

香港 2030+ 知識分享研討會 - 智慧、環保及具抗禦力的城市
(1/4/2017)

運輸 • 生活

講者: 盧佩瑩教授, 香港大學地理系教授

簡報摘要

在過去一百多年, 我們的運輸模式是以管道、鐵路、道路、水路及空運為主。然而, 講者指出運輸系統中所採用的燃料、交通工具的建造物料、以至資訊科技的應用, 卻大有不同。而我們在出行態度及行為上亦有各種重大的轉變, 明白到在經濟、社會及環境需要之間要取得平衡以達致可持續性、抗禦轉變的重要性、慢慢開始接受共享, 以及生活態度上社會更重視人與人之間的公共空間。這些趨勢為我們帶來可持續運輸突破和進步的機遇。講者繼而講解「可持續運輸」概念對未來規劃方向的啟示: 運輸系統的「可持續性」, 取決於是否可保護環境資源、減低交通排放、交通擠塞及交通意外的能力、所採用的物料可否循環再用, 以及在社會及經濟方面是否可持續。講者亦指出, 環境、經濟及財務、以及社會各方面的可持續性, 互相之間是存在矛盾, 並且需要妥協。此外, 講者亦認為「可持續發展」需要有「時間性」的觀念: 因在系統運作過程中無可避免會遇到自然或人為的破壞性事件, 故此抗禦力是維持可持續發展重要的一環。同時, 「可持續運輸」的概念亦會因應社會改變而演進。講者對於達致「可持續運輸」的策略有以下觀點及建議:

- 現今, 減碳不應只講求達致在某一年的一些既定目標 (如二氧化碳減排目標), 而是應以生活周期去計算碳排放, 例如興建道路不再只考慮耗用了多少瀝青, 亦需考慮道路建成後所增加的交通流量及其碳排放。
- 講者認為, 職住空間的分佈, 不單會影響交通流量, 亦會影響市民生活的質素及碳排放, 是達致低碳運輸的關鍵。講者亦指出, 單靠將各樣交通工具的碳排放減至最低, 並不等如整體運輸系統的碳排放能達致最低: 我們需考慮引進新的營運模式, 淘汰不理想的營運模式, 而不同使用者的出行需要應配以合適的運輸模式, 並與土地用途相配合。

- 無論從經濟、日常需要還是社交而言，出行都是生活重要的一部分。城市不同空間的層次必須得以流通。作為骨幹，鐵路對於不同空間的流通是重要的，但鐵路系統亦需其他不同種類交通模式的協助才能運作良好。講者指出，公交為本的城市交通發展是一個「社區」的概念，關乎運輸網絡設計、泊車設施、行人及單車友善、土地用途分佈、房屋類型及密度、公共及私人設施的規劃、以至公共空間的設計。講者亦特別指出步行對於配合公共交通的重要性。而就中長途的出行而言，鐵路確實在載客、能源消耗及二氧化碳排放方面都比空運和道路交通表現較佳，對於空氣污染及生物多樣性方面的負面影響也較少。
- 在一個公共交通為本的城市中，轉乘是必要的一環。無縫的轉乘需要資訊、票務、以及交通設施和公交服務各方面的整合。而步行對於無縫轉乘亦是十分重要的。

講者指出，運輸規劃需要從使用者的角度出發。各方面政策(如可持續運輸與綠色城市)的配合是十分重要的。最後，講者希望政府、商界、使用者及學者均能擁抱新的思維，通力合作，把握資訊科技的創新，繼續改進整體的運輸系統以達致可持續運輸。

**Hong Kong 2030+ Knowledge Sharing Seminar –
Smart, Green and Resilient City (1/4/2017)**

Transport • Life

Speaker: Professor Becky P. Y. LOO,
Professor of the Department of Geography, The University of Hong Kong

Abstract of Presentation

Over the past hundred years, pipeline, rail, road, water and air transport are our main modes of transport. The Speaker, however, points out that the fuels, materials, and information technology adopted in our transport system have undergone significant changes. Besides, attitudinal and behavioural changes in the aspects of sustainability (the need to strike a balance among economic, social and environmental needs), resilience, transport preferences (e.g. sharing) as well as other lifestyle preferences (e.g. human interactions) are happening. These trends have opened up opportunities for breakthroughs and advancements in achieving sustainable transport. The Speaker then proceeds to explain how the concept of sustainable transport guides future planning directions. The comprehensive sustainability of our transport system depends on the preservation of environmental resources, the ability to minimise transport emissions, traffic congestion and traffic fatalities/injuries, the use of recyclable materials in vehicle construction, as well as social and economic sustainability. The Speaker also points out that there are inherent conflicts among environmental sustainability, economic and financial sustainability, and social sustainability, which has to be resolved through compromise. In addition, the Speaker considers that there is a temporal dimension in the concept of transport sustainability: since natural and/or man-made adverse events are likely to happen over time, resilience is the key of sustainability. The Speaker then makes the following viewpoints and recommendations for the strategy to achieve sustainable transport:

- Nowadays, carbon reduction has to go beyond efforts to achieve certain targets by a certain year (e.g. emission reduction target for carbon dioxide (CO₂)) but to adopt a life-cycle approach in carbon accounting; for example, the amount of asphalt used is not the only consideration for road construction, but also the increase in traffic flow and carbon emission after the road is built.
- In addition to traffic flow, the speaker considers that the home-job spatial pattern also affects people's quality of life and carbon emission, which is the key to

low-carbon transport. The Speaker also points out that minimising carbon emission of individual mode of transport may not achieve the minimum for the system as a whole. We need to consider introducing new transport modes and services, and phasing out the undesirable ones. The transport means should match with the travel needs of the users' and should be integrated with land use planning.

- Travelling is essential to our lives no matter whether it is for economic activities, daily needs or social purposes. Mobility at different spatial levels of a city is important, and railway has a key role to play. However, a diversity of transport modes should be in place. The Speaker explains that transit-oriented development (TOD) is a concept of “community”, and is about the design of transport network, parking facilities, pedestrian and bicycle-friendliness, land use pattern, housing types and development density, planning of public and private facilities, as well as design of public space. The speaker highlights that walking is an essential component to complement public transport. As for medium to long-distance travel, railway performs better in terms of loading factor, energy consumption and CO₂ emission than air or road transport, and also renders less adverse impacts on air pollution and bio-diversity.
- Intermodal change is integral to a public-transport-based city. Seamless intermodal change requires the consolidation of information, ticketing, as well as related transport facilities and public transport services, etc. Walking also plays a crucial role in seamless intermodal change.

The Speaker states that transport has to be planned from the user's perspective. Coordination of policies of different aspects (such as sustainable transport and green city) is of paramount importance. Last but not least, the Speaker hopes that the government, the business sector, users and academics could work together to make progress towards sustainable transport through embracing new ideas and capitalising on the e-technologies and related innovations.