

# 报告

建设可持续智慧校园

## Building a Sustainable and Smart Campus

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### 讲者介绍 Biography

Professor Fung Tung is professor of the Department of Geography and Resource Management, The Chinese University of Hong Kong. He is also Co-Director of the Institute of Future Cities and Associate Director of the Institute of Environment, Energy and Sustainability. He was Associate Vice-President of the Chinese University of Hong Kong from 2009 to 2017. His research areas include land use and land cover change detection, hyperspectral image/data analysis, landscape ecology, wetland monitoring, mangrove species mapping and leaf area index modeling and development of digital image analytical techniques including object-oriented image analysis and multifractal analysis for image fusion, image classification and monitoring environmental changes using remotely sensed data of different resolutions. During his service as Associate Vice-President of CUHK, he led the design, planning and implementation of Campus Master Plan. He helped build important teaching and research facilities including University Library Extension, Integrated Teaching Blocks, Student Amenity Centre, 5 new Colleges for undergraduates and hostels for postgraduate. He also led the university in building a sustainable campus through a series of policies plans and programmes. CUHK won the Hong Kong Awards for Environmental Excellence Gold Award twice in 2009 and 2014; Green Building Award (Green Leadership Category) in 2016 as well as overall championship in Energy Saving Championship Competition in 2017 under his leadership. He also won donation from Hong Kong Jockey Club to build the first Museum of Climate Change in the world.

### 报告摘要 Abstract

Building a sustainable campus was stipulated in the CUHK campus master plan (2010) as one of the six planning precepts. Long term target was set to reduce per capita energy consumption and greenhouse gas emission at 25% and 20% respectively by 2025. The Campus Planning and Sustainability Office has been established to formulate policies, plans and develop programs for this purpose. It works jointly with Campus Development Office and Estate Management Office based on which CUHK develops a rigorous sustainability framework on both infrastructure development as well as stakeholder engagement. The concept of sustainability goes hand in hand with that of smart city. Advancement in ICT and prolific usage of smartphone and related devices helps promote sustainability. Aligning with the concept of green buildings, new academic buildings are designed, built and managed with building management technologies. Existing buildings are retrofitted with similar systems. These systems together with the provision of smart sensors on motion, air quality, light, temperature and humidity, building performance parameters such as energy consumption can be monitored and optimized.

Institute of Future Cities was established in 2013 to promote interdisciplinary and transdisciplinary research for sustainable urban futures. Four research centres on (1) Urban History, Culture and Media; (2) Land Resource and Housing Policy; (3) Urban Sustainability and (4) Community and Place Governance as well as a research program on Urban Informatics have been set up within the institute. An important project jointly pursued with Hong Kong Science and Technology Park is to develop a smart region living laboratory for smart city between CUHK and HKSTP to support and pilot application of innovative solutions. It is aimed to accelerate the adoption of new technology, to enhance collaboration and knowledge sharing and to build a vibrant social community for cultural and technology exchange. Four prime areas are identified namely, social culture platform, autonomous self-driving vehicles, smart buildings and facility management and cashless society in the initial phase of development.