



## Land Surveying Division

Sr Lau Chi Kwong LSD Council Chairman

# The Role of the Land Surveyor Expands

## 1. Professional Services Advancement Support Scheme (PASS): Promote Land Surveying Technological Services to Belt-and-Road Countries

The LSD has collaborated with different Belt-and-Road countries under a funded Professional Services Advancement Support Scheme (PASS) project that aims to promote Hong Kong's land surveying services and enhance exchanges between Hong Kong and Belt-and-Road countries. Its final event was held via Zoom on 7 February.

## 2. Geospatial Data

Land surveyors are no longer limited to common land surveying professions, but can also work with geospatial data. Many are equipped to discuss geo-referenced spatial data captures and data quality, along with their analysis and management. On 25 January, the LSD invited Prof John SHI of PolyU to give a CPD on this topic.

### PASS

The Project commenced on 1 April 2018 with four main deliverables:

- I. Four exhibitions on land surveying services in Mainland China, Pakistan, Kazakhstan, and Sri Lanka and visits to relevant organisations in these countries
- II. Four translations/summaries of these countries' surveying laws and regulations
- III. One conference on land surveying technology in Hong Kong
- IV. Three workshops on technology transfers and surveying industry information in Hong Kong

Throughout the project period, the LSD's project team members fulfilled most of the designated deliverables including exhibiting and promoting

Hong Kong's land surveying services in Pakistan and Kazakhstan. But then Covid-19 appeared and forced the project team to change its original plan from face-to-face interactions to online communications. Still, the team successfully hosted all collaborative workshops with the selected Belt-and-Road country representatives. Furthermore, it hosted a one-day conference in hybrid mode, which allowed land surveying experts from Hong Kong and the four Belt-and-Road countries to share advanced land surveying technologies.

Thanks to the LSD Council, the LSD PASS team was able to present an exhibit in Guangdong Province and conduct technical exchanges with their Mainland counterparts. Recently, the project team completed the final event under PASS: a technology exchange as an online CPD with its Sri Lankan counterparts on 7 February. During the event, four Sri Lankan land surveying experts and two Hong Kong professional land surveyors shared their perspectives on land surveying services including the latest land surveying technologies, surveying legislation, and the surveying profession in Hong Kong and Sri Lanka. Details of their exchange and the names of the speakers are as follows.

### Speeches by Representatives from Sri Lanka:

- A. "Surveying Education in Sri Lanka," Dr Homindra Divithure, Dean, Faculty of Geomatics, Sabaragamuwa University of Sri Lanka
- B. "Land Information System to Enhance Land Management and Good Governance in Sri Lanka," Mr S Sivanantharajah, Retired Surveyor General, Survey Department of Sri Lanka
- C. "Provisions to Become a Registered Surveyor and the Role of the Professional Surveyor: Sri Lankan Context," Ms Shyamalie Perera, Retired Surveyor General, Survey Department of Sri Lanka
- D. "Advancements in Surveying Techniques: A Current Overview of Practices in Sri Lanka," Dr GSN Perera,

Head, Department of RSGIS, Faculty of Geomatics, Sabaragamuwa University of Sri Lanka

### Speeches by Representatives from the LSD:

- A. "Land Surveying Organisation in the HKSAR Government and Surveying Legislation in Hong Kong," Sr LEE Yiu Hing, Senior Land Surveyor/Legislation, Lands Department
- B. "An Introduction to the HKIS LSD," Sr Ricky CHEUNG, LSD Honorary Treasurer (Supporting: Sr Yvonne CHEU Yuk Yi, LSD Vice Chairman)

Thanks go to all parties who supported PASS on its different deliverables. The LSD believes that the project fulfilled its primary objective: to promote Hong Kong's land surveying services to Belt-and-Road countries.

## Geospatial Data CPD Highlights

### Advances in Digital Twinning Technologies for Smart Cities

The LSD had the pleasure to invite fellow member Sr Prof John SHI, Director of PolyU's Otto Poon Charitable Foundation Smart Cities Research Institute and Chair Professor in Geographic Information Science and Remote Sensing, to deliver a CPD, "Advances in Digital Twinning Technologies for Smart Cities," on 25 January.

Prof SHI introduced the framework of urban informatics, which is an emergent trans-discipline that integrates urban science, computer science, and geoinformatics and aims to develop more efficient and sustainable cities. He then highlighted three recent advancements in digital twinning technologies for smart cities:

- a) A multi-platform and multi-sensor mobile mapping system for generating digital twins
- b) Quality control technologies for photorealistic 3D models for ensuring the quality of digital twins
- c) A smart city platform for managing the data and analytics of digital twins.

The talk concluded with a prediction on the future of digital twinning and a summary of the latest developments in urban informatics.

After the presentation, Sr Edmond LAM moderated a Q&A session between Prof SHI and participants, which featured insightful discussions on the governance of 3D data standardisation and the interoperability of the data captured by profound urban sensors.

On behalf of the LSD, I express gratitude to Prof SHI for taking members on a fascinating journey to build a smarter Hong Kong through the application of various advanced digital



Sr LEE Yiu Hing during His Presentation



Sr Ricky CHEUNG during His Presentation



(L-R): Sri Lanka experts (on-screen), Sr Dr Conrad Tang, Sr LEE Yiu Hing, Sr Ricky Cheung, and Sr Yvonne CHEU discuss various land surveying development issues in Hong Kong and Sri Lanka during the sharing session.

# DIVISIONAL NEWS & ACTIVITIES

## 組別簡訊

twinning technologies including the latest urban sensory devices, standardised 2D/3D spatial data, and an interoperable city data platform for collecting and analysing static and dynamic city data. Moreover, I highly appreciate Sr Prof SHI's generosity for offering his textbook, Urban Informatics, for free download. As of this writing, it has been downloaded over 1.5 million times! I encourage all HKIS members to acquire a copy of it to capture Sr Prof SHI's knowhow and insights into urban informatics. Last, but not least, I thank Sr ZHANG Haodong for helping to host this event.

### SpaceScanX 多平台移動測量系統及應用示例

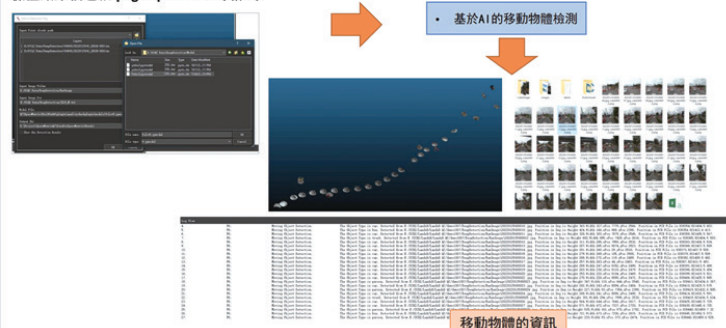


### 城市信息學五大維度

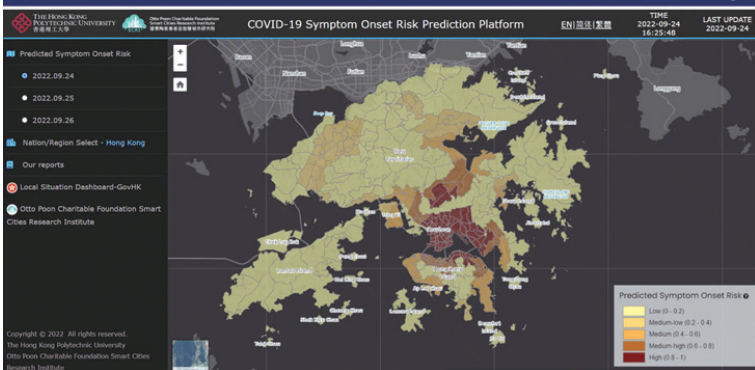


### 實景三維中國香港資料質量檢查系統

該功能輸入一系列.pcd或.las格式的點雲檔及其對應的pos檔和全景影像檔，進行移動車輛的檢測。檢查結果檔包括.png、.pcd、.csv等格式。

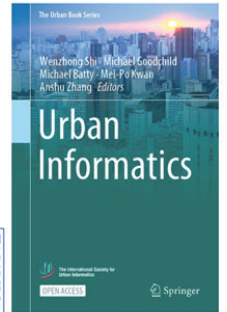


### 智慧城市平臺：新冠病毒發病風險預測系統



### Urban Informatics – 城市信息學里程碑著作

- 本書是**第一本**系統介紹城市信息學原理及其在城市運作、控制、管理和未來規劃等各方面應用的著作。
- 自 2021 年以來章節下載量超過**150萬次**，是 Springer 2022 年**章節下載量最高**的交叉學科與社科類圖書，該類別每年出書2000本以上。
- 學界和業界讀者廣泛評論為“必讀書”、“迄今為止（對規劃者）瞭解智慧城市最好的入門書”。
- 本書被**麻省理工學院**、**浙江大學**等著名學府選為參考/教科書。



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(L-R): Sr CK LAU presents a certificate of appreciation to Sr Prof John SHI.



(L-R): Sr Edmond LAM conducts a Q&A session with Sr Prof John SHI.