

ROUNDTABLE

Singapore – the World's First TROPICAL CYCLING CITY?

The Centre for Liveable Cities and the United States-based Urban Land Institute jointly studied active mobility in many cities on a research project entitled “Creating Healthy Places through Active Mobility”. The project, partly funded by the ULI, resulted in a book of the same name launched in Singapore and New York in October 2014. As part of this project, CLC Director **Limin Hee** moderated a roundtable panel featuring **Camilla van Deurs**, Partner at Gehl Architects; **Scott Dunn**, Vice-President and Director of Development at AECOM; **Cliff Lee**, Director (Physical Planning, Infrastructure) at the Urban Redevelopment Authority; and **Kenneth Wong**, Director (Local Planning) at the Land Transport Authority. The following is an edited transcript from the roundtable, highlighting the key points of the discussion.

LH Limin Hee
CVD Camilla van Deurs
SD Scott Dunn
CL Cliff Lee
KW Kenneth Wong



Camilla van Deurs, Gehl Architects.

● **LH:** In cities like Copenhagen, walking and cycling make up more than half the transport modes. Cycling in Singapore merely makes up 1 to 2%. How did Copenhagen build up such a successful cycling culture?

CVD: One key to success is a very fine-grained network. Bicycle lanes were always first to be built. They were about everyday movement, not recreation; not about exercise, but an equal form of urban transportation. Another success factor is the “people-first design”. Cars have to give priority to bicycles and pedestrians. We go into little details: like giving the right of way to cyclists to turn right at a green light, or timing all intersections so a bicycle going at 18 to 20 kilometres an hour has a green wave through the

city. There are signs saying, “Hello Cyclists, please relax and thank you for cycling”, little footrests when you’re waiting, even dustbins angled to fit bicyclists riding by.

70% of cyclists do so even in winter, because bicycle lanes are cleared first. It’s not only hardware – you must also work with the software – culture, maintenance and cleaning crews. You can also take your bicycle on the train, waterbus or metro for free. Then it’s easy to commute over longer distances, because there is complete inter-travel mobility. Even on taxi – by law, you are required to take two bicycles on your taxi.

Why do we cycle in Copenhagen? Every year, the city asks people why. It’s not really because we care about the environment – only 1% do. Is it because we’re afraid of getting fat? Partially. But 61% of us cycle simply because it is the fastest, most convenient way of transporting ourselves. That really is the key to our success. We must make cycling the first and easiest choice.



61% of Copenhagen people cycle because it is the fastest, most convenient way of transport... We must make cycling the first and easiest choice.

Camilla van Deurs, Gehl Architects

Limin Hee, Centre for Liveable Cities.



● **LH:** How do you think cities can start, because moving away from the car-based transportation model might be the hardest step? Being a Johnny-Come-Lately in cycling culture, how did New York get started?

CVD: Copenhagen has more than 350 kilometres of bicycle lanes, and it took us 50 years. New York created more than that in a mere three years. So, you do not have a disadvantage if you start late. You can definitely still win the race.

New York started when Mayor Michael Bloomberg appointed Janette Sadik-Khan as traffic commissioner. He wanted a “Greener, Greater” city, and wanted to promote active mobility. Pilot projects allowed New York to get results out on the streets quickly, and create a big, cohesive network. That’s key because if you can’t rely on it to get from A to B, then you can’t trust the system. That’s what New York did successfully: get the infrastructure in first.

● **LH:** What are we doing to get started in Singapore?

CL: I think we pale in comparison with Copenhagen. We are quite road- and public transport-oriented. Public transport will be the backbone of our transport system, so we need to also see how walking and cycling can be integrated into one ecosystem. Government agencies thus need to work together to enhance the first and last mile

However, we’re not starting from a clean slate either. Our park connectors are 200-over kilometres in distance. Now, how do we connect all these towns together, and bring people into the city centre?

Singapore’s National Cycling Plan aims to facilitate cycling as a safe, convenient option. We will start off with off-road cycling, and aim to create 700 kilometres of cycle paths island-wide, hopefully by 2030. This is a multi-agency effort, with the Land Transport Authority (LTA) taking care of intra-town cycling, National Parks Board (NParks) in charge of park connectors, Public Utilities Board (PUB) covering up drains to gain that space, JTC Corporation (JTC), Housing and Development Board (HDB), Sport Singapore (Sport Sg), Health Promotion Board (HPB), Traffic Police (TP), and cycling enthusiasts. With this network in totality, we will have a better chance to get more people to cycle.



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*Cliff Lee,
Urban Redevelopment Authority*



Kenneth Wong, Land Transport Authority.



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A lot of things can be done within HDB housing estates...By 2030, all towns will have cycling networks.

*Kenneth Wong,
Land Transport Authority*

KW: In our off-road cycling network, we're looking at dedicated, bi-directional paths of about 2 metres wide. Where we need to share the path, we will probably increase this to about 2.5 metres. Safety is our number one consideration. For example, we will have to push the stop lines back for motorists and create more space for cyclists to cross safely. We will also have to undertake a review of traffic junctions to reduce accidents. Another issue to review is the range of personal mobility devices that is becoming very popular in Singapore, such as e-scooters.

A lot of things can be done within our public housing estates. All of our housing estates have at least one Mass Rapid Transit (MRT) station, so it is quite viable to consider the first- and last-mile connectivity to stations. There are 26 towns today; with more still being planned. By 2030, all towns will have cycling networks.

CL: We want to make cycling convenient and seamless. Thus for cycling facilities, bicycle racks are very important – at transport nodes, developments and living environments. Our public housing board, HDB, has been providing one rack for every 10 units. This will go up to one in every six units.

KW: We have over 11,000 racks at MRT stations, and more will be built. The Thomson Eastern Region Line will have underground bicycle racks and parking spaces. We are also really keen to pilot a bicycle sharing system, perhaps in the Jurong Lake District.

LTA has also put up the Walk-to-Ride framework, looking at providing about 200 kilometres of sheltered connectivity by 2018.

CL: Walkability is important because we are moving towards a rapidly ageing population. We want it to be convenient, safe, comfortable, delightful, not just for the mobile but those less able as well, and for all ages. We need to do some auditing in all our housing areas – the pavement, potholes – all the small things.

Scott Dunn, AECOM.



Being in a dense city helps because you don't need to travel far to have access to amenities.

Cliff Lee, Urban Redevelopment Authority

⁰¹ Panellists Camilla van Deurs (left), Scott Dunn (centre) and Cliff Lee (right) at the Active Mobility Roundtable.

● **LH:** A lot of successful examples of cycling seem to be in temperate countries. How can we encourage cycling in tropical weather?

SD: In our joint study, we identified 10 design factors that would promote active mobility. Number one was making it easy and convenient. A lot of design work we're doing in major metropolitan areas is on connecting those facilities, and linking the last kilometre.

Urban design can also enhance the comfort of cyclists and pedestrians. We have more buildings that are taller, and there's a lot of wind that comes down from the buildings that helps cool you. So we can use building form to bring the wind down to street level. This will be a new idea in terms of using a city's urban design, and with density you have the ability to do that.

● **LH:** Are any things going for Singapore that would help to encourage cycling even in tropical weather?

CL: When we drafted the urban planning Master Plan 2013, one survey on cycling did feature that climate is a strong deterrent. But our NParks colleagues have lined trees along all roadsides, so that provides shade, and LTA is working towards providing covered linkways within 400 metres of transport nodes. All these will enhance active mobility for that first and last mile.

Being in a dense city helps because you don't need to travel far to have access to amenities. Our land-use planning is based on self-sufficient towns and higher-intensity developments, so people do not need to walk as far to go to school, pick up groceries and so forth.

KW: We live in a tropical country, so we need to be prepared to perspire at some part of our journey. Someone once said, “There’s no such thing as bad or wrong weather, it’s just wrong clothes.” Are you dressed appropriately? Are you in the right spot? I think Singapore is one of the first tropical countries to roll out a national cycling plan. This will provide that first-mile, last-mile connectivity to our public transport system, which will remain the backbone of our transport system.

● **LH: Camilla, you have worked in very hot climates to provide cycling infrastructure and design. What is your comment about the weather?**

CVD: We’ve done some work in Zambia, Africa, Oman, and Mexico City. None as humid as Singapore – that’s one big difference. In a hot climate, besides wind and shade, it’s also about distance. Singapore is in this fantastic situation where you have a very compact city, relatively flat, so it is very possible to have cycling even though it’s tropical. But it’s also a question of a mindset shift. Is it only for the hipster, the bicycling fanatic on Sundays, the very poor, or for everyone at all times?

● **LH: Which one has to come first, then – mindset change or infrastructural change?**

KW: Infrastructure has to come in first; to encourage people that it’s safe.

SD: Primarily infrastructure. Just the ease of use – if it’s not easy, people won’t do it.

CL: In Singapore’s context, infrastructure needs to be in place – before we can even talk about safety and convenience – to encourage people to cycle.

CVD: Yes, safety first. For an ageing population, safety is a great concern for them to go onto the streets. If we’re going to have active mobility even into a ripe age, we need to have good amenities.

KW: At the same time, infrastructure is just one piece of the puzzle. We rolled out the National Cycling Plan, but other pieces need to come together, including education. We have a diverse group of users on the road – the young, the elderly, locals and foreigners.

Education requires a lot of coordination among agencies. We need an approach where we can reach as many diverse groups in a targeted manner as possible. We also don’t quite have a culture of cycling in Singapore. If we want cycling to be an active transport mode, we need to work with the education ministry to find ways to teach our children. We have to start young.

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CL: There is still a fair bit of conflict between pedestrians and cyclists. A code of conduct will be very useful to get everybody to better understand each other's needs, and be more gracious to other users of the same space.

SD: The mayor of Kuala Lumpur has been focusing on raising awareness. The idea of a car-free KL has been very successful. He started with the first Sunday of the month. Downtown roads are closed for four hours, and all types of non-motorised transportation are allowed, so you can walk, run, skateboard, roller-blade, in front of the KL Convention Centre. It has become very popular. The mayor's now going to two Sundays a month.



Is it just about efficiency – moving enough people given the given amount of space – or is it about other goals, like enhancing liveability?

Kenneth Wong, Land Transport Authority

● **LH: What is one word that describes the roadblocks to implementing active mobility, and how can we overcome them?**

KW: Space, and trying to prioritise the different groups of users. We have to cater to cyclists, pedestrians, motorists, commuters on the bus, but also have to consider space for greenery, which is something we treasure.

● **LH: That's because you didn't take any space away from the road.**

KW: It's about moving people optimally. Mass public transport is still the most efficient – a train can move up to 1800 people at high speeds. But we also need to consider users moving at different speeds: pedestrians move at perhaps four kilometres an hour, and the elderly even more slowly. The issue is optimising space while considering speed, velocity, and mass. We're just trying to balance the use of space between different groups of people. That said, we probably have to rethink on who should have priority of the space. Is it just about efficiency – moving enough people given the given amount of space – or is it about other goals, like enhancing liveability?

● **CL:** Investment, which is also about allocating necessary infrastructure in a dense environment.

In the past, we invested heavily in road infrastructure, and less in walking and cycling infrastructure. We need to reassess if this is worth investing in, but I do sympathise with Kenneth about space, as this often surfaces in inter-agency discussions. If we want to squeeze in a two-metre cycling track within six and a half metres of space, something has to be compromised, either in terms of less greenery, or less road space.

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We have to decide when to take that courageous first step... Singapore...has the ability to do it.

Camilla van Deurs, Gehl Architects

● **SD:** Co-operation. Urban mobility is one of the most important things in city planning, and it takes co-operation by everybody to make mobility easy and convenient for as many different users as possible. I've seen a dramatic change in the way Singaporean agencies work together on land use issues since I've moved here in 2007.

● **CVD:** Courage. We have to decide when to take that courageous first step, because we cannot keep expanding at the current rate. There's simply not enough space and resources in our world. Singapore is a country that has previously shown courage to implement vast systems in short amounts of time, and I think has the ability to do it.

01 Panellists Cliff Lee (left) and Kenneth Wong (centre) at the Active Mobility Roundtable, moderated by Limin Hee (right).

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*...walkable,
convenient and safe...
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Scott Dunn, AECOM

● **LH:** What roles can various sectors play to build a culture of active mobility?

CVD: In Copenhagen, the police force worked with immigration services and job employment services to teach immigrant women to cycle as part of job training. So they become independent, and can go and apply for a job.

SD: Real estate aims to create places that people are happy in. We're starting to see a lot of green and blue connections being marketed as the main thrust behind developments such as the River of Life project, at the centre of Kuala Lumpur, along the Klang Valley and Gombak River. Almost every major project along the river is being branded as walkable, convenient and safe. And those are the key factors in building an attractive community.



CL: For the Club Street and Haji Lane road closures, planners worked with local businesses. We want them to take ownership of the road closures, so that it's more sustainable. We've received feedback that businesses have improved, and customers feel much safer walking in those areas. Some of the stakeholders have even requested extending the hours of closure and making it more permanent.

KW: We should encourage building owners to provide cycling facilities, such as bicycle racks. Many of us live in public housing estates; how do we get our bicycles up the lifts and into our storerooms? For design, we need an end-to-end perspective.

The other challenge is retaining greenery and streetscapes. There are also traffic considerations depending on local configuration. To make any changes, we will need a lot of buy-in from communities and landowners.

Our Travel Smart Network is aimed at mitigating demand for transport, but also includes a grant to incentivise companies to install bicycle parking and shower facilities.

● **LH: One last question. How many years would it take before Singapore can become a cycling nation?**

CVD: Twenty.

SD: By 2050

CL: As a planner I'll be a bit more optimistic. By 2020

KW: I mentioned a plan for 2030 so I'll gun for 2030, which is in about 15 years.

● **LH: I'm very glad to hear that our local agencies are more optimistic than our foreign experts. I think that's a good note on which to end this panel.**

Watch the full lecture:



<https://www.youtube.com/watch?v=I5MaqsiMMmw>

⁰¹ Panellists at the Active Mobility Roundtable, moderated by Limin Hee (right).