



For Immediate Release

LSCM Logistics Summit 2022
“Rise Above the Challenges with Innovation”

Showcasing the latest technologies in logistics and related sectors for the industry to seize unlimited future opportunities and flourish in the new normal

30 September 2022, Hong Kong — The Logistics and Supply Chain MultiTech R&D Centre (LSCM) successfully held its flagship annual event, **LSCM Logistics Summit 2022**, today at Hong Kong Science Park. Under the theme of **“Rise Above the Challenges with Innovation”**, the event highlighted the importance of innovative technologies for the industry to enhance competitiveness and prepare for the challenges in the post-pandemic new normal. LSCM’s showcased technologies included MaxBot, Tele-practice Platform, AIoT Herbal Picking and Delivery System, Adaptive Voice Localisation System for Service Robot, e-Publishing Platform, Robo-9 and Next Generation End-to-End Healthcare Community Support System. In addition, LSCM’s partnering organisations and local universities also exhibited their latest collaborative projects developed for fostering Smart City development in Hong Kong.

The Summit gathered government officials, industry experts, business leaders and academic representatives to share their inspiring insights on how businesses can make use of digital transformation with innovative technologies to enhance efficiency and productivity, as well as driving the industries forward.

“I am glad to see that the LSCM has been collaborating with different government departments and developed various systems using IoT (Internet of Things) technologies to support Hong Kong to become a smart city, thereby enabling our members of the public to enjoy the convenience and improvements to their daily lives brought by the technological advancement, and certainly making Hong Kong a better place to live,” said **Prof Dong SUN**, JP, Secretary for Innovation, Technology and Industry, The Government of the Hong Kong SAR, in his opening remarks.

Launch of a pioneering technology platform encouraging the industry to adopt innovative technology to seize future opportunities

One of the highlights at the Summit was the official launch of the pioneering “LSCM x Microsoft Tech Platform” jointly developed by LSCM and Microsoft Hong Kong. The platform aims to encourage the industry to adopt innovation and technology to enhance efficiency and productivity. At the Summit, **Ir Dr Alan LAM Hiu Fung**, Chairman of the Board of Directors, LSCM, **Mr Simon WONG**, MH, FCILT, Chief Executive Officer, LSCM, **Mr Anthony KWOK**, Chief Operating Officer, LSCM, **Ms Cally CHAN**, MH, General Manager of Microsoft Hong Kong and Macau, **Mr Fred SHEU**, National Technology Officer, Microsoft Hong Kong, and **Ms Serena CHEUNG**, Director, Public Sector Group, Microsoft Hong Kong, announced the launch of the platform. “In the digital economy, Cloud Computing is a crucial enabler of digital transformation in terms of scalability, time-to-market, security and innovation. Striving to collaborate with research institutes in Hong Kong such as LSCM in the R&D of innovation and technology is always our core mission,” said **Ms Cally CHAN**, General Manager of Microsoft Hong



Kong and Macau. “As the technology enabler, we are thrilled to jointly develop the ‘LSCM x Microsoft Tech Platform’ with LSCM, joining hands to empower local logistics and supply chain players to embrace digital transformation with Microsoft technology solutions and expertise. Together with LSCM and the logistics and supply chain sector, we support Hong Kong to build a world-class smart city.”

Signing of a groundbreaking MoU between LSCM and China Mobile Hong Kong to collaborate in fostering the development of innovation and technology in Hong Kong

Another highlight of the Summit was the signing of a Memorandum of Understanding (MoU) between LSCM and China Mobile Hong Kong (CMHK). Witnessed by **Mr Simon WONG**, MH, FCILT, Chief Executive Officer, LSCM, and **Mr Sean LEE**, Director & Chief Executive Officer of China Mobile Hong Kong, **Mr Anthony KWOK**, Chief Operating Officer, LSCM, and **Dr Max MA**, Director and Executive Vice President of China Mobile Hong Kong, signed the MoU, signifying the collaboration of the two parties in fostering the development of innovation and technology in Hong Kong.

Mr Sean LEE, Director & Chief Executive Officer of China Mobile Hong Kong, expressed that, “As a leading 5G telecommunications service provider, CMHK has spared no effort in boosting innovation and technology development in Hong Kong, and is committed to integrating smart technology applications into all industries, thus promoting smart city development in Hong Kong. It is with great pleasure we enter into a strategic partnership with LSCM. We look forward to a strong partnership between the two parties, leveraging on CMHK’s powerful 5G network, combining iSolutions’ new technologies and diversified services, and reaching more milestones in local logistics research together with LSCM.”

“LSCM is excited to collaborate with the two renowned companies, Microsoft Hong Kong and China Mobile Hong Kong, in developing innovation and technology and in fostering the adoption of technology across different industries. Our initiatives will enhance the application of technology in smart city development, smart mobility and logistics and supply chains, as well as the community for the elderly. The industry is encouraged to utilise innovation and technology to grasp the future opportunities,” said **Mr Simon WONG**, MH, FCILT, Chief Executive Officer, LSCM at the Summit.

Showcasing key technology innovations to drive industries forward

LSCM has newly developed several technologies to enhance the operations and services of different industries, as well as the quality of life of the public. For instance, the Multi-Area-eXpandable Robot (MaxBot) is capable of smooth and agile operation on various surfaces, which is very useful in warehouses and other environments, while the Tele-practice Platform provides support to different service users, such as the elderly and children with disabilities, and enables the therapists to remotely deliver their services, such as assessment, training, case follow-up and evaluation.

“LSCM is committed to developing innovative technologies for the logistics and related industries, while facilitating smart city development in Hong Kong,” said **Ir Dr Alan LAM Hiu Fung**, Chairman of the Board of Directors, LSCM, in his welcome remarks at the Summit. “The COVID-19 pandemic has brought about significant changes to the global supply chain and economy, which led to the



acceleration of enterprises' efforts in digital transformation. Technology is indispensable in tackling the challenges in the post-pandemic new normal. In the future, LSCM will continue to work closely with the industry to develop innovative technologies in order to enhance the competitiveness of Hong Kong."

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

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

The **LSCM Logistics Summit 2022** served as a key platform for government officials, industry experts, business leaders and representatives from academia to share insights on how innovative technologies could foster the development of logistics and supply chain related industries in the new normal. Keynote speakers included **Prof Dong SUN**, JP, Secretary for Innovation, Technology and Industry, The Government of the Hong Kong SAR, **The Hon Duncan CHIU**, JP, Legislative Councillor (Technology and Innovation Constituency), The Hong Kong Special Administrative Region, **Dr Sunny CHAI**, BBS, JP, Chairman, Hong Kong Science and Technology Parks Corporation, **Mr Li Nan**, Vice President, China Resources Enterprise, **Dr Thomas SO**, JP, Chairman of eBRAM International Online Dispute Resolution Centre, **Ir Ricky LEUNG**, Executive Director (Engineering & Technology), Airport Authority Hong Kong, **Ar Prof Ada FUNG**, BBS, President, Hong Kong Alliance of Built Asset and Environment Information Management Associations, **Ms Anna LIN**, JP, FCILT, Chief Executive, GS1 Hong Kong, **Ir Dr Alan LAM Hiu Fung**, Chairman of the Board of Directors, 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 co-hosted 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, to bring about meaningful and significant benefits to the industry and the community. For more information, please visit www.lscm.hk.



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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 2022 – concluded successfully today at Hong Kong Science Park under the theme of "**Rise Above the Challenges with Innovation**". The Summit gathered government officials, industry experts, business leaders and representatives from academia to share their inspiring insights on the application of emerging technologies in different industries to enhance their competitiveness and prepare for the challenges in the new normal.

Photo 2:



Prof Dong SUN, JP, Secretary for Innovation, Technology and Industry, The Government of the Hong Kong SAR, delivered the opening remarks for the Summit, expressed that he is glad to see that LSCM has been collaborating with different government departments to support Hong Kong to become a



smart city, enabling members of the public to enjoy the convenience and improvements to their daily lives and making Hong Kong a better place to live.

Photo 3:



As one of the highlights of the Summit, LSCM signed a groundbreaking Memorandum of Understanding (MoU) with China Mobile Hong Kong (CMHK), signifying the collaboration of the two organisations in the development of innovation and technology.

Photo 4:



At this year's Summit, LSCM and Microsoft Hong Kong jointly announced the launch of the "LSCM x Microsoft Tech Platform", which promotes the deployment of technology by the industry to expand their businesses.

Photo 5:



In his welcome remarks, **Ir Dr Alan LAM Hiu Fung**, Chairman of the Board of Directors, LSCM, said that technology is indispensable for businesses to thrive and succeed in the new normal. Looking forward, LSCM will continue to foster the development and adoption of innovation and technology to enhance the efficiency and productivity of the industry.

Photo 6:



In his speech at the Summit, **Mr Simon WONG, MH, FCILT**, Chief Executive Officer, LSCM, said that LSCM would collaborate with two renowned companies, Microsoft Hong Kong and China Mobile Hong Kong (CMHK), in facilitating the development and application of innovation and technology, and the industry is encouraged to utilise technology to grasp the future opportunities.

Photo 7:



In the exhibition at the LSCM Logistics Summit 2022, a series of the latest innovative technologies developed by LSCM, as well as those developed in collaboration between LSCM and its partnering organisations and various local universities, were showcased.



Appendix I: Latest innovative technologies from LSCM

1.	<p>Tele-practice Platform</p>
	<p>The Tele-practice Platform developed by LSCM is a cloud-based system and is designed to provide support to different service users, such as the elderly and children with disabilities, and enable the therapists to remotely deliver their services, such as assessment, training, case follow-up and evaluation. Besides, it is more convenient for these service users to receive the care services remotely as compared to going to the rehabilitation centres in person. Not only can the remote healthcare services be provided to the users in Hong Kong, but also extended to the Greater Bay Area. The platform provides suitable rehabilitation services to users by facilitating collaboration among different tele-service providers, NGOs and therapists. This platform also paves the way for the future “Medical-social Collaboration”, an exciting initiative promoted by the Government to provide better services to their service users.</p>
2.	<p>MaxBot (Multi-Area-eXpandable Robot)</p>
	<p>MaxBot is a versatile mobile robot platform with very small footprint, high payload and expansion capability. The unique central differential drive with suspension system design enables its smooth and agile operation on various surfaces and enables it to run in narrow areas with zero turning radius.</p> <p>It also features a 360-degree collision detection system with front volumetric obstacle detection that makes it safe to operate in a crowded environment. The high payload and expansion capability make it very useful in multiple environments, such as warehouse, restaurant, hotel and hospital, etc.</p> <p>The user can set multiple destination locations and build the map through the graphical user interface for fast deployment. The robot can be used independently without any infrastructure. It can also work in a fleet with the remote fleet management system through Wi-Fi.</p> <p>The hardware and software platforms are also expandable, through which users with relevant technical knowledge can make further development. An auto-charging function is available so that users do not need to worry about running out of battery power.</p>
3.	<p>AIoT Herbal Picking and Delivery System for Traditional Chinese Medicine Hospital</p>
	<p>Taking reference from the operation of hospitals while adapting it to the common Chinese medicine practices, LSCM developed an AIoT herbal picking and delivery system to assist in dispensing medicine, and intelligent robots to deliver the medicine to the designated locations within the hospitals. In addition, the working units of conveyance, herbal dispensing assistant system and deliverbots are developed as system modules to provide higher flexibility for the deployment in hospital operations and facilitate the expansion of the hospital in the future.</p>
4.	<p>e-Publishing Platform</p>



	<p>In the publishing industry, the time and cost required for translation is high. Utilising machine translation could significantly reduce the resources required in the process. Therefore, LSCM has developed the e-Publishing Platform to support Hong Kong Publishing Federation’s “Publishing 3.0 HK Smart E-book Hub Promotion Scheme”. The Scheme is supported by Create Hong Kong, aiming to encourage the publishing industry to utilise technology to enhance efficiency and productivity.</p> <p>The platform utilises domain specific AI NMT (Artificial Intelligence Neural Machine Translation) to translate the e-books, enhancing the quality and efficiency of translation and reducing the cost and the difficulty of hiring suitable interpreters. The “Text-to-Speech” technology can convert the e-books to audio books, which significantly reduces the production time of audio books to a few minutes, and also saves the time and cost for the sound recording process.</p>
5.	<p>Adaptive Voice Localisation System for Service Robots</p> <p>This is a device that can capture and focus on the user’s speech signals. Combining vision and audio signals, it detects and tracks the nearest person’s face, and processes the audio speech signal from the detected person. By using the visual technology, it gathers the information from the target person’s mouth location with its distance and location, using “Near Field” audio processing to capture the speech signal. It uses “Adaptive Beamforming” to reduce the noise which comes from the surroundings. Such technology improves the Signal-Noise-Ratio of the captured speech and improves the Word-Error-Rate (WER) in “Speech-to-Text” recognition.</p>
6.	<p>Robo-9: Sensor Fusion Technologies for the Visually Impaired</p> <p>The visually impaired often encounters various difficulties when going out on their own. To enhance their mobility, LSCM has developed a cost-effective robot vision and sensing technology. The technology has been developed to simulate important functionalities provided by guide dogs, including obstacle avoidance and guidance. The robot is equipped with navigation and locationing functions which can provide walking guidance to the user. And SLAM technology is deployed to provide orientation and navigation information to the user for free walking and going to the target destination.</p>
7.	<p>Next Generation End-to-End Healthcare Community Support System</p> <p>The limitation of traditional healthcare systems is that information cannot be securely shared among different parties. It is difficult to access a patient’s previous medical records from different doctors or specialists for treatment purposes. It is also difficult for pharmaceutical companies to gather data related to their drugs for analysis.</p> <p>This system is a secure healthcare blockchain and data exchange platform that supports information exchange among stakeholders. A permissioned blockchain solution is developed to store the health records and ensure that they are only accessible by authorised individuals. The data is stored in a distributed manner with immutable audit history. It thus facilitates secured and privacy-conscious information exchange among various stakeholders to provide personalised healthcare services.</p>



8.	Latest innovative technologies developed jointly by LSCM and local universities
	<p>Smart City Platform and 3D Mobile Mapping System</p> <p><i>SpaceScanX – A Backpack Mobile Mapping System</i> SpaceScanX is a backpack mobile mapping system which integrates laser scanning hardware and 3D data processing software. The key technologies of SpaceScanX include SLAM, an integrated hardware system which is composed of LiDAR, 360-degree camera, GPS and IMU, and an associated data processing software system. SpaceScanX can scan and generate 3D digital models of a city, including buildings, roads, infrastructure and trees. The digital models are presented in the form of point cloud, coloured point cloud, street view, photo-realistic 3D model, etc.</p> <p><i>Smart City Platform – A Comprehensive Digital Twin Solution</i> Smart City Platform is a comprehensive spatial-temporal big data platform. This system is a B/S (browser/server) architecture based WebGIS system mainly containing data management, web feature service, and data visualisation modules. The system is an open spatial data platform for potential users or communities with different backgrounds, for extension into web-based visualisations and applications based on massive 3D geospatial data.</p>
	<p>AIoT Platform and Multi-modal Analytic Technologies for a Smart City</p> <p>With the advent and penetration of broadband 5G, Wi-Fi and LoRA /NB-IoT technologies, the IoT sector has been experiencing phenomenal growth in recent years. Devices sensing Wi-Fi, BLE and visual signals are increasingly deployed in Hong Kong. Although the sensing data collected in a venue is often correlated in nature, it is usually analysed individually in cloud, forming data silos. It has been a critical industrial challenge to bridge these silos for effective multi-modal learning and mining to support applications such as object recognition, people sensing and user analytics, etc.</p> <p>Therefore, novel IoT and multi-modal analytics technologies have been developed to overcome these challenges. To achieve a cost-effective smart carpark, we have designed a novel AI-based camera platform to recognise a large number of license plates simultaneously by employing our super-resolution technology with an ultra-low streaming rate. To address the data silo problem, we have developed an integrated data platform based on centralised or federated machine learning techniques for multi-modal, sporadic and noisy samples. These technologies will enable cost-effective IoT deployment.</p>
	<p>“BIM Square”: Blockchain BIM for Modular Integrated Construction (MiC)</p> <p>HKU iLab has developed a digital platform, “BIM Square”, for modular integrated construction (MiC) offsite production, cross-border logistics and supply chain, and onsite installation, by synergising BIM, blockchain, and in-house developed i-Core technologies. The platform is formed by three APPs, <i>e-InStar</i>, <i>e-TranStar</i>, and <i>e-InstallStar</i>, which can work separately or can be integrated to function as a whole. The innovations include:</p> <ul style="list-style-type: none"> - blockchain security of quality monitoring, assurance and tracing of the whole production, transport and installation process;



- BIM to visualise the whole process to allow real-time status queries and visualisation of specific modules; and
- in-house developed i-Core technology serving as blockchain oracles to link the BIM and blockchain and to ensure data authenticity through cross-checking.

The platform has been implemented in HKU MiC projects. If it is properly scaled up, it can contribute significantly to solving the housing problems in Hong Kong.