

Logistics and Supply Chain MultiTech R&D Centre 物流及供應鏈多元技術研發中心

For Immediate Release

LSCM Logistics Summit 2023 "The Role of Smart Logistics in Facilitating the Greater Bay Area Development"

Exploring smart logistics with e-commerce technologies, supply chain digital transformation and Hong Kong's smart city advancements to unleash future opportunities

11 October 2023, Hong Kong — The Logistics and Supply Chain MultiTech R&D Centre (LSCM) successfully held its flagship annual event, **LSCM Logistics Summit 2023**, today at Hong Kong Science Park. Under the theme of "**The Role of Smart Logistics in Facilitating the Greater Bay Area Development**", the event highlighted the latest technology advancements that facilitate the development of Smart Logistics in Hong Kong and the significance of Smart Logistics in the Greater Bay Area development in fostering the economic growth in the area. In addition, LSCM also showcased a series of its cutting-edge and award-winning technologies developed for the logistics and other sectors at the Summit, including the Automated Concrete Cube Testing System, Electronic Power Assist Trolley System, e-Smart Port Platform and RFID Devices (Two-piece Device for Tolling Application).

The Summit brought together government officials, industry experts, business leaders, and academia to share their experience, views and valuable insights on how enterprises in different sectors can leverage advanced technologies to accelerate digital transformation and enhance efficiency and productivity so as to facilitate the development of Smart Logistics in Hong Kong, thereby fostering the economic growth in the GBA.

In his Opening Remarks, **Mr LEUNG Chun-ying**, GBM, GBS, JP, Vice Chairman of the National Committee of the Chinese People's Political Consultative Conference stressed the importance of innovation and technology to Hong Kong's development, "For Hong Kong to upgrade its status as a transportation centre, cross-boundary logistics solutions backed by policy and innovations would be needed to achieve the goal of upgrading. All the rigid and unnecessary policy barriers impeding cross-boundary traffic should be lowered or removed altogether using the latest technology while complying with the "One Country, Two Systems" principle."

"As an international trade and logistics centre, Hong Kong plays a unique role in promoting and supporting the economic development of the GBA. We welcome enterprises based in GBA to utilise Hong Kong's smart logistics services and leverage on its advantage as a regional distribution centre to develop e-commerce and high value-added freight forwarding and logistics business," said **Ms Mable CHAN**, JP, Permanent Secretary for Transport & Logistics, The Government of the Hong Kong Special Administrative Region, in her special remarks. "We would like to express our sincere gratitude to LSCM for being a long-term trusted partner of the Government in facilitating the smart logistics development in Hong Kong."

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Sharing by Hong Kong celebrities who participated in LSCM's Smart e-Book Research Project featuring their AI synthesised voices

One of the key highlights of the Summit was LSCM's "Authors x AI Real Voice Audiobook" project, featuring **Mr LAM Chiu Ying**, SBS, Chartered Meteorologist, **Mr TAM Yiu Chung**, GBM, GBS, JP, Vice Chairman, Chinese Association of Hong Kong & Macao Studies, and renowned artiste **Dr WANG Ming Chun, Elizabeth**, GBS, SBS. They had attended the recording sessions to read out a few scripts extracted from their publications for LSCM to use its AI technology to generate other chapters of the publications into English, fostering the development of Smart e-book in Hong Kong, thereby facilitating the growth of the publishing industry overseas, as well as promoting cultural exchange. At the event, they shared their memorable experiences of participating in the project and how they were amazed by the convenience and joy that technology advancement brings about.

Showcasing key technology innovations to drive industries forward

LSCM has developed a number of innovative technologies for the industry to enhance efficiency and the quality of life of the public. For instance, the RFID Device for Tolling Application is a two-piece device which facilitates the application in tolling systems. The unique identity of the driver's tolling account is kept in the standalone RFID card with a short-read range of around 3 cm. Once the card is put into the card slot, the amplifying antenna in the card slot will couple with the RFID card, extending the read range to more than 6 metres. The 2-piece tag device can easily differentiate different drivers driving the same commercial vehicle. The RFID card can serve as the driver's identity card. In the tolling application, information of both the drivers and the vehicles can be collected during each transit.

"LSCM has been working closely with the Government, industry and the academia to develop innovative technologies to assist the industry in coping with the challenges ahead while seizing future opportunities in the GBA," said **Ir Prof Alan LAM, JP, Chairman of the Board of Directors, LSCM**, in his welcome remarks at the Summit. "Looking to the future, we will continue to strive to develop various innovative technologies for the industry and the community, fostering the Smart City development in Hong Kong, while making the best of Hong Kong's advantages to reinforce the city's status as the international trade and logistics hub of the GBA."

(Please see Appendix I for more information on the LSCM technologies showcased at the Summit.)

Heavyweights from the government, industry and academia shared insights into the advancement of innovation and technology

The LSCM Logistics Summit 2023 served as a key platform for government officials, industry experts, business leaders and the academia to share their insights on how innovative technologies can foster the development of logistics and supply chain related industries in the digital era. Keynote speakers included **Mr Rudy HUI**, Assistant Commissioner (Excise & Strategic Support), Customs and Excise Department, **Dr Robin LI**, Deputy General Manager and Board Secretary, China Merchant Ports Co., Ltd., **Ir Dr Raymond CHEUNG**, JP, Head of Geotechnical Engineering Office & Deputy Commissioner of Mines, Civil Engineering and Development Department, **Mr Albert CHOW**, Executive Director, Hong Kong Council for Accreditation of Academic and Vocational Qualifications (HKCAAVQ), LSCM and **Mr Simon WONG**, MH, FCILT, Chief Executive Officer, LSCM.

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About LSCM

The Logistics and Supply Chain MultiTech R&D Centre (LSCM) was founded in 2006, with funding from the Innovation and Technology Fund of The Government of the Hong Kong SAR, and is cohosted by the University of Hong Kong, the Chinese University of Hong Kong and the Hong Kong University of Science and Technology. It aims to strengthen the local logistics sector and related industries by providing a one-stop resource for applied research and technology transfer, and to reinforce cooperation between the industry and research institutes, so as to bring about meaningful and significant benefits to the industry and the community. For more information, please visit <u>www.lscm.hk</u>.

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Photo Captions

Photo 1:



The Logistics and Supply Chain MultiTech R&D Centre (LSCM)'s annual flagship event – **LSCM Logistics Summit 2023**, themed "**The Role of Smart Logistics in Facilitating the Greater Bay Area Development**" – concluded successfully at Hong Kong Science Park. Industry experts, business leaders and representatives from the academia shared their valuable insights on e-commerce technology, logistics digitalisation and Hong Kong's Smart City development.

Photo 2:



In her special remarks, **Ms Mable CHAN**, JP, Permanent Secretary for Transport & Logistics, The Government of the Hong Kong Special Administrative Region, acknowledged LSCM's dedication in fostering the development of Smart Logistics in Hong Kong, facilitating the growth of the development of the Greater Bay area, thereby assisting Hong Kong's development into an international smart logistics hub.



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Photo 3:



During the "Authors x AI Real Voice Audiobook" session, one of the highlights of the Summit, Mr LAM Chiu Ying, SBS, Chartered Meteorologist, Mr TAM Yiu Chung, GBM, GBS, JP, Vice Chairman, Chinese Association of Hong Kong & Macao Studies, and renowned artiste Dr WANG Ming Chun Elizabeth, GBS, SBS, shared their experiences of participating in LSCM's Smart e-BookResearch Project.

Photo 4:



In his welcome remarks, Ir Dr Alan LAM Hiu Fung, JP, Chairman of the Board of Directors, LSCM, emphasised the significance of LSCM's collaboration with the Government, Industry and the academia in developing innovation and technology, assisting the industry to cope with the future challenges.

Photo 5:



At the exhibition in LSCM Logistics Summit 2023, LSCM showcases its technologies to promote technology adoption in the industry.



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Appendix I: Latest innovative technologies from LSCM

1.	RFID Device (Two-piece Device for Tolling Application)
	The system consists of the integrated antenna and a 2-piece device which includes the RFID card (driver's card) and the slot. The integrated antenna is a UHF RFID antenna that LSCM specially designed for installation in the lamp pole. Considering the deployment in outdoor environment, the antenna is a thin structure, and it is lightweight, wind resistant and UV/IR resistant.
	TOPPAN Edge (Hong Kong) Ltd. has utilised a groundbreaking combination of PCH, PETG, and stainless iron plates materials in the production of the RFID card (driver's card) and the slot. The RFID card can store the unique identity of the driver's tolling account. It has a short-read range of around 3cm. Once the card is put into the slot, the antenna in the slot will couple with the RFID card to extend the read range to more than 6m.
	Besides, the 2-piece tag device has a magnetic-locking feature, which facilitates the application in tolling systems. LSCM collaborated with TOPPAN to ensure 100% pass rate through specialised QC tools for each card and RFID slot. For commercial vehicles with multiple drivers driving the same vehicle, the 2-piece tag device could easily differentiate different drivers, and the RFID card can serve as the driver's identity card. In the tolling application, both the driver's and vehicle's information can be collected at the same time in each transit.
2.	Smart Area-Wide Traffic Control System for Better Mobility
	A Smart Area-Wide Traffic Control System is developed by deploying cameras, sensors, and algorithms to adjust traffic signal timings based on real-time traffic conditions. With the smart system in use, significant reductions in delays and queue lengths are achieved in an area with multiple junctions as compared to the traditional traffic control system.
3.	Intelligent Traffic Enforcement System
	An Intelligent Traffic Enforcement System is developed to identify and record roadside traffic offences such as illegal stopping at a road section with no-stopping restriction. The system is helpful in reducing congestions and enhancing road safety.
4.	Electronic Power Assist Trolley System
	This is an electronic power assist trolley system with an intuitive control function. Sensors are strategically embedded in the trolley handlebar to measure the micro deformation of the materials when force is applied by the user. The torque vector is calculated 100 times per second based on the sensor's value by an onboard AI controller. Amplified torque is generated by two motors connected to the wheels of the trolley. Turning left/right or forward/backward depends on the calculated torque vector. The manoeuvre of this power assist trolley is the same as a traditional mechanical trolley without buttons, joysticks and controllers. No prior training is required when using the trolley and it can be manoeuvred like an empty trolley even if it is heavily-loaded. The built-in power regeneration and brake system make it safe for use even on a ramp.



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5.	Automated Concrete Cube Testing System
	LSCM and the Geotechnical Engineering Office of Civil Engineering and Development Department (GEO/CEDD) jointly developed the Automated Concrete Cube Testing System. The system can automatically carry out the entire concrete cube testing procedure, including concrete cube curing, weight and dimension measurement and compression test. The system consists of an overhead xyz moving stage, robotic arm on rail, laser 3-dimensions measurement device and compression test machine. Equipped with Al technology, the system can distinguish whether the fracture mode of the concrete cube sample meets the prescribed requirements using computer vision technology. The system has already been put into operation at GEO's Public Works Regional Laboratory (Sham Shui Kok).
6.	e-Smart Port Platform
	LSCM has been working with the Transport and Logistics Bureau to study the development of the e-Smart Port Platform (eSPP). It is a data-smart infrastructure and an inter-organisational software platform to facilitate the sharing of port and logistics information in the port community. eSPP deploys blockchain technology, smart contracts, advanced IoT and global positioning technology, etc. with a view to tracking and visualising the global supply chain and port logistics effectively. eSPP also includes a News Portal App which gathers industry news, reports, blogs, and other useful information for the port community's reference and discussion.