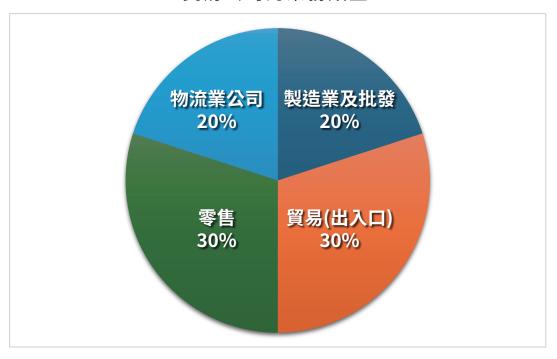
項目小組再於2024年4月至12月期間向此50間中小企以親身約見、電話或視像等形式作出第二輪跟進,以審視並了解公司有否試行數碼轉型方案或遇到什麼困難。項目小組亦因應訪談資料所得及當時最令中小企及業界有興趣的議題,制定了8場項目主題研討會及2次本地考察團,供受訪企業參與。

### 3.2 研究結果分析

#### 1.目標群組

目標企業群組	企業數目
製造業及批發	10
貿易(出入口)	15
零售	15
物流業公司	10

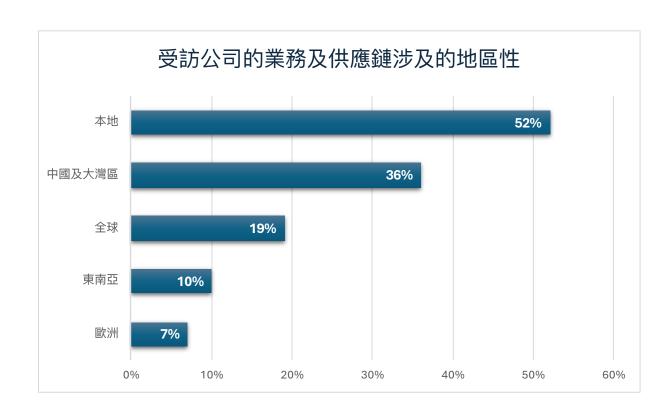
受訪公司的業務類型



受訪者來自50家不同的公司,包括物流貨運、進出口貿易、製造和批發及零售。

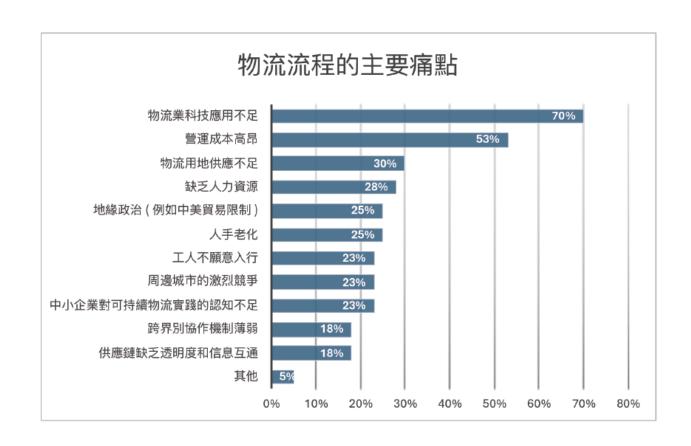
## 2.業務及供應鏈涉及的地區性:

業務地區性	百分比
本地	52%
中國及大灣區	36%
全球	19%
東南亞	10%
歐洲	7%



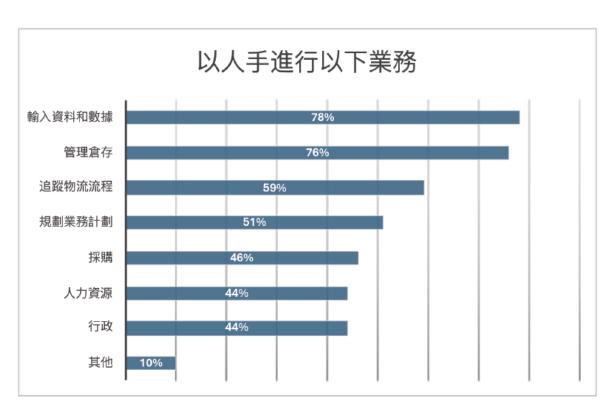
## 3.物流流程的主要痛點:

物流業科技應用不足	70%
營運成本高昂	53%
物流用地供應不足	30%
缺乏人力資源	28%
地緣政治(例如中美貿易限制)	25%
人手老化	25%
工人不願意入行	23%
周邊城市的激烈競爭	23%
中小企業對可持續物流實踐的認知不足	23%
跨界別協作機制薄弱	18%
供應鏈缺乏透明度和信息互通	18%
其他:(如技術培訓不足、投資和資金支持不足等)	5%



## 4.以人手進行以下業務:

輸入資料和數據	78%
管理倉存	76%
追蹤物流流程	59%
規劃業務計劃	51%
採購	46%
人力資源	44%
行政	44%
其他: (如與顧客聯絡)	10%

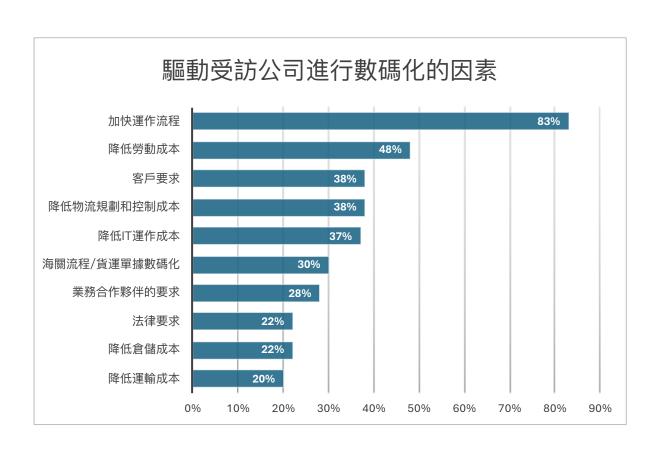


## 5. 運用數據分析協助日常營運

50家公司入面,32%表示平日需要運用數據分析協助日常營運, 6%表示會以EXCEL用作分析工具,7%使用企業資源規劃,5%使用自己 公司的軟件,2%使用倉儲管理系統,3%會用貨運管理3000系统來分析, 其餘69%表示沒有或不了解運用數據分析協助日常營運。

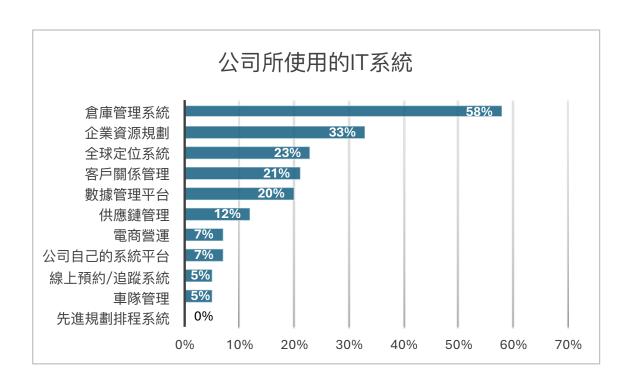
## 6.驅動公司進行數碼化的因素:

加快運作流程	83%
降低勞動成本	48%
客戶要求	38%
降低物流規劃和控制成本	38%
降低IT運作成本	37%
海關流程/貨運單據數碼化	30%
業務合作夥伴的要求	28%
法律要求	22%
降低倉儲成本	22%
降低運輸成本	20%



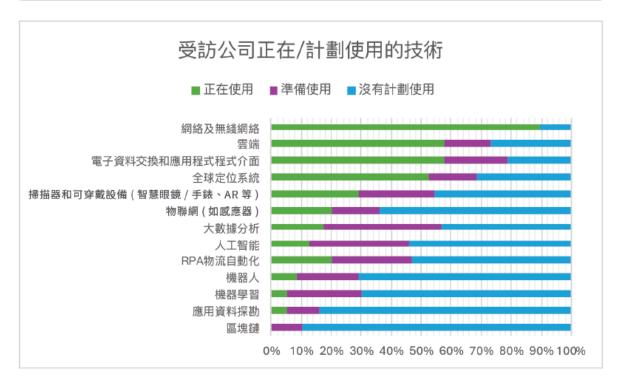
## 7.公司所使用的IT系統:

58%
33%
23%
21%
20%
12%
7%
7%
5%
5%
0%



## 8.受訪公司正在/計劃使用的技術:

	正在使用	準備使用	沒有計劃使用
網絡及無綫網絡(Wi-Fi)	59.1%	0%	6.8%
雲端	34.1%	9.1%	15.9%
電子資料交換(EDI)和 應用程式程式介面(API)	25%	9.1%	9.1%
全球定位系統(GPS)	22.7%	6.8%	13.6%
掃描器和可穿戴設備 (智慧眼鏡 / 手錶、AR 等)	15.9%	13.6%	25%
物聯網(如感應器)	11.4%	9.1%	36.6%
大數據分析(Big data analytics)	9.1%	20.5%	22.7%
人工智能(Artificial Intelligence)	6.8%	18.2%	29.5%
RPA 物流自動化	6.8%	9.1%	18.2%
機器人(Robotics)	4.5%	11.4%	38.6%
機器學習(Machine Learning)	2.3%	11.4%	31.8%
應用資料探勘(Data Mining)	2.3%	4.5%	36.7%
區塊鏈(Blockchain)	0%	4.5%	38.6%

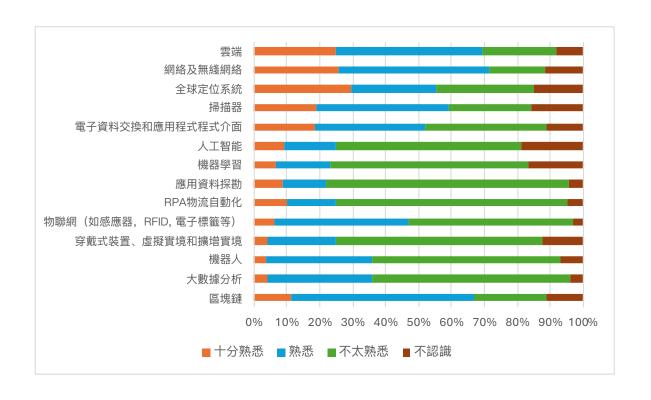


#### 9. 對於使用以上數碼技術, 受訪者認為:

- a. 司機和倉務員不夠積極配合
- b. 對產品損壞的擔憂:公司擔心使用RFID標籤或機械臂等技術可能會對 產品造成負面影響或損壞
- c. 與整體運營整合不足:這些技術與整體運營流程未能完全銜接,限制了 其有效性
- d. 與數據中心相關的挑戰:數據中心對電力和倉庫安全有很高的要求,不確定這些技術是否能轉化為對外客戶使用的產品
- e. 技術開發初期投資高:在技術開發初期需要大量的財務和人力資源投入
- f. 高成本和不確定成效:公司憂慮實施成本高昂,且不確定投資後是否能 有預期成效
- g. 公司希望採用技術前能夠徹底了解其適用性
- h. 公司希望能有全面的技術支援,並獲得資助採用這些數碼技術
- i. 電子數據交換(EDI)問題:EDI系統有時無法發送數據,導致貨物延誤

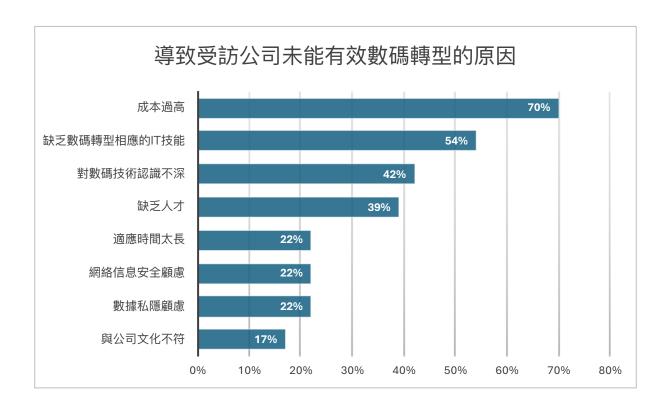
## 10.受訪者對以下數碼技術和應用程式的認識程度:

	十分熟悉	熟悉	不太熟悉	不認識
雲端	20.5%	36.4%	11.4%	2.3%
網絡及無綫網絡(Wi-Fi)	20.5%	36.4%	6.8%	2.3%
全球定位系統(GPS)	18.2%	15.9%	18.2%	4.5%
掃描器	13.6%	29.5%	18.2%	2.3%
電子資料交換(EDI)和 應用程式程式介面(API)	11.4%	20.5%	22.7%	2.3%
人工智能(Artificial Intelligence)	6.8%	11.4%	40.9%	6.8%
機器學習(Machine Learning)	4.5%	11.4%	40.9%	11.4%
應用資料探勘 (Data Mining)	4.5%	6.8%	38.6%	13.6%
RPA 物流自動化	4.5%	6.8%	31.8%	6.8%
物聯網 (如感應器,RFID,電子標籤等)	4.5%	29.5%	36.4%	2.3%
穿戴式裝置、虛擬實境 (VR) 和 擴增實境 (AR)	2.3%	11.4%	34.1%	6.8%
機器人(Robotics)	2.3%	20.5%	36.4%	9.1%
大數據分析(Big data analytics)	2.3%	18.2%	34.1%	9.1%
區塊鏈(Blockchain)	2.3%	11.4%	36.4%	11.4%



### 11. 導致受訪公司未能有效數碼轉型的原因:

成本過高	70%
缺乏數碼轉型相應的IT技能	54%
對數碼技術認識不深	42%
缺乏人才	39%
適應時間太長	22%
網絡信息安全顧慮	22%
數據私隱顧慮	22%
與公司文化不符	17%

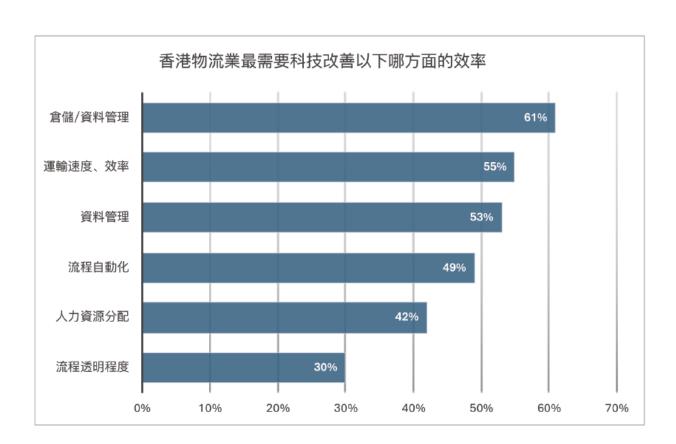


### 12.政府應如何支援物流業進行數碼轉型:

加強對行業協會/培訓機構的支持,為從業員提供智慧物流相關的培訓 85% 促進業界與物流科技供應商的互動交流(如舉辦博覽會、講座及研討會等) 80% 加強宣傳推廣、吸引有資訊科技背景的年青人入行 42% 吸納有資訊科技背景的外來人才來港 36%

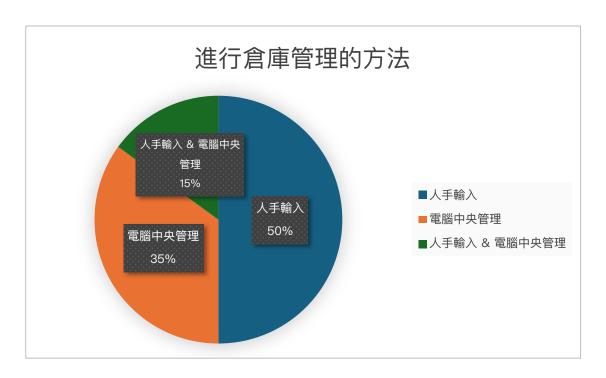
### 13.香港物流業最需要科技改善以下哪方面的效率:

倉儲/資料管理	61%
運輸速度、效率	55%
資料管理	53%
流程自動化	49%
人力資源分配	42%
流程透明程度	30%



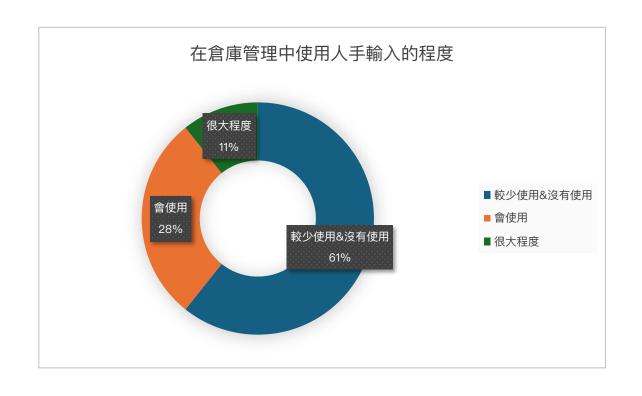
### 14. 進行倉庫管理的方法:

人手輸入50%電腦中央管理35%人手輸入&電腦中央管理15%



# 15.在倉庫管理中使用人手輸入的程度:

較少使用&沒有使用61%會使用28%很大程度11%



### 16.在倉庫管理中使用電腦中央管理的程度:

會使用45.5%很大程度27.3%較少使用27.3%

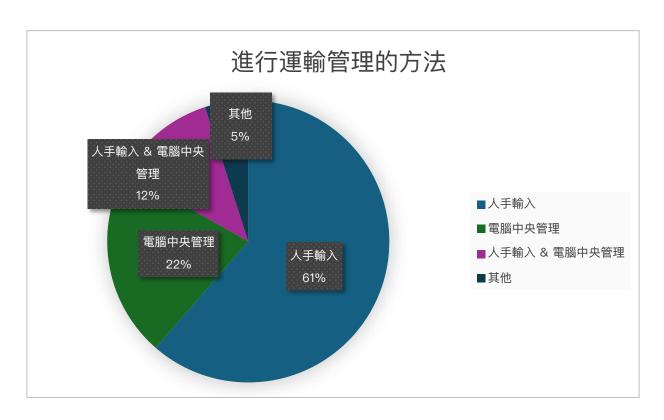


### 17.以下是受訪者進行倉庫管理的數碼科技:

- · 無線射頻辨識(RFID)
- 無線網路(Wi-Fi)
- · 二維碼(QR code)
- 倉庫管理系統(WMS)
- · 2D條碼
- · 掌上電腦(PDA)
- 條碼掃描器
- 自主開發系統

### 18.受訪公司進行運輸管理的方法:

人手輸入	61%
電腦中央管理	22%
人手輸入 & 電腦中央管理	12%
其他: 如線下溝通等	5%

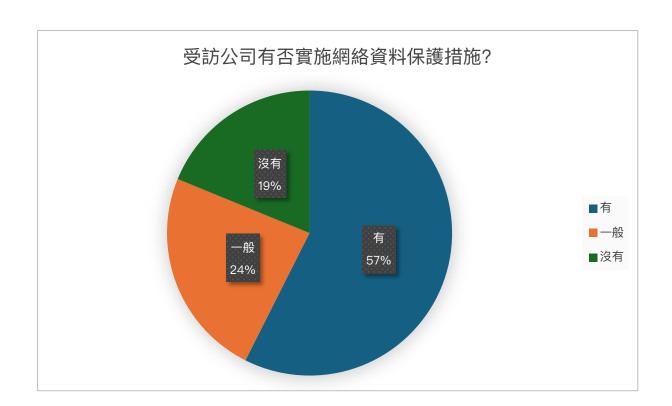


# 19.以下是受訪者進行運輸管理的數碼科技:

- 倉庫管理系統(WMS)
- 雲端系統
- 企業資源規劃系統(ERP)
- · 無線射頻識別(RFID)
- 掌上電腦(PDA)
- · 庫存管理系統(IMS System)
- 自主開發系統

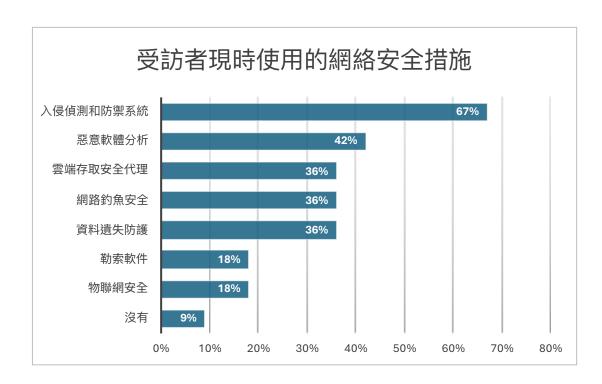
# 20.受訪公司有否實施網絡資料保護措施?

有57%一般24%沒有19%



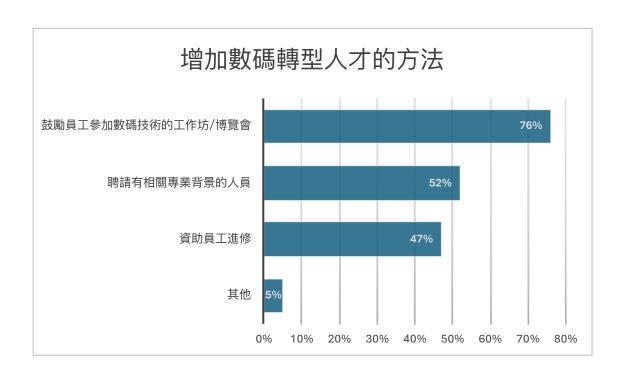
### 21.受訪者現時使用的網絡安全措施:

入侵偵測和防禦系統	67%
惡意軟體分析	42%
雲端存取安全代理	36%
網路釣魚安全	36%
資料遺失防護	36%
勒索軟件	18%
物聯網安全	18%
沒有	9%



### 22. 為有效進行數碼轉型,增加數碼轉型人才的方法:

鼓勵員工參加數碼技術的工作坊/博覽會 76% 聘請有相關專業背景的人員 52% 資助員工進修 47% 其他: 如聘請科技顧問公司教授員工數碼技術等 5%



# 23.最期望通過數碼轉型培訓提升的能力:

- 全流程管理
- 提升貨物處理效率及行業競爭力
- · 數據挖掘、數據分析、PowerBI 使用
- 對倉儲管理及運輸管理前沿科技的認識、專業知識的學習和未來戰略規劃
- 流程自動化和資訊安全
- 人工智能及大數據分析
- 公司與倉庫的合作更系統化
- 優化流程:確保流程順暢且高效
- 倉庫管理
- · 認識國際運輸、物流管理、報關報檢、自由貿易協定(FTA)、授權經濟運營商(AEO)和貿易單一窗口(TSW)原則的知識

#### 24. 香港所屬行業內最需要什麽數碼技術?

- · 以AI解決/幫助分揀及運輸問題
- · 以自動輸入資料解決/幫助處理單據問題
- · 以AR或AI解決/幫助倉儲管理及運輸管理問題
- 以數碼系統解決/幫助人力成本問題
- 以資助公司轉型項目和員工進修解決/幫助數碼轉型問題
- 以科技幫助倉儲及追蹤運輸
- 以數據分析幫助生意問題
- 以大數據中心和文化生活系統為起點,解決/幫助中小微型企業與運輸物流行業持續發展生長問題

### 25.受訪公司在物流流程上有那些不足及需要改善?

- 自動化不足
- 數碼化程度較低,且存在倉庫及運輸司機人手不足及老齡化問題
- 成本高昂
- 物流和倉庫基礎設施僅達到初級水平
- 物流業相關前沿科技應用不足
- 未實現物流流程閉環可視化管理
- 電子化的服務
- 數據分析
- ·缺乏數碼轉型相應的IT技能
- 系統未能提供全面服務,需要分別於多個程式下完成工作
- 地區政府與國家政策需統一,以支援開拓國際市場
- 公司以人手搬運貨物,希望將來能改以機械臂/小機械人搬運貨物,令 員工不用那麼操勞及減少工傷

(註:個別企業或會選擇多於一個選項或拒絕作答,百分比的總和或會大於或小於100%)

#### 3.3 總結

受訪的50間公司分別來自物流業、貿易(出入口)、零售和製造業及批發。超過8成受訪者認為物流業科技應用不足及營運成本高昂是其主要痛點。有逾7成受訪者表示仍以人手輸入資料和數據,以及管理倉存。8成受訪者表示,為了加快運作流程並減少人力處理業務的時間,成為推動公司數碼轉型的主要因素。

接近6成受訪公司使用倉庫管理系統(WMS)和網絡及無線網絡(Wi-Fi)作為公司主要採用的科技,其次是33%的企業資源規劃系統(ERP)和34.1%的雲端技術,這是因為受訪公司比較熟悉以上數碼科技和應用程式,其他如人工智能(Artificial Intelligence)、機器學習(Machine Learning)和應用資料探勘(Data Mining)均有接近5成受訪者表示不太熟悉和不認識這些科技,使他們未有信心採用這些技術到業務流程。另外,70%受訪公司認為成本過高亦是導致他們未能有效數碼轉型的原因。

約60%公司有實施網絡安全保護措施,他們最常使用入侵偵測和防禦系統,不過仍有1成公司沒有使用任何網絡安全措施,而對網絡安全(22%)和數據私隱有顧慮(22%)亦使他們對數碼轉型卻步。

8成以上公司均認同要支援物流業進行數碼轉型,政府應加強對行業協會或培訓機構的支持,為從業員提供智慧物流相關的培訓,以及舉辦博覽會、講座及研究會等活動,促進業界與物流科技供應商的交流。這亦是本項目期望透過舉辦各類型活動,使物流行業能獲取數碼轉型的相應知識,從而透過新科技,提升工作流程及效率。



### 4.1 中小企數碼轉型成功例子

公司A - 一間專注於空運的物流公司

### (一) 公司背景:

公司A是一間專注於空運的物流公司,主要運輸貨物到歐洲。公司大約20人,只有一個位於香港的辦事處,屬於小型企業。公司A主要聘請外判



管理倉存,而現時使用的IT系統均外判到IT公司處理。現時亦有使用Cargobase處理電子提單及其他單據的工作,同時使用Ezycargo進行航運管理。

# (二) 現時使用的技術及其痛點:

- 1. 現時使用的技術包括Cargobase, Access程式與外判倉務公司的資料庫不統一: 現時公司A聘用外判倉庫公司管理貨物, 但雙方使用的單據處理界面不一, 若要處理單據, 需要依靠倉庫電郵發送單據, 再人手更改檔案名稱及儲存到公司內部系統中。
- 2. 檔案處理繁複:各供應商/合作夥伴使用的單據格式不一,難以用一個系統處理各式單據。故此公司仍然要列印出單據,人手簽署再掃描至公司系統儲存。儲存檔案時使用的名稱不統一,導致難以顯示到需要的結果。雖然現時部分單據以列表方式接收,可以使用電子方式轉換至Excel處理,但轉換時仍會出現錯位情況,需要人手調整。

- 3. 會計依靠人手計算及輸入:每次收到賬單都要依靠人手掃描至電腦並計算。 而一些單據要進行批核則要列印出來再交給會計,如會計未能及時處理, 整個程序就會延遲,過程過度依靠一方的運作。
- 4. 現存網站不能滿足業務需要:網站不能讓顧客網上填表及報價,只能依靠電郵與顧客溝通,難以有效處理業務及進行業務擴展。顧客亦不願意填電 子表格,令公司記錄和處理訂單的效率下降。
- 5. 人力資源管理系統不完善: 現時使用Info-Tech HRMS System軟件不能有效處理假期申請,考勤日數等。最後仍要依靠人手使用Excel輸入。
- 6. 沒有足夠業務推廣的工具:現時沒有使用修圖軟件及其他軟件處理業務, 令推廣業務的材料未能有效吸引新顧客。

#### (三)建議

1. 採用企業資源規劃 (ERP)

ERP系統可以整合各種人力資源管理功能,例如招聘、員工資料管理、薪酬和福利管理、培訓和發展等。這使得人力資源部門可以在一個統一的平台上集中管理和控制所有人力資源相關的信息和流程,提高工作效率和準確性。

ERP系統也可以將人力資源相關的數據集中存儲和管理。這樣一來,人力資源部門可以輕鬆地存取和共享員工的個人和工作信息,包括合同、考勤記錄、績效評估等。這有助於提高信息的準確性、一致性和實時性,並促進不同部門之間的協作和溝通。

ERP系統可以自動化和標準化人力資源管理的各種流程,減少手動工作和 繁瑣的紙資料處理。例如,系統可以自動處理招聘流程中的申請、面試、 選擇和入職程序,從而節省時間和成本,同時減少錯誤和遺漏。

ERP系統可以提供強大的數據分析和報告功能,幫助人力資源部門更好地理解和管理人力資源情況。系統可以生成各種報表,例如人力資源指標、員工績效評估、培訓成效等,從而幫助管理層做出更明智的決策和制定有效的戰略。

### 2. 銷售及發票管理平台

坊間有不少透過AI生成報價單、發票及收據的平台,而AI亦能透過光學字元辨識技術(OCR),將手寫賬單上的賬單號碼、銀碼等資料,轉換成電腦文字,減少人手輸入的時間和提高效率。平台更能製作出不同數據分析報表,幫助一覽銷售紀錄,以作出更準備的判斷和制定更貼近市場需要的銷售策略。

#### 3. 數碼化營運流程

建議採用各種數碼技術平台優化資源配置,包括整合訂單、電子簽名及二維碼掃描等功能,這些數碼工具能促進自動化流程,提升整體生產力。例如 Konica Minolta 物流控制台方案能在數碼平台上整理賬單及價目,使整個營運流程電子化;也可以使用FreightAmigo - 一站式物流供應鏈電子市場,這個工具能輕鬆比較及管理貨運報價,整個過程,包括報價、預訂、付款,可以在少於四分鐘的時間完成,而且亦不需要人手處理貨運文件,在FreightAmigo平台上下單就已經會自動創建貨運文件。這個除了可以節省員工時間之外,亦大大降低了人手出錯的機會,令整個供應鏈管理的效率提高。

#### 4. 重建公司網站

建議公司重新建構網站,加入各種功能,包括網上登記平台、即時通訊渠道等,取代依靠電郵溝通。公司亦可以創建一張有特定格式的表格,放於網站上供顧客下載或填寫,讓訂單資料能清晰顯示和記錄在公司內部。而表格創建的工具可使用Adobe的PDF Acrobat付費版,不但可以有效編輯PDF文件,還可以建立表格,將數據以有序的方式進行組織和呈現。通過在PDF中創建表格,可以將信息按行和列進行排列,使數據更易於理解和分析,這有助於提高數據的可讀性和可操作性。尋找供應商建立網站時,應加入可自行於後台編輯的功能,方便公司定期更新網站資料。

#### 5. 修圖軟件

Canva是一種線上圖形設計工具,它提供了一個直觀且易於使用的平台,讓使用者可以創建各種圖形設計專案,包括海報、名片、社交媒體圖像、演示文稿、宣傳單張等等。Canva具有豐富的預設模板和圖形元素,以及一個簡單且直觀的拖放界面,使使用者能夠輕鬆地進行設計和編輯。使用者可以從內置的圖像庫中選擇圖片、添加文字、調整佈局和顏色,並應用各種效果和濾鏡,以創建具有專業外觀的圖形設計作品。Canva也提供了團隊協作功能,讓多個使用者可以一起合作設計和編輯項目。此外,Canva還提供了付費的高級功能,如更多圖像和模板選擇、品牌設計工具等,以滿足更專業和個性化的設計需求。基本版Canva是免費的,若想獲取更多功能及更高質圖像,可以購買升級團隊版。

#### 6. 人工智能軟件

建議使用AI人工智能軟件生成一般書信,電郵等文件,如需要更專業的協助,可以訂閱Poe內的GPT-4.5,這個模型在書信撰寫方面可以生成範本、提供校對和修飾、生成個性化內容等功能,已經能夠滿足大部分企業的需求。GPT-4.5模型擁有廣泛的知識和語言理解能力,能夠生成流暢、連貫的文字內容,並提供符合語法和拼寫規則的建議。如希望使用AI工具生成圖片,可以使用leonardo.ai,通過輸入文字生成圖片,每天有免費試用可以免費生成圖片。

### 公司B-食品製造及批發商/網上零售

### (一) 公司背景:

公司B主要經營食品糧油業務,是香港食品糧油製造商。他們建立了煉油產品線,每天生產新鮮、高品質的食品,並擁有自己的車隊。除香港外,銷售網絡遍布全球,包括內地、歐美、東南亞等。公司B曾申請多項生產力局及其他資助計劃,包括設計及建立數碼轉型生產線,將工種全面智能化,並只需一條生產線,便能處理多款不同大小的產品。自動化的生產線,取代過往的人手工作,令產能及品質都有所提升。

### (二) 現時使用的技術及其痛點:

- 1. 現時的資料處理方式效率不足: 現時仍然使用較傳統的資料輸入和管理方法, 過程繁複而且需要較多人手參與, 而且現時的資料處理未能有效預測未來的趨勢和以系統性的方式展示, 未能有效利用大量數據資料推進業務發展及開拓更廣客源。
- 2. 人手老化: 現時企業內出現人手老化問題, 隨著年齡的增長, 年長的員工可能會面臨技能不匹配的問題。對於數碼轉型所需的新技術和工具, 年長的員工可能需要進行額外的培訓和學習, 以適應新的工作要求。如果企業沒有為年長員工提供培訓和支持, 技能缺口可能會對數碼轉型產生自而影響。





### (三)建議

### (1) 利用大數據管理營運資料

數據收集和整合:公司B可以利用大數據技術來收集、整合和組織各種來源的資料。這包括從廠房的生產過程中收集的數據,例如原料使用量、生產效率和能源消耗等。同時,他們也可以收集食品零售商的銷售數據,包括商品銷售量、客戶購買記錄和庫存狀況等。這樣一來,公司B可以將來自不同來源的數據整合在一起,形成統一的資料庫,使其更易於管理和存取。

數據分析和洞察:公司B可以利用大數據分析技術,從大量的資料中提取有價值的見解和洞察。例如,他們可以分析廠房的生產數據,以確定最佳的生產流程和節能措施。他們可以識別出生產過程中的瓶頸和效率問題,並提出改進措施。同樣地,他們可以分析食品零售商的銷售數據,以了解最受歡迎的產品、消費者的購買偏好和銷售趨勢。這些洞察可以幫助公司B制定更有效的業務策略,優化生產和銷售過程。

市場趨勢預測:大數據分析還可以幫助公司B預測市場趨勢和需求變化。通過分析市場數據、社交媒體數據和其他相關數據,公司B可以獲得關於產品需求、競爭動態和消費者行為的洞察。例如,他們可以分析消費者在社交媒體上的評論和反饋,以了解消費者對產品的態度和期望。這些數據可以用來預測市場趨勢,並根據預測結果調整產品供應鏈、銷售策略和市場定位,以滿足市場需求並獲得競爭優勢。

客戶關係管理:大數據可以幫助公司B改善客戶關係管理。通過分析客戶數據,公司B可以深入瞭解客戶的偏好、購買行為和價值。他們可以識別出忠實客戶和潜在的重要客戶,並提供個性化的產品和服務來滿足他們的需求。此外,公司B還可以利用大數據技術來監測客戶反饋和評價,從而及時回應客戶需求,改進產品質量和服務水平。這樣可以加強客戶關係,提高客戶滿意度並促進業務增長。



### (2) 改善人力資源管理

人力資源培訓和發展:企業應該投資於人力資源培訓和發展計劃,以提升現有員工的數碼技能和知識。這可以通過提供內部培訓課程、外部培訓課程或聘請數碼專家作為顧問來實現。透過培訓,員工可以學習和掌握數碼工具、技術和流程,從而提高工作效率和生產力。

招聘年輕數碼專才:企業可以積極招聘具有數碼專長和知識的年輕人才。這些人才可能具有對新技術和數碼化趨勢的更深入了解,並且能夠迅速適應數碼工作環境。他們可以為企業帶來新的思維和創新,並協助推動數碼轉型的進程。

跨部門合作和知識共享:企業應該鼓勵跨部門合作和知識共享。這樣可以促進不同年齡組別的員工之間的互相學習和知識交流。年輕的數碼專才可以與年長的員工合作,分享他們的數碼知識和技能。同時,年長的員工可以分享他們的豐富經驗和專業知識,從而實現互相補充和學習。

外部合作和技術伙伴關係:企業可以與外部合作夥伴建立技術伙伴關係。這些合作夥伴可能是科技創新機構或數碼轉型顧問等。通過與這些合作夥伴合作,企業可以借助他們的專業知識和資源,推動數碼轉型的實施並解決人手老化問題。



# 第三方物流服務供應商資助先導計劃 (TPLSP)

為維持香港物流業界的競爭力, 香港特別行政區政府(政府)已於2020年 10月12日正式成立「第三方物流服務 供應商資助先導計劃」(先導計劃),鼓勵 物流業透過科技應用提升效率及生產力。

先導計劃同時涵蓋為設立管制空運貨物安檢設施所須購買並符合民航處標準的安檢設備,包括X光檢查設備及爆炸物痕量探測設備(ETD)。

運輸及物流局委託香港生產力促進局(生產力局)為先導計劃的執行夥伴, 為先導計劃提供秘書處服務,並成立包括 工商及專業界代表的管理委員會去審批 申請。

#### 有關詳情:

https://bee.hkpc.org/tc/funding-schemes/tplsp/

# 智慧及綠色物流專業培訓計劃 (PTSGLS)

為支援物流業培育更多專業人才, 鼓勵在職從業員掌握最新知識,以支持行 業朝向綠色和智慧方向升級和轉型,香港 特別行政區政府(政府)已於2024年1月8日 在「海運及空運人才培訓基金」「推出 「智慧及綠色物流專業培訓計劃」(計劃設 」(計劃於2024年10月4日起優化,措劃 包括准許以自資形式運作的課程納入育 也括准許以自資形式運作的課程納 動質助範圍內。香港註冊公司或殺色物 備舉辦或即將舉辦與現代、智慧和綠色物 備舉辦或即將舉辦與現代、智慧和綠色物 流相關的非牟利或自資培訓課程,可申請 成為本計劃預先核准的課程。

此外,為簡化計劃的行政程序,合資格的物流從業員可從計劃的預先核准課程名單中,選擇適合提升業界從業員在智慧及綠色物流方面知識的課程,並可在圓滿修畢預先核准的課程後,向計劃申請發還高達 80% 的課程費用,每名申請人的資助上限為港幣 30,000 元。

運輸及物流局委託香港生產力促進局(生產力局)為計劃的執行夥伴,為計劃提供秘書處服務。計劃由香港物流發展局(LOGSCOUNCIL)轄下的基建及推廣小組(SID)其下的計劃指導委員會監督運作。

#### 有關詳情:

https://bee.hkpc.org/tc/funding-schemes/ptsgls/

# 物流推廣資助計劃 (LPFS)

為了打造現代物流業「智慧、創新、 高端」的新形象,吸引更多年青人入行, 以及向本地和海外企業推廣香港作為 國際卓越物流樞紐的優勢,香港特別行 政區政府(政府)已於2024年1月8日 在「海運及空運人才培訓基金」下推出 「物流推廣資助計劃」(計劃),以支持 和鼓勵機構和專業團體舉辦以現代及 智慧物流為主題的推廣項目。

運輸及物流局委託香港生產力促進局(生產力局)為計劃的執行夥伴,為計劃提供秘書處服務。計劃由香港物流發展局(LOGSCOUNCIL)轄下的基建及推廣小組(SIP)監督運作。

#### 有關詳情:

https://bee.hkpc.org/tc/funding-schemes/lpfs/

# 發展品牌、升級轉型及拓展內銷市場的 專項基金(BUD Fund)

- 開拓業務到內地、自貿協定及/或投資協定市場
- 上限700萬港元
- 核准總開支50%
- 75%首期撥款

#### 有關詳情:

https://www.bud.hkpc.org/index.php/zh-hant

# 企業支援計劃 (ESS)

- 資助企業進行內部研究及發展工作
- 每個項目上限1,000萬港元
- 核准總開支50%
- 獲資助企業可申請40%現金回贈

#### 有關詳情:

https://smereachout.hkpc.org/kpNMX4b9x3xA/自助配FUND站/詳細內容/企業支援計劃

# 新型工業化資助計劃 (NIFS)

- 在香港設立新的智能生產線
- 上限4,500萬港元 (最多可同時申請3個項目)
- 每個項目核准開支1/3或1,500萬港元

#### 有關詳情:

資助計劃官方網址

https://www.itf.gov.hk/tc/funding-programmes/facilitating-technology/nifs/

中小企支援組-自助配Fund站 https://smereachout.hkpc.org/DcPD9XQpyF77/ 自助配FUND站/詳細內容/新型工業化資助計劃

# 中小企業市場推廣基金 (EMF)

- 出口推廣活動,擴展香港境外市場
- 上限100萬港元
- 每項活動核准總開支的50%或10萬 港元
- 75%首期撥款

#### 有關詳情:

https://smereachout.hkpc.org/NZX2j7ispyZE/ 自助配FUND站/詳細內容/中小企業市場推廣基金

### 數碼轉型支援先導計劃 (DTSPP) – 培訓資助方案

為推動餐飲、零售(不包括餐飲業)、旅遊或個人服務業中小企進行數碼轉型及加深對即時可用的基本數碼方案的認識,數碼港開展數碼轉型支援先導計劃-培訓資助方案。本方案旨在為鼓勵上述行業的商會主動組織數碼轉型培訓項目,以回應決策者和從業人員對有效培訓的需求。

#### 申請資格

申請者必須為餐飲、零售(不包括餐飲業)、旅遊或個人服務業的商會。

申請者必須為香港商業登記條例(第310章)下註冊的公司,並其主要商業運作須在香港。

關於申請資格的詳情,請參閱: 申請指引及須知 (ENC.RF.071)

#### 有關詳情:

https://dtspp.cyberport.hk/zh-hk/training2/

# 新型工業化及科技培訓計劃 (NITTP)

「新型工業化及科技培訓計劃」是在「科技專才培育計劃」下的一個資助計劃,旨在以2:1的配對形式資助本地企業人員接受高端科技培訓,尤其是與「新型工業化」有關的培訓。每間合資格公司每年最多可獲港幣50萬元資助。在培訓課程完成前,可因應獲批資助企業的要求,預先發放50%獲批培訓資助額予受資助企業。

「新型工業化及科技培訓計劃」認可課程 - 合資格學員最高可獲得2/3學費資助。

#### 申請NITTP培訓資助

公司有意為僱員申請出席已登記公開課程的培訓資助,須於開課至少五星期前於https://nittp.vtc.edu.hk/rttp/login?lang=tc申請。

另外,申請表亦可以親身、郵寄、 傳真或電郵至nittp@vtc.edu.hk向 秘書處提交。

#### 詳情請瀏覽:

https://nittp.vtc.edu.hk/tc

# 數碼轉型支援先導計劃 (DTSPP)

數碼轉型支援先導計劃(「計劃」), 會以一對一(1:1)配對方式為本地中型及 小型企業(「中小企」)提供資助,協助 中小企應用現成的基礎數碼科技方案。 香港特別行政區政府(「政府」)已預留 港幣五億元用於執行本計劃。

申請本計劃撥款資助的中小企必須屬於餐飲、零售(不包括餐飲)\*、旅遊或個人服務業,必須根據《商業登記條例》(第310章)在香港註冊或為根據《小販規例》(第132AI章)持有有效固定攤位小販牌照的小販,在香港擁有實質業務運作,以及並非是上市公司、法定機構或接受公帑資助的非政府機構。

香港數碼港管理有限公司 (「HKCMCL」)是本計劃的秘書處。如 對本計劃有任何疑問,請透過 https://dtspp.cyberport.hk/contact所列 途徑聯絡HKCMCL。

本計劃旨在透過為中小企提供一對一配對資助,支援其在目標方案類別中採用已預先評估的現成數碼科技方案,以加快中小企數碼轉型步伐。

#### 計劃目標方案類別如下:

電子支付系統及店面銷售:協助企業自動化收款和計算的工作流程,並支援電子支付以開拓新收款渠道。該類型的系統亦可包括自助式店面銷售方案,如自助落單系統和自助售賣機等。系統可透過營銷數據自動生成報表,讓企業分析其業務狀況,為業務決策提供依據。

線上推廣:為企業建設公司網站、 社交媒體專頁,或透過線上搜索引擎和 社交媒體幫助他們推廣業務。

客戶管理及優惠系統:該類型的系統可支援銷售推廣活動如電子會惠券等。系統亦可提供會惠券等。系統亦可提供報表讓企業有效地檢視、分析在實理。對應,所發掘的潛在客戶及相關跟進工作,讓企業能與現有及潛在客戶增加互動,並集中儲存客戶資料和聯繫記錄。

#### 有關詳情:

https://dtspp.cyberport.hk/contact

# 4.3 數碼化技術方案



# 運輸管理系統 (TMS) Transport management system

運輸管理系統(TMS)通常是更大供應鏈管理系統的一個子集,專門針對運輸操作。從本質上來說, TMS是任何物流操作或供應鏈的基礎運營平台。

無論規模大小,貨主都必須追 蹤其供應鏈。如果沒有一個清晰、統 一的視圖,就無法識別哪些方面運 作良好,哪些方面需要改進。

對於承運商來說,TMS是收集 關鍵數據並獲取網絡意識的最有效 (也是最常見)的方法。

# 應用程式介面 (API) Application programming interface

API代表應用程式介面 (Application Programming Interface)。 在API的上下文中,「應用程式」一詞 指的是任何具有特定功能的軟體。 而「介面」可以被視為兩個應用程式 之間的服務合約。這份合約定義了 它們如何透過請求和回應來進行相 互溝通。

# 機械人流程自動化 (RPA) Robotic process automation

在物流供應鏈的後勤工作之中, 有許多流程往往是操作電腦程式與 資訊系統之間的重複作業,例如管 理數據、資料蒐集、寄送郵件和資料 比對等。由人手作業,不但耗費大量 的工作時間和人力,更容易出錯。 RPA軟件可以取代後勤人手執行每 日重複性的工作,例如採購部門的 採購工作、會計部門記帳及製作報 表和人事部門履歷篩選等,大大加 快工作的進度。

# 無線射頻識別技術 Radio Frequency Identification (RFID)

無線射頻識別 (RFID) 是一種尖端技術,可利用無線電波在無需實際接觸下,毫不費力地識別和監測物體或人。這種創新系統包含三個基本要素:

RFID標籤,是儲存資料的微小裝置;

RFID讀取器,可與標籤進行無線通訊;

後端系統,用於管理和處理收集到的資訊。

RFID技術應用於各行各業,可提供自動化資料擷取、改善庫存管理、增強供應鏈可視性及提高營運效率等好處。Walmart, Amazon, Siemens, DHL, Ford Motor Company, Johnson & Johnson和Airbus等頂尖公司已經採用 RFID 技術來簡化業務運作。

RFID技術被廣泛應用於供應鏈追溯,能即時觀察和追蹤供應鏈過程中的貨物。個別物品或貨櫃上的RFID標籤包含獨特的識別碼,可在不同的檢查站進行掃描和追蹤。RFID讀取器可放置在倉庫、配送中心和運輸樞紐等關鍵位置,用以捕捉標籤資訊,提供準確的庫存水平、位置和移動數據。

這項技術可有效管理庫存、減少缺貨、提高訂單準確性並增強供應鍵效率。利用RFID的供應鏈追溯功能,企業可以優化物流作業、減少錯誤、改善預測、確保及時交貨,最終節省成本並提高客戶滿意度。



# 倉庫管理系統 Warehouse management system (WMS)

倉庫管理系統(WMS)是一種軟體,旨在幫助企業管理和控制日常倉庫操作,從貨物和材料進入分銷或履行中心的那一刻起,直到它們離開為止。WMS軟體系統是供應鏈管理的關鍵組成部分,並提供企業在倉庫中和運輸中整個庫存的即時可見性。除了庫存管理外,WMS還提供了用於揀選和包裝流程、資源利用、分析等工具。

一個良好的WMS系統可以通過簡化倉庫管理的每個方面來提供幫助 ——從收貨、上架、揀選、包裝和運輸流程,到庫存跟踪和補貨。它通過單一 介面組織所有活動。倉庫管理系統還與其他工具集成,包括基本的條碼掃 描和RFID標籤、更先進的機器人和增強現實(AR)穿戴設備,以及其他關鍵 任務解決方案,如運輸管理系統(TMS)、企業資源規劃系統(ERP)和物流 軟體。

WMS 的好處包括:

- 提高操作效率
- 減少浪費和成本

- 即時庫存可見性
- 改善勞動力管理
- 更好的客戶和供應商關係

# 雲端運算 Cloud computing

雲端運算可以根據部署模型或服務類型進行分類。根據具體的部署模型, 我們可以將雲端分為公有雲、私有雲和混合雲。同時,根據雲端模型提供的 服務,它可以分為基礎設施即服務(IaaS)、平台即服務(PaaS)和軟體即 服務(SaaS)。

#### miniGPT

miniGPT 是一種本地部署的解決方案,能夠無縫整合組織的集體智慧,同時通過本地伺服器存儲來保護敏感數據。

# 企業資源規劃 Enterprise Resource Planning (ERP)

企業資源規劃(ERP)是一種軟體系統,旨在幫助組織簡化其核心業務流程——包括財務、人力資源、製造、供應鏈、銷售和採購——通過提供活動的統一視圖和單一的真實數據來源。

組織的大部分或全部數據應存儲在ERP系統中,以提供整個業務的單一真實數據來源。例如:

- 財務部門需要ERP來快速結帳
- 銷售部門需要ERP來管理所有客戶訂單
- 物流部門依賴運行良好的ERP軟體,以向客戶提供正確的產品和服務
- 採購部門利用ERP來採購商品和服務,並管理供應商關係
- 應付帳款部門使用ERP來準確且按時支付供應商
- 管理層需要即時了解公司績效,以便做出及時決策
- 銀行和股東需要準確的財務記錄,因此他們依賴 ERP 系統提供的 可靠數據和分析

以下是一些特定行業的ERP使用案例示例:

#### 製造業

離散製造、批量生產和連續流程製造商依賴ERP來實現產品質量目標、 管理資產利用率、控制加班成本等。製造商還通過監控庫存動向、識別表現 最佳和欠佳的產品,以及更高效地管理採購,實現端到端的庫存控制。

# 批發業

批發商、進口商、直接商店配送公司以及第三方物流(3PL)/第四方物流(4PL)公司希望降低分銷成本、增加庫存周轉率並縮短訂單到現金的時間。 為實現這些目標,他們需要整合庫存管理、物流功能以及定制自動化流程。

# 零售業

當實體店與電子商務和其他數位銷售渠道融合時,零售業經歷了重大轉型。一致且整合的數據對於提供自助服務選項(如識別、配置、購買和運送產品)至關重要。ERP還幫助零售商減少購物車放棄率、提高網站轉化率並提升平均訂單價值。

許多組織——尤其是小型企業——通常最初使用簡單的獨立工具來管理其業務流程,例如QuickBooks或Excel電子表格。採用ERP系統可能感覺不必要,像是增加了複雜性。然而,隨著任何規模的企業成熟和擴展,這些

管理工具可能變得低效且不可持續,阻礙可擴展性並影響優化。

以下是一些常見跡象,表明公司已經不再需要現有的管理工具,並準備好使用現代 ERP 系統:

- 1. 花費過多時間在日常任務上
- 2. 難以獲取關鍵業務數據
- 3. 業務流程失控
- 4. 缺乏標準化流程和重複的數據集
- 5. 錯失太多機會

#### ERP 的好處:

- 1. 提高生產力:簡化並自動化核心業務流程,使組織中的每個人都能 以更少的資源完成更多工作。
- 2. 更深入的洞察: 消除信息孤島,獲得單一的真實數據來源,並快速 回答關鍵業務問題。
- 3. 加速報告:快速完成業務和財務報告,輕鬆分享結果以根據洞察採取行動並實時改善績效。
- 4. 降低風險:最大化業務可見性和控制力,確保符合監管要求,並預測和預防風險。
- 5. 簡化 IT:使用共享數據庫的整合 ERP 應用程序,簡化 IT 並為每個人提供更輕鬆的工作方式。
- 6. 提高敏捷性: 通過高效運營和隨時訪問實時數據, 識別並應對新機會。



- Digital DIY 數碼不求人 現成基礎方案一站式平台 https://ddiy.hkpc.org
- 香港網絡安全事故協調中心 https://www.hkcert.org
- 中小企支援組 www.smereachout.hkpc.org
- 資助易 https://bee.hkpc.org
- 生產力學院 www.hkpcacademy.org
- 守網者 https://cyberdefender.hk
- T-box (Transformation Sandbox)
   https://smesupport.hktdc.com/en/s/tbox
- 數碼學堂 https://academy.hktdc.com
- 數碼轉型支援先導計劃 (DTSPP) 方案清單
   https://dtspp.cyberport.hk/zh-hk/solution-list-digit
   al-payment-solutions-and-shopfront-sales-hk/
- FreightAmigo一站式數碼供應鏈金融平台www.freightamigo.com

- Supply Chain Logistics Management Solutions from SAP https://www.sap.com/hk/products/scm/supply-cha in-logistics.html
- ERP 解決方案: https://www.sap.com/hk/products/erp/what-is-erp. html
- YOOV 綜合業務管理 – 類似無代碼系統開發平台,滿足企業全面工作需求 AI 驅動的 OCR 解決方案 – 以 AI 精準將文件轉化為數據www.yoov.com
- Widerworld
   業務與數碼轉型解決方案及培訓
   www.widerworld.com
- Amazon Web Services 免費培訓與數碼課程 https://aws.amazon.com/training
- 香港出口信用保險局 www.hkecic.com
- Kingdee金碟ERP熱門方案 https://kingdee.com.hk
- 用友 Yonyou 供應鏈管理解決方案 https://yonyou.com.hk

# 免費資源/其他管道:

### LogTech Expo

為幫助本地物流中小企業掌握行業最新技術趨勢,支持物流業培養更多專業人才以實現升級與轉型,並鼓勵業界善用政府資助,推動智慧與綠色物流的發展。

展覽將設有展覽攤位和研討會,展示物流技術、介紹智慧與綠色物流的培訓,並提供政府資助計劃的現場申請支援。參與者還可以參加主題導覽和互動體驗環節。專家講者將通過小組討論與參與者探討如何善用政府資助,幫助企業升級轉型至智慧與綠色物流,從而提升效率與生產力。

了解更多詳情,請訪問:

https://logtechexpo.hkpc.org

### 數碼轉型的成功案例

數碼 DIY 平台(Digital DIY Portal)已收集了超過 250 個來自不同行業的成功案例。企業可以深入了解每個案例的具體情況、實施過程及其帶來的成果,從而掌握數碼轉型的實踐方法,並制定更符合自身需求的數碼策略。

了解更多成功案例,請訪問:

https://ddiy.hkpc.org/en/success-stories

# 免費 AI 聊天機器人/工具

#### Poe

網址:https://poe.com/ 企業可以使用 Poe 上的 AI 聊天機器 人來提問、撰寫或翻譯文章,並協助內 容行銷。

#### Canva

網址:https://www.canva.com/en\_gb/ 這是一個易於使用的圖形設計工具。 企業可以使用它來創建海報、 Instagram 和 Meta 等平台的圖片。

# 付費工具

企業可以根據需求和預算選擇合適的付費訂閱計劃,以促進工作進度和生產力。

# Midjourney

網址:

https://www.midjourney.com/home 可以根據文字提示或指令快速生成多 樣化且高品質的 AI 圖像,適合需要頻 繁牛成圖像的公司。

# 免費線上課程(MOOCs)

網址:www.mooc.org 大規模開放在線課程 (MOOCs) 是免 費的線上課程,任何人都可以註冊。 MOOCs 提供了一種經濟實惠且靈活 的方式來學習新技能、提升職業生涯, 並提供高品質的教育體驗。

### 總結

有許多免費和付費版本的 AI 聊天機器人/工具可供選擇。以上 AI 聊天機器人/ 工具的免費版本在一定程度上可以協助企業改善工作流程和效率。

# 顧問公司網站/報告

McKinsey Insights 為企業和管理層提供行業前瞻分析

**Digital BCG** 

協助企業向數碼、科技和數據轉型

Deloitte Technology 為科技、媒體、娛樂、通訊產業行業意見

### 鳴謝

# 項目督導委員會

香港付貨人委員會主席林宣武先生GBS, JP, FCILT 香港付貨人委員會執行總幹事何立基先生JP 香港航運物流協會陳秉友主席 香港物流商會鍾鴻興主席 香港食品委員會陳建年會長 香港O2O電子商務總會許文俊會長 香港环石玉器金銀首飾業商會黃紹基理事長 香港中華出入口商會貝鈞奇會長SBS, BBS, MH 香港生產力促進局數碼轉型部陳仲文總經理

### 合作機構

香港中小型企業聯合會有限公司 香港中小型企業總商會有限公司 香港中華廠商聯合會 香港總商會 香港物流協會有限公司 香港中華出入口商會 香港工業總會 香港物資採購與供銷學會有限公司 香港航運物流協會有限公司 香港運輸物流學會 香港貨運物流業協會有限公司 香港中華總商會 香港物流商會有限公司 香港食品委員會有限公司 香港物流管理人員協會 香港貨櫃碼頭商會有限公司 香港珠寶首飾業商會有限公司 香港 O2O 電子商務總會有限公司 (排名不分先後)





































#### 聲明

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本項目報告所述資料截至2025年2月為止。如有任何疑問,請向我們查詢。

聯絡我們 Contact Us: 香港付貨人委員會

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