CENTRE for LiveableCities SINGAPORE

Shaping Knowledge, **Building Networks**

Annual Report 16/17

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CENTRE FOR LIVEABLE CITIES

Set up in 2008 by the Ministry of National Development and the Ministry of the Environment and Water Resources, the Centre for Liveable Cities' mission is to distil, create and share knowledge on liveable and sustainable cities. CLC's work spans four main areas - Research, Capability Development, Knowledge Platforms, and Advisory. Through these activities, CLC hopes to provide urban leaders and practitioners with the knowledge and support needed to make our cities better.

Connect with CLC

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The team would like to thank Ms Hazelina Yeo for her contributions to the report.

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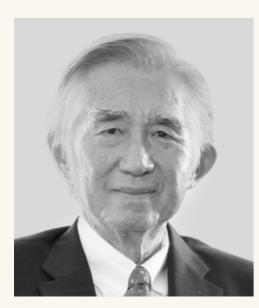
Cover Image

Visitors enjoying the view at Gardens by the Bay. Image credit: "Dragon Bridge" (CC BY-NC-SA 2.0) by chooyutshing

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During the year, the Centre continued to focus on our core missions. Given the greater maturity of our colleagues, I am happy to say that we have been able to explore a wider range of urbanisation issues with credible depth.

To support the broad range of the Centre's activities, our staff strength has steadily increased and reached 72 at the end of financial year 2016. We also work closely with our partners from more than 30 ministries and statutory boards. As urban planning touches on all aspects of human life in any city, this approach allows the Centre to equip a growing pool of officers with a basic understanding of urban issues and challenges. I believe these officers will make better decisions in the best interest of the future development of Singapore.

By the same token, the Centre has also extended its Leaders in Urban Governance Programme (LUGP), a key milestone course for Director-level officers under the Public Service Leadership Programme, to younger high-potential Deputy Director-level officers outside the Infrastructure and Environment sectors. On the one hand, we hope they can become better equipped to perform their tasks. On the other, we hope that, years later, they can become future LUGP trainers to succeed our current group of excellent and very experienced tutors who must, in time to come, retire from teaching.

Similarly, the Centre continues to increase its sharing and exchange of urbanisation experiences and knowledge internationally. These activities fall into two broad categories. The first category encompasses our ongoing training programmes, such as the International Leaders in Urban Governance Programme and the Temasek Foundation International Leaders in Urban Governance Programme, for mayors and government officers of different cities, and staff of international organisations. So far, we have trained over 1,311 international participants from 29 countries.

The Centre will continue to share the Singapore urbanisation experience with more regions around the world, as well as to learn from others. During the year, we exchanged knowledge with 13 Visiting Fellows, who shared their expertise and experience with CLC and our stakeholders.

Among our other group activities, of note is the flagship World Cities Summit, a leading international event where top government and industry leaders meet to discuss how to make cities better. This year saw our largest edition of the Summit yet, with 21,238 participants who attended Singapore International Water Week, CleanEnviro Summit Singapore, and the World Cities Summit, which includes the Lee Kuan Yew World City Prize, World Cities Summit Mayors Forum, and the World Cities Summit Young Leaders Symposium. Strategic partners and agencies also supported the week by organising forums, workshops and networking events to complement. In this way, the Centre attempts to offer a wider variety of topics for discussion in the hope of providing the various cities around the world with solutions to their respective urban problems.

Looking forward, we hope to continue improving our various programmes to reach out to more people around the world. I wish to thank our Advisory Board, stakeholders, experts, partners and staff, who have generously given their time, knowledge and support to the Centre's work. I look forward to creating more conversations and new ways of collaboration to move towards our common goal of creating liveable and sustainable cities. 10 23 37

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It has been a busy and productive year for the Centre for Liveable Cities as we continue to study what makes cities liveable and sustainable, an endeavour that would not be possible without the assistance of our experts and partners. The theme of this report, *Shaping Knowledge, Building Networks*, captures the essence of what CLC has achieved thus far.

Research remains central to CLC's mission. Besides documenting lessons from Singapore's development journey in three new Urban Systems Studies publications, we have also published new research that apply what we have learnt to new challenges facing cities. For instance, in the face of changing urban mobility, CLC collaborated with the Urban Land Institute to propose a new way forward for cities to go car-lite.

CLC is also honoured to lead Singapore's collaboration with UN-Habitat in developing international capacity development programmes to support emerging cities in developing countries, and has since run a successful pilot with African cities. This opportunity is a testament to the value of our **Capability Development** programmes, which help local and international participants understand the challenges of sustainable development, and to identify solutions in their own cities. CLC also continues to work closely with our existing partners through our **Advisory** services.

Our Knowledge Platforms are instrumental for disseminating knowledge and extending our networks. Most notably, the World Cities Summit 2016, held in conjunction with Singapore International Water Week and CleanEnviro Summit Singapore, drew 21,238 attendees from 125 countries and regions, making the event one of the largest global gatherings of urban change-makers. Together with the Urban Redevelopment Authority, we greatly value this opportunity for us to convene such a platform to forge new collaborations and exchange urban solutions with likeminded partners all over the world.

CLC remains committed to building the body of knowledge about what makes cities liveable and sustainable, and to sharing this with our growing network of partners and city leaders worldwide. I am thankful to our advisors, experts, stakeholders and staff, whose experience, advice and unwavering dedication have been invaluable in shaping the Centre's work. We look forward to partnering with more of you to continue making our cities even better. B. TEAMS A. HIGHLIG

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Our People CLC Advisory Board Members

* As at 31 March 2017



Dr Liu Thai Ker Chairman Senior Director, RSP Architects Planners & Engineers Pte Ltd



Prof. Aline Wong Chancellor, Singapore University of Social Sciences



Chan Heng Loon, Alan Chief Executive Officer, Singapore Press Holdings Ltd

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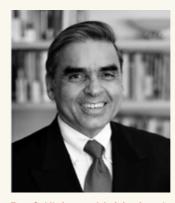
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Choo Chiau Beng Chairman, M1 Pte Ltd



Prof. Heng Chye Kiang Professor, Department of Architecture, National University of Singapore



Prof. Kishore Mahbubani Dean, Lee Kuan Yew School of Public Policy, National University of Singapore



Lee Tzu Yang Chairman, Esplanade Co. Ltd



Dr Tan Chin Nam Chairman, Temasek Management Services



Tan Gee Paw Chairman, PUB, Singapore's National Water Agency

Our People CLC Distinguished Advisors

* As at 31 March 2017



Prof. Aline Wong Chancellor, Singapore University of Social Sciences



Chan Heng Loon, Alan Chief Executive Officer, Singapore Press Holdings Ltd



David Lim Tik En Director, Wheelock Properties Singapore



Special Advisor

Benny Lim Former Permanent Secretary, Ministry of National Development



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J Y Pillay Rector, College of Alice & Peter Tan, National University of Singapore



Lim Chee Onn Senior International Advisor, Ascendas-Singbridge Pte Ltd



Mah Bow Tan Chairman, Global Yellow Pages Limited



Prof. Ngiam Tong Dow Adjunct Professor, Lee Kuan Yew School of Public Policy, National University of Singapore



S Dhanabalan Member, Council of Presidential Advisers



Peter Ho Chairman, Urban Redevelopment Authority



Dr Tan Chin Nam Chairman, Temasek Management Service Pte Ltd



Philip Yeo Chairman, Spring Singapore



Tan Yong Soon Adjunct Professor, Lee Kuan Yew School of Public Policy, National University of Singapore

Our People CLC Fellows

* As at 31 March 2017



Andrew Tan Chief Executive, Maritime and Port Authority of Singapore



Chionh Chye Khye Former Executive Director, Council for Estate Agencies

Nanyang Academy of Fine Arts



Prof. Leo Tan Wee Hin Professor, Director (Special Projects), Faculty of Science, National University of Singapore



Prof. Lui Pao Chuen Advisor, National Research Foundation, Prime Minister's Office



Dr Ngiam Tong Tau Chairman, Sky Urban Solutions Pte Ltd



Prof. Tan Kong Yam Professor of Economics, Nanyang Technological University

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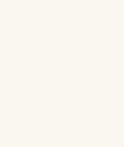
Lim Neo Chian Chairman, Agri-Food & Veterinary Authority of Singapore



Michael Koh Former Chief Executive Officer, National Heritage Board



Prof. Paul Cheung Professor of Social Policy and Analytics, Lee Kuan Yew School of Public Policy, National University of Singapore





Low Sin Leng

Chairman,

Prof. Neo Boon Siong Dean, Nanyang Business School, Nanyang Tecnological University



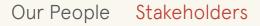
Prof. Phang Sock Yong Vice-Provost, Singapore Management University

Our People Panel of Experts

* As at 31 March 2017

Marc Boey Kok Leong	Director, Far East International	р П
Chan Yoon Kum	Senior Advisor, PUB, Singapore's National Water Agency	OP
Choy Chan Pong	Former Senior Advisor, Urban Redevelopment Authority	Ē
Foo Chee See	Director, SCP Consultants Pte Ltd	
Foong Chee Leong	Former Director General (Meteorological Services) and Former Director (Pollution Control), National Environment Agency	
Goh Hup Chor	Former Deputy Chief Planner, Urban Redevelopment Authority	
Prof. Gopinath Menon	Fellow, Institution of Engineers, Singapore	
Jeffrey Ho	Senior Director, Surbana Consultants Pte Ltd	
Joseph Hui	Principal Consultant, National Environment Agency	
Khoo Seow Poh	Deputy Chief Executive Officer, National Environment Agency	
Lau Joo Ming	Senior Advisor, MOH Holdings Pte Ltd	
Pamelia Lee	Senior Tourism Consultant, Singapore Tourism Board	
Prof. Lee Sing Kong	Vice President (Alumni and Advancement), Nanyang Technological University	
Dr Leong Chee Chiew	Deputy Chief Executive Officer, National Parks Board	
Leung Yew Kwong	Principal Consultant, KPMG Services Pte Ltd	
Lim Chin Chong	Former Deputy Chief Executive Officer of Sino-Singapore Tianjin Eco-city Investment and Development Co., Ltd	
Loh Ah Tuan	Former Deputy Chief Executive Officer/Director-General, National Environment Agency	
Wilfred Loo	Former Senior Vice President (Planning), Jurong Consultants Pte Ltd	
Linda Low	Associate Professor, Singapore University of Social Sciences	
Low Tien Sio	Former Deputy Chief Executive, Land Transport Authority	
Ong Geok Soo	Former Advisor, Chairman's Office, JTC	
Ong Seng Eng	Former Director (Waste and Resource Management), National Environment Agency	
P Teva Raj	Senior Director (Municipal Landscapes Division), National Parks Board	
Mohinder Singh	Advisor, LTA Academy, Land Transport Authority	
Sng Cheng Keh	Former Deputy Chief Executive Officer, Housing & Development Board	
Benedict Tan Chye Hup	Senior Advisor, Building & Construction Authority	
Tan Choon Shian	Chief Executive, Workforce Singapore	
Tan Siong Leng	Former Deputy Chief Executive Officer, Urban Redevelopment Authority	
Tan Tian Chong	Deputy Managing Director (Built Environment Research and Innovation Institute), Building and Construction Authority	
Tan Yok Gin	Deputy Chief Executive (Operations), PUB, Singapore's National Water Agency	
Wong Kai Yeng	Former Group Director, Urban Redevelopment Authority	
Yap Chin Beng	Deputy Chief Executive Officer (Estate & Corporate), Housing & Development Board	
Yap Kheng Guan	Former Senior Director, PUB, Singapore's National Water Agency	
Joseph Yee	Senior Consultant, Changi Airport Group	
Yeo Yek Seng	Deputy Chief Executive Officer (Economic Regulation Division), Energy Market Authority	

C. CALENDAR B. TEAMS A. HIGHLIGHTS



Parent Ministries

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Stakeholder Agencies AVA Agri-Food & Veterinary Authority of Singapore Building and Construction







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Ministry of the Environment and Water Resources



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Singapore



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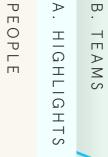




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World Cities Summit 2016

Jointly organised by the CLC and URA, World Cities Summit 2016 drew more than 21,000 policymakers, city leaders and industry experts to Singapore for this flagship event. Held from 10–14 July in conjunction with Singapore International Water Week and CleanEnviro Summit Singapore, this fifth edition of the series was the most well attended to date. IN-CONVERSATION & OPENING PLENARY SESSIONS 11 July 2016

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Speakers at the World Cities Summit 2016 Opening Plenary Session 2: Partnerships and Collaborations. From left: Dr Joan Clos, Executive Director, United Nations Human Settlements Programme (UN-Habitat); Park Won-soon, Mayor, Seour Metropolitan City, South Korea; Dr Judith Rodin, then-President, The Rockefeller Foundation; Prof Tommy Koh, Ambassador-at-large, Ministry of Foreign Affairs, Singapore; Isabelle Kocher, Chief Executive Officer, ENGIE; Laurence Tubiana, Ambassador for Climate Change Negotiations, Special Representative for the 2015 Paris Climate Change Conference; and Charles O Holliday, Chairman, Royal Dutch Shell (Designations correct as at 31 March 2017). A1









Liveable and Sustainable Cities: Innovative Cities of Opportunity

The 5th World Cities Summit centred on how cities can seize opportunities to co-create innovative urban solutions that address the challenges of increasing urbanisation. The Summit also provided a valuable network through which cities shared urban solutions and best practices that enhance the lives of citizens. Other key highlights of the biennial Summit include the Lee Kuan Yew World City Prize, the annual World Cities Summit Mayors Forum and the Young Leaders Symposium.

Key Insights Distilled From the Summit

- Long-term vision and planning is the foundation for everything else
- Inclusive development brings everyone along
- Social cohesion holds everything together
- Sustainability hinges on sustained public education
- Cities should also exercise leadership nationally and regionally
- Smart cities must adapt to technology and a louder citizen voice
- Cities should invest more in the "fourth space" of social capital and culture

"It was a meaningful occasion to deliberate about how to make cities more liveable and how to improve the quality of life for citizens."

> Park Won-soon, Mayor, Seoul Metropolitan City, South Korea

"The Summit was a fantastic opportunity to learn from other global cities and to build relationships with other city leaders."

> Martin Haese, Lord Mayor, Adelaide, Australia

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7th World Cities Summit Mayors Forum

The World Cities Summit Mayors Forum is an annual by-invitation only event for mayors and city leaders to share practical experiences, discuss innovative solutions and express common commitments to tackle pressing challenges cities face. The 7th edition of the Forum saw 92 mayors and city leaders from 64 countries share fresh approaches and governance tools used to tackle their cities' complex challenges. Together, the participating cities also identified areas of action on the New Urban Agenda to be adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III). Read the full *Mayors Forum Report*.



Challenges and Focus Areas for Mayors (collated from surveys at the WCS Mayors Forum)

Top 5 Challenges Cities Currently Face



Top 2 Areas Cities are Harnessing New Technologies for

- Enabling faster communications and delivery of public services
- Improving transportation flow and management

Mayors' Areas of Focus for the Next 2-3 Years



- Build up public infrastructure and improve public services
- Roll out smart city deployments / technology applications
- Ensure environmentally sustainable developments
- Drive economic growth and development
- Promote social cohesion and integration of my citizens with diverse backgrounds
- Ensure heritage preservation and cultural development along with urbanisation
- Spearhead climate-resilient efforts / projects
- Others

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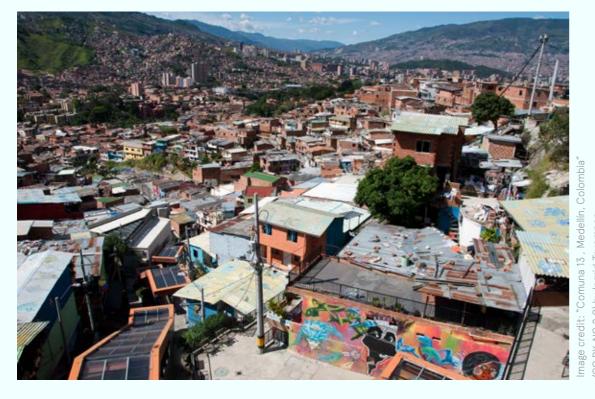
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Lee Kuan Yew World City Prize 2016

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The Lee Kuan Yew World City Prize is a biennial international award that honours outstanding achievements and contributions to the creation of liveable, vibrant and sustainable urban communities around the world.

The city of Medellín, Colombia was awarded the Lee Kuan Yew World City Prize 2016 for its unconventional solutions and commitment to good governance and citizen participation.

3rd World Cities Summit Young Leaders Symposium



The World Cities Summit Young Leaders Symposium is an exclusive platform that harnesses the collective wisdom and experience of the WCS Young Leaders for intellectual discourse and to launch initiatives that tackle future urban challenges.

The 3rd Young Leaders Symposium united 52 thought leaders from 34 cities to dialogue with keynote speaker Peter Brabeck-Letmathe, Chairman of Nestlé, and to also garner fresh insights and perspectives on tackling the "wicked problems" of urbanisation.

Read the Young Leaders Symposium report.

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A Summit of Significance

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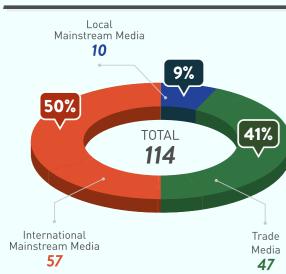
The significance of the World Cities Summit in bringing together government leaders, top industry executives and experts from all over the world attracted international media to report on the event, as well as to feature the mayors and their cities.

International broadcasters including Bloomberg and Channel NewsAsia conducted on-site interviews and did live crosses from the Summit. BBC and Al Jazeera also conducted studio interviews with key speakers and spokespersons.



= NEWS CLIPS (BROADCAST, PRINT, TRADE, ONLINE)

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UNITED KINGDOM Dying cities can be brought back to life and here's how, says World Bank - Thomson Reuters New report to help cities find money for infrastructure projects - Cities Today ROMANIA • Timisoara mayor goes back into the world. **Destination: Singapore** - Timis Online UNITED STATES OF AMERICA • The city that shrinks poverty - The Mark News • New Global Platform: Helping City Leaders Achieve Smart City Goals - Meeting of the Minds COLOMBIA • Medellin wins Lee Kuan Yew World City Prize in Singapore - El Tiempo IRAN • Medellin wins world award for transformation Iran to attend World Cities Summit - Notimerica - Financial Tribune • Medellin won the world urban transformation award - Minuto30.com MALAYSIA • HPE rolls out Future City initiative to APAC HEADLINES - Digital News Asia **INDONESIA** • Towards resilient cities together FROM AROUND THE GLOBE - Kompas • Governor of South Sumatra shares experience at the World Cities Summit Mayors Forum 2016 Singapore - Trihun News



 Mayors, policy makers discuss global terrorism at Singapore Summit - The Times of India

UGANDA

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• Lord Mayor off to Singapore

 VIETNAM • Global cities summit opens in Singapore

- Vietnam Plus • A choiceful city is the future city
- Vietnam Plus
- Hanoi to integrate technology in managing and reducing urban traffic pressure - Hanoi Times

SOUTH KOREA

 Seoul to strengthen multicultural policy - The Korea Times Seoul to strengthen solidarity with ASEAN Seoul Economic Daily

PHILIPPINES

 Angeles 'best govt' practices take the stage at 2016 World Cities Summit - Manila Bulleti

AUSTRALIA

 Strong leadership recognised on global stage - The Sydney Standard

NEW ZEALAND

- Mayor leads delegation to Singapore Scoop.co.nz • Auckland gets Special Mention in
- Lee Kuan Yew World City Prize 2016 - OurAuckland

SINGAPORE

 Trust between citizens & Government key for Smart Nation - The Straits Time Colombian city a model of progress - The Straits Times World Cities Summit to explore creative place-making - The Straits Times Singapore: from planned chaos to a distinctive city - The Business Times • Mayors, leaders pledge to make cities safe and sustainable - ΤΟΠΑΥ

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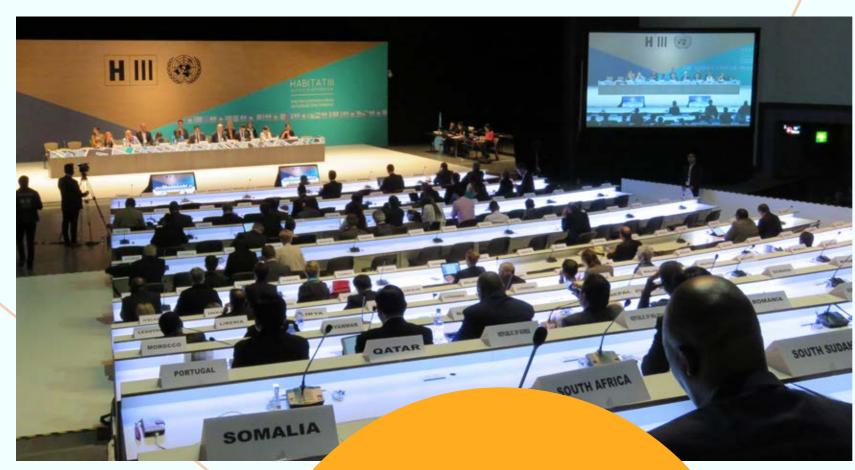
ettlements Programme (UN-Habitat) (Designations correct as at 2017).

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Delegates at Habitat III.

"The UN-Habitat and Singapore's collaboration combines the comparative advantages of UN-Habitat's global knowledge, expertise, normative responsibilities and networks, with Singapore's development experiences and lessons distilled from its unique urban planning approaches, urban land management, mobility and urban finance models that have led to the concept of liveable cities—a concept that lies at the heart of the Singapore Liveability Framework."

> Dr Joan Clos Executive Director UN-Habitat

Held in Quito, Ecuador from 17-20 October 2016, Habitat III was the third edition of the bi-decennial United Nations Conference on Housing and Sustainable Urban Development. As the first UN global summit to convene after the adoption of the UN 2030 Agenda for Sustainable Development, the conference was a key global platform for development and governance issues.

The MOU signed by UN-Habitat Executive Director Dr Joan Clos and then-Senior Minister of State for Home Affairs and National Development Desmond Lee on 18 October 2016 established a framework for the joint development of international capacity development programmes. Significantly, the agreement profiled Singapore as a model of successful, sustainable urban development, and enhanced the country's standing as a partner for emerging cities and countries.

The Habitat III conference also saw the consensus adoption of the New Urban Agenda, a non-legally binding charter outlining a new global strategy for urbanisation over the next two decades. The Singapore Liveability Framework was incorporated into the text of the New Urban Agenda, further showcasing Singapore's capabilities and collaborations in sustainable urban development. C. CALENDAR B. TEAMS

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The CLC publication *Transformative Partnerships*– *Case Studies on Urban Governance* was also launched at Habitat III. Through a series of case studies in Singapore, North East Lincolnshire in the United Kingdom and Gwangju in the Republic of Korea, the booklet examines how innovative partnership models can boost a city's competitiveness, sustainability and liveability and highlights the transformative impact of innovative urban governance.



From left: Ban Ki-moon, then Secretary-General, United Nations, with Khoo Teng Chye, Executive Director, Centre for Liveable Cities.

Singapore was also one of 18 cities to receive the prestigious National Earth Hour Capital 2016 award by the World Wildlife Fund (WWF) at the National Earth Hour City Challenge (EHCC) Awards Ceremony on 16 October 2016.

Car-Lite Urban Mobility

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The CLC and the Urban Land Institute (ULI) embarked on a research collaboration to pave the way for cities to prepare for a car-lite future, so that they can achieve greater sustainability and a higher quality of life in the long term through constructive collaborations and partnerships.

Image credit: Urban Redevelopment Authority

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CLC brought together stakeholders from government and industry to collectively brainstorm solutions for going car-lite.

Recognising that the private and people sectors are driving new mobility solutions, CLC brought together diverse stakeholders to brainstorm solutions through workshops, presentations and a discussion panel at the World Cities Summit. The various discussions culminated in a report, *Creating Liveable Cities through Car-Lite Urban Mobility*, which was launched in October 2016 at the ULI Fall Meeting in Dallas, United States.

Exploring car-lite solutions

The workshops sought to identify best-practice mobility examples from around the world, and distil expert knowledge into a relevant, practical guide on what needs to be done and how to get it done. The first workshop in February 2016 spotlighted car-lite initiatives from selected cities, and examined new technology-driven mobility solutions, the sharing economy, progressive parking policies and enlightened urban design.

"The future of sustainable mobility is about offering a whole package of transport options that make owning private cars completely pointless."

Prof. Paul Barter Lee Kuan Yew School of Public Policy National University of Singapore "The more important thing is to really approach mobility from people's perspectives, not cars."

> Khoo Teng Chye Executive Director Centre for Liveable Cities

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HIGHLIGHTS

C. CALENDAR B. TEAMS The second workshop was held in April 2016 at Jurong Lake District, a regional centre primed for fresh planning and mobility solutions. Identifying priority areas of action, or quick wins, was the main objective here. CLC invited Gabe Klein, former Transport Commissioner, Chicago and Washington, D.C., to share his experiences of imbuing public sector agencies with the energy, creativity and change management approach of start-ups.

Key Ideas From Workshop ||

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- Inclusive streets that prioritise the human over the car, with widened pavements and reduced-speed roads to include bicycles and PMDs.
- Sharing systems for bicycles, PMDs and autonomous vehicles need to be convenient, user-friendly options.
- Managing travel demand at a district level, with measures such as hub parking and freight delivery consolidation, can encourage sustainable travel.



CLC Visiting Fellow Gabe Klein facilitated a multi-stakeholder workshop to promote a collaborative approach to creating a car-lite district.



Workshop II participants trying out personal mobility devices at Jurong Lake District.

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The panel of city leaders and experts shared their experiences of making cities liveable by going car-lite at World Cities Summit 2016.

From left: Gabe Klein, former Transport Commissioner, Chicago and Washington, D.C.; Kim Soo-hyun, then-President of the Seoul Institute; Morton Kabell, Mayor for Technical and Environmental Affairs, City of Copenhagen; Dr Carsten Brosda, State Secretary for Culture, Media and Digital Affairs of the Free and Hanseatic City of Hamburg; and Konrad Otto-Zimmermann, Creative Director of The Urban Idea and former Secretary-General, ICLEI (Local Governments for Sustainability).

> "Do everything, and do it now. Develop everything - build your underground, enable the buses to be emission-free, make your cities walkable and bikeable. Offer people the choices to decide the mode of transportation that they want to use in the city for themselves. They will make the right choices."

Dr Carsten Brosda State Secretary for Culture, Media and Digital Affairs for Hamburg Preliminary recommendations gleaned from the research project were presented at the World Cities Summit during a panel comprising urban thought leaders and experts. They included Morten Kabell, Mayor of Technical and Environmental Affairs for Copenhagen, who underlined the role of infrastructure in making cycling attractive, and Dr Kim Soo-hyun, then-President of the Seoul Institute, who stressed that public transport networks should be the backbone of a car-lite system.

> "You're talking about up to 90% of cars gone within 10–15 years. This is actually a huge opportunity to...transform our streets and give people amazing spaces that have big returns in business, safety and land value. It's really about change management, about how you bring all your stakeholders along with you in facilitating change."

> > Gabe Klein Former Transport Commissioner, Chicago and Washington, D.C., author and venture capitalist

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HIGHLIGHTS

10 IDEAS TO PREPARE CITIES FOR A "CAR-LITE" URBAN MOBILITY FUTURE

Align Visions, Both Internally and Externally

- Internal alignment of vision across different teams within key agencies to ensure coherent efforts and targeted outcomes.
- · Make sure all relevant agencies and stakeholders are on board to ensure transport. planning is not done in isolation from other related policies.

Focus On People's Needs, Work With Competition To Find Win-Win Solutions

- · Provide customer-oriented services.
- · Public sector to encourage fair competition as a prerequisite for innovation, greater systematic efficiency and creation of an integrated package of "mobility as a service".
- · Service providers to work with public sector to establish good understandings of newer mobility options such as ride-hailing and car/bike-sharing and their impact on the "car-lite" mobility ecosystem.

Create Development-based Mobility Demand Management Strategies

- · End-users to play their parts in promoting sustainable travel behaviours.
- Develop site/estate-specific travel demand management plan that not only caters to local commuters' needs, but also ensures that all new development project contributes towards shaping cities" "car-lite" urban mobility.
- Monitor progress over extended time.

Expand Public Transport Amenities to Cover the First-and-Last-Mile

- · Develop high-quality public transport network as the backbone of cities' future mobility system.
- Look beyond public transport network to also address commuters' first-and-last-mile needs.
- Public transport service providers to form strong intermodal partnerships with taxi, car-sharing and bike-sharing providers to complete the trip ecosystem.

Planning Mattersl

- · Use planning to address underlying causes, instead of symptoms, of urban mobility challenges by finding ways of avoiding or shortening trips in the first place.
- Bring jobs and homes closer to each other.
- Encourage high-density mixed land uses around public transport nodes.

Put A Stop To Cheap And Easy Parking & Reflect The Full Cost Of Driving Ensure better understanding of current parking supply and demand to facilitate

- development of proactive policy interventions. Consider a set of more stringent parking provision framework but calibrate provision
- standards against factors such as public transport accessibility and access to amenities and services.
- · Price parking correctly by exploring demand-responsive systems with the help of technologies.
- · District-wide parking strategies to encourage sharing and minimise redundancy of parking spaces.
- Ensure car owners are fully aware of car-running costs to make better travel choices.

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Turn Street Design on its Head

- · Get the fundamentals right by reviewing prevailing traffic planning and street design which generally prioritise vehicular traffic.
- Fine-tune road categorisation and street design in favour of pedestrians, cyclists and public transit users wherever possible.
- · Make "complete streets" a planning and design norm.

Use Public Spaces as Common Ground for Public-Private-Peop Collaborations

- Public sector to lead/initiate transformation of car-dominated streets into people-oriented places.
- Communities, businesses and other stakeholders to be included in developing their own "car-lite" mobility solutions/initiatives that are financially sustainable in the longer term and also sensitive to the local context.

Drive Change through Data-Driven Research Pilot

- · Embrace "trial and error" in public sector's decision-making nmcess.
- · Use quick and cost-efficient pilot programmes to establish optimum and gather evidence.

Change Mindsets and Make "Car-lite" Mobility Cool

- · Proactively shape perceptions instead of waiting for mindsets to change.
- · Influence commuters' travel choices through creative use of media, education and campaions.
- For a start, target specific groups of audiences, such as school children, corporations. public agencies, new residents and new employees.

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Research

Interviews



Published Urban System Studies



Workshops / Roundtables



FY 16/17 **3**

FY 16/17

FY 15/16

3

3

FY 15/16

CLC Insights Articles



Forward-Looking Research Projects and Publications



Shaping Urban Solutions Together for Tomorrow's Challenges

It has been a busy but fulfilling year for the CLC. Our ongoing pursuit to document Singapore's development experience has yielded rich lessons gleaned through oral history interviews with our urban development pioneers and is captured through our Urban System Studies. As we translate the knowledge gained from past experiences into practical solutions for today's urban challenges through our CLC Insights articles, forward-looking research projects and publications, we hope to challenge practitioners to go beyond conventional thinking and to also create opportunities to share the latest ideas and innovations in urban solutions. The CLC continues to collaborate with research partners to deepen the collective body of knowledge on urban systems, so as to develop urban solutions that address the future challenges of cities.

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CALENDAR

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TEAM



Campbell Lane in Little India was one of the sites where CLC researchers conducted pedestrian counts, interviews and observations.

Understanding Little India

CLC's six-month collaboration with URA sought to systematically understand Little India from the perspective of its diverse stakeholders, including residents, business owners, shopkeepers, local visitors, tourists, migrant workers, as well as non-government organisations who operate in the area. The evidence-based, mixedmethods approach involved over 300 interviews with key stakeholders, detailed dataset collection from relevant government agencies, a visual survey of Little India's commercial landscape, as well as ethnographic observations and pedestrian counts on weekdays and weekends spanning three months. This gave researchers an in-depth understanding of the complex ground realities in Little India.

Based on the research findings, the study put forward a long-term vision and holistic recommendations that reinforce Little India's standing as a significant historic and heritage cultural node of Singapore, while balancing diverse stakeholder interests and making it more liveable for residents and visitors alike.



From left: Pamelia Lee; Senior Tourism Consultant, Singapore Tourism Board; Prof. Lily Kong; Provost and Lee Kong Chian Chair Professor of Social Sciences, Singapore Management University; Didier Repellin, international preservation consultant and Chief Architect and Inspector General of Historic Monuments, France; and Koh-Lim Wen Gin, former Chief Planner and Deputy Chief Executive Officer, Urban Redevelopment Authority.

Heritage and Sustainable Urbanism – Singapore Heritage Symposium 2016

Jointly organised by the CLC, the Embassy of France and the Urban Redevelopment Authority, the Heritage and Sustainable Urbanism Symposium brought together conservation pioneers and current practitioners from France, Singapore and the region to share their experiences in implementing and managing heritage conservation, with a focus on how Singapore's heritage conservation efforts have developed over the years and contributed to raising the quality and strengthening the identity of the living environment.

As guest speaker for the Symposium, CLC Visiting Fellow Didier Repellin also recounted his involvement in Singapore's shophouse restoration demonstration project and the preservation of the former Convent of the Holy Infant Jesus (known as CHIJMES today). ω

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Cities Roundtable 2017.

Innovation and Collaboration – Cities Roundtable 2017

112 researchers and policymakers from 18 government agencies and 24 research institutions gathered at the 5th Cities Roundtable to discuss projects across five themes of national interest:

- Liveable Cities
- Urban Analytics
- **Creating Space**
- Advanced Construction and Innovation
- **Building Resilient Communities**

CLC convenes the annual Roundtable for policymakers and researchers to exchange knowledge and kickstart collaborations to tackle Singapore's future urban challenges through an integrated, multidisciplinary approach.

Harnessing Complexity and Data Science for Urban Solutions

Government agencies are increasingly employing the science of complexity to better understand urban issues in cities. CLC Visiting Fellow Prof. Luis Bettencourt led a workshop that brought together urban practitioners and complexity science experts to discuss how complexity science can help planners to develop a holistic understanding of cities as integrated complex systems, especially in Singapore's context. This opens up possibilities for urban planners and policymakers to create comprehensive, evidence-based urban solutions to fill the gaps in conventional policymaking.



WALKABLE BIKEABLE CITIES



Common Lessons from Unique Solutions to Shared Aspirations

The first CLC-Seoul Institute (SI) joint research study Walkable and Bikeable Cities: Lessons from Seoul and Singapore crystallises lessons from their journeys to becoming more walkable and bikeable, as a resource for other cities to become more people-friendly and less car-reliant. Through site visits and roundtable discussions with experts, planners and policymakers, CLC and SI researchers exchanged and deepened their understanding of each other's approaches to promoting walking and cycling.

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Research and Collaboration with Visiting Fellows

CLC hosted and collaborated with 13 distinguished researchers and practitioners under the CLC Visiting Fellowship Programme. The programme strengthens the CLC's ties with like-minded experts and deepens our body of knowledge on sustainable and liveable cities to jointly create urban solutions.



Gabe Klein (Apr and Jul 2016) Former Transport Commissioner,

Chicago and Washington, D.C.

Over two fellowships, Klein discussed landuse and transport planning issues with various government agencies. He was a guest advisor to CLC-ULI's joint research on Car-Lite Urban Mobility and delivered a CLC Lecture on "Bridging the Public-Private Divide to Create Great Cities". Klein also participated in World Cities Summit 2016 as a WCS Young Leader.



Didier Repellin (May 2016)

International preservation consultant; Chief Architect and Inspector General of Historic Monuments, France

Repellin met with government agencies and shared Singapore's conservation efforts and how it has been improving the quality of Singapore's historic districts at the Heritage and Sustainable Urbanism Symposium. He also advised CLC's research projects on conservation and Understanding Little India.



Konrad Otto-Zimmermann (Jul 2016) Creative Director, The Urban Idea; Former Secretary-General, ICLEI (Local Governments for Sustainability)

Otto-Zimmermann delivered the Keynote Address at the 3rd Megacity Think Tank Alliance Forum, and was a panellist at the CLC-ULI joint research collaboration on Car-Lite Urban Mobility panel discussion, which were both co-located events at the World Cities Summit 2016.



Prof. Luis Bettencourt (Jul 2016 and Jan 2017) Professor of Complex Systems, Santa Fe Institute

Prof. Bettencourt spoke at the World Cities Summit 2016 and met government agencies to discuss the role of complexity science and planning in Singapore. He returned in January to conduct a workshop for senior government agency representatives, sharing cuttingedge research that applied complexity theory to better understand Singapore's urban environment. 26

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Prof. Yin Wenquan (pictured), Sun Guangxuan, Yue Xiuhu, Zheng Jian (Oct 2016)

Prof. Yin is Director-General, Institute of Economic System and Management, National Development and Reform Commission (NDRC). Sun Guangxuan, Yue Xiuhu and Zheng Jian are Deputy Director-Generals, NDRC.

Prof Yin, Sun, Yue and Zheng participated in the NDRC-TFILUGP and met with government agencies to understand more about Singapore's development experience. They also led a seminar sharing China's latest policy directions and development challenges. This is a key deliverable of the MND-NDRC MOU signed in 2015.



Profs. Susan and Norman Fainstein (Jan 2017)

Prof. Susan Fainstein is Senior Research Fellow, Department of Urban Planning and Design, Harvard University. Prof. Norman Fainstein is Professor Emeritus of Sociology and Urban Studies, Connecticut College.

The Fainsteins conducted research on urban design strategies to enhance social equity and inclusiveness in Singapore's public housing estates, and conducted a seminar with government agencies to share their findings.





Prof. Peter Rowe (Feb 2017)

Raymond Garbe Professor of Architecture and Urban Design, former Dean, Harvard Graduate School of Design

Prof. Rowe conducted research for an upcoming joint CLC-Harvard GSD publication on the development of Singapore's green and blue spaces, and advised CLC researchers on ongoing research projects.



Prof. Alexandros Washburn (Feb 2017)

Former Chief Urban Designer, New York City; Visiting Professor, Stevens Institute of Technology

Prof. Washburn led a workshop sharing New York's experience in flexible industrial typologies and co-chaired a joint design workshop with CLC VF Henk Ovink. He also delivered a CLC Lecture on "Planning for Liveable and Resilient Cities: Lessons from New York" and advised CLC researchers on ongoing research projects.

Henk Ovink (Mar 2017)

Special Envoy for International Water Affairs, Kingdom of the Netherlands.

Mr Ovink co-chaired separate workshops with Dr Willem Stolte on marine spatial planning and a joint design workshop with Prof. Washburn. He also co-chaired roundtables on building social resilience and on the Dutch planning experience.

Capability Development and Advisory

Total Participants -	No. of Programme Participants FY 16/17 794 FY 15/16	
International Programmes	601 No. of Programmes Conducted FY 16/17	Average Rating FY 16/17 4.86
	FY 15/16 8	4.00 FY 15/16 4.68
Local Programmes	No. of Programmes Conducted FY 16/17 17 FY 15/16 8	Average Rating FY 16/17 4.51 FY 15/16 4.49

Shaping Cities Through Practice-Oriented Training

As the key training institute for public servants in the Infrastructure and Environment (I&E) sector, CLC continues to train an increasing pool of local and international city leaders through its practitioner-centric and action-oriented local and international training programmes.

Beyond learning about Singapore's urban development experience through the lens of the Singapore Liveability Framework and our Urban Systems Studies, CLC also deepened participants' understanding of the challenges facing cities through CLC's latest research. Participants also got to witness the best practices of Singapore and other cities in action through learning journeys and site visits, and worked with CLC's Panel of Experts to apply the principles they learnt through concrete action plans to tackle their cities' urban challenges. ω

TEAMS



7th LUGP participants at the High Line, New York's elevated park built on an abandoned railway line.

7th Leaders in Urban Governance Programme (LUGP)

The four-week Leaders in Urban Governance Programme (LUGP) is a key milestone programme designed for Director-level officers under the Public Sector Leadership Programme (PSLP). Through focused dialogues, discussions and integrated learning journeys, participants critically unpack the principles underpinning Singapore's development successes and build on them to address pressing urban challenges and issues. Participants also went on a learning journey to New York City to learn about the city's best practices and strategies for effective governance and development.



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9th EDGE participants experiencing cycling in Copenhagen, the best cycling city in the world.

9th and 10th Executive Development and Growth Exchange Programme (EDGE)

The three-week Executive Development and Growth Exchange Programme (EDGE) equips promising mid-level officers with insights into Singapore's urban development journey, and emphasises the need to adopt an integrated urban systems approach to build a liveable and sustainable Singapore through the lens of the Singapore Liveability Framework. EDGE participants also went on an overseas learning journey to understand urban innovations that other cities are embracing.

City Executive Leaders Programme (City EXCEL)

Jointly organised by CLC and BCA Academy, the one-week City EXCEL Programme is a foundation programme for officers within the Infrastructure and Environment (I&E) sector to think critically about how to overcome urban challenges through the lens of the Singapore Liveability Framework. Participants also learnt firsthand from urban practitioners the value of applying an integrated and systems approach to tackling complex urban issues.



Twenty-eight city leaders and senior government officials participated in the 2016 International Leaders in Urban Governance Programme.

International Leaders in Urban Governance Programme (iLUGP)

In July 2016, CLC hosted 28 city leaders and senior government officials in the International Leaders in Urban Governance Programme (iLUGP). A practitioner-oriented programme that shares principles of Singapore's integrated approach to developing a dense yet liveable city, the programme was also fully integrated with the World Cities Summit for the first time. This programme is a collaboration between the Ministry of Foreign Affairs and CLC under the Singapore Cooperation Programme.



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5th TFILUGP participants at the Singapore City Gallery.

5th Temasek Foundation International Leaders in Urban Governance Programme (TFILUGP)

Thirty-seven city leaders came to Singapore in November 2016 to participate in the Temasek Foundation International Leaders in Urban Governance Programme (TFILUGP), an exclusive mayoral programme supported by Temasek Foundation International. The practitioner-focused and actionoriented programme allows participants to glean insights of how Singapore overcame its developmental challenges through a whole-of-government approach in creating a dense yet liveable city. Participants also formulated action plans to tackle their respective cities' urban challenges with guidance from Singapore's urban pioneers and expert practitioners. CLC will continue to work closely with these city leaders as they implement their plans in the coming year.



The delegation being briefed on the Singapore River clean-up and the development of Marina Bay. From left: Nimal Weeraratne, High Commissioner to Singapore; Chandra Das, High Commissioner to Sri Lanka; Dr Janil Puthucheary, then-Minister of State for Communications and Information and for Education, Singapore; Ranil Wickremesinghe, Prime Minister, Sri Lanka; and Khoo Teng Chye, Executive Director, Centre for Liveable Cities.

Visit by Prime Minister of Sri Lanka

Sri Lanka's Prime Minister Ranil Wickremesinghe visited Singapore from 18-19 July 2016. As part of CLC's ongoing advisory work with Colombo city, CLC hosted him on a cruise down the Singapore River to understand how its cleanup evolved beyond founding Prime Minister Lee Kuan Yew's initial vision and extended to the development of the Marina Bay area. Parallels were drawn between Singapore's past experience and Colombo's current situation, where low-density colonial buildings fringe the polluted Beira Lake in the city centre.

The transformation of Beira Lake was the focus of the Sri Lanka Urban Planning and Governance Programme held in Singapore from 5-9 September 2016. Sri Lanka's Ministry of Megapolis and Western Development (MMWD) sent a delegation who was responsible for the lake clean-up, planning and development of the surrounding areas to attend the programme. Minister of Megapolis and Western Development Patali Champika Ranawaka graced the closing session and viewed participants' proposals. Working alongside Sri Lankan officials on their plans for Beira Lake were members of CLC's Panel of Experts, former senior officials who had been involved in the 1970s Singapore River clean-up as well as its planning, conservation and urban design.



India LUGP (TCPO) participants on a learning journey at Toa Payoh, the first satellite town fully conceived and built by the Housing & Development Board (HDB).

India Leaders in Urban Governance Programme

In November 2015, the Singapore Cooperation Enterprise (SCE) and the Town and Country Planning Organisation (TCPO) — the technical arm of India's Ministry of Urban Development — signed a Memorandum of Understanding to further knowledge sharing on urban issues. CLC was appointed by Singapore's Ministry of Foreign Affairs to deliver four runs of capability development programmes on urban planning and governance for 100 Indian government officials.

Since September 2016, CLC has trained chief planners and directorlevel TCPO officials through the practitioner-oriented India Leaders in Urban Governance Programme on the principles of integrated long-term sustainable planning and development, derived from Singapore's urban development experience. The programme featured a strong lineup of high-level expert practitioners from the government and the private sector, who shared on urban design guidelines, heritage and conservation, and GIS in land use planning. These were in response to the participants' requested focus areas to address their urban challenges.

Knowledge Platforms

World Cities Summit	No. of Delegates in Attendance FY 16/17 1,165 FY 14/15 1,169	No. of Participating Cities and Provinces FY 16/17 70 FY 14/15 67	
World Cities Summit Mayors Forum	No. of Participating Cities and Provincial Leaders FY 16/17 92 FY 15/16 65	No. of Participating Cities and Provinces FY 16/17 92 FY 15/16 59	No. of Participating Countries FY 16/17 38 FY 15/16 35
CLC Lecture - Series	No. of Lectures FY 16/17 12 FY 15/16 22	Total no. of Lecture Attendees FY 16/17 1,226 FY 15/16 2,882	

Strengthening Knowledge-Sharing Networks

Lectures, publications and strategic partnerships remain key platforms for CLC to reach a growing network of city leaders and urban practitioners to distil and share knowledge on liveable and sustainable cities.

The World Cities Summit 2016 was one of the largest gatherings of the world's top policymakers and industry leaders in Singapore to share ideas and strategies for building innovative and sustainable cities.

CLC also maintained its close partnership with China through several key training programmes for senior Chinese officials, while strengthening our knowledge base on liveable and sustainable cities through close research collaborations and publications with our knowledge partners.

City leaders, experts and urban pioneers also shared the latest ideas and developments from around the world through CLC's public lectures. All lectures and interviews are freely accessible at CLC's YouTube channel and publications such as our Urban Systems Studies book series and CLC's biannual magazine *Urban Solutions*, which are available for free at CLC's website. Do keep up-to-date on the latest ideas and happenings at CLC through our monthly newsletter *Better Cities* and Facebook page. 37

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Knowledge Platforms

CLC Lecture Series Highlights



Sustaining Singapore's Farming Heritage

The agriculture, livestock and fisheries sectors in Singapore have changed significantly since the 19th century.

Dr Ngiam Tong Tau, former Chief Executive Officer of the Agri-Food & Veterinary Authority (AVA), has actively promoted the farming sector over the last 40 years.

The Chairman of Sky Urban Solutions shared his observations on the rapid changes in the farming industry and the resilience and entrepreneurship of our farmers in meeting the challenges of farming in land-scarce Singapore. He also shared his vision of the way forward for Singapore's farming sector.

Watch the *lecture video* or read the *lecture report* for more info.

"Our farms have come of age and have the necessary experience to improve and expand production. I'm of the strong view that if land tenure can be extended to 30 years, our farms will take off, they will fly."

> Dr Ngiam Tong Tau Chairman, Sky Urban Solutions

"We all know it's not sustainable to meet this demand via road expansion. With demographic changes and an elderly population, there's an emphasis on safer roads and safer streets. We aspire to create a culture where everybody actively walks, cycles and rides public transport, and creating a safe, inclusive environment for all."

> Kenneth Wong Director (Local Planning), Land Transport Authority

Creating Liveable Cities Through Car-Lite Urban Mobility

Chou Mei (Group Director, Conservation and Urban Design, URA), Kenneth Wong (Director for Local Planning, LTA), Scott Dunn (Vice President, AECOM), Markham Shaw (Chairman, Orchard Road Business Association) and Mizah Rahman (Director, Participate in Design) represented the public, private and community sectors in making a case for Singapore to move towards more sustainable modes of transport as the city continues to mature and evolve.

Watch the *video highlights* or read the *lecture report* for more info.

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Publications Highlights

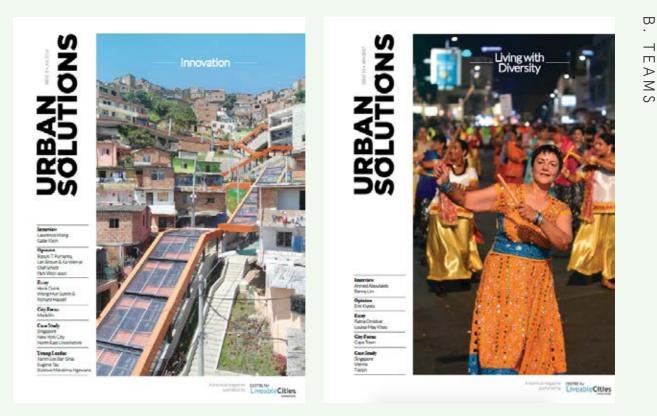


Launch of A Chance of A Lifetime, Lee Kuan Yew and the Transformation of Singapore at the Lee Kuan Yew Prize Award Ceremony & Banquet at the World Cities Summit 2016. From left: Lee Hsien Loong, Prime Minister, Singapore; Khoo Teng Chye, Executive Director, Centre for Liveable Cities; and Prof. Chan Heng Chee, Chairman, Lee Kuan Yew Centre for Innovative Cities.

A Chance of A Lifetime: Lee Kuan Yew and the Transformation of Singapore

Published by CLC and the Lee Kuan Yew Centre for Innovative Cities (LKYCIC), this book is based on a conference held in 2013 to mark the 90th birthday of Singapore's first Prime Minister, Lee Kuan Yew. The book focuses on Mr Lee's clear vision and pivotal role in shaping the urban landscape of Singapore over the last half-century through the commentaries of policymakers and leading officials.

The book was launched by Prime Minister Lee Hsien Loong at the Lee Kuan Yew World City Prize Award Ceremony and Banquet on 11 July 2016, and is on sale online and at major bookstores.



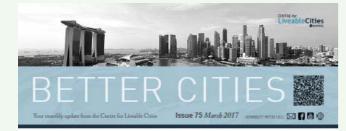
Urban Solutions

Innovation, from rethinking governance to co-creating solutions with citizens, can be a vital tool to improve the quality of life. That was the theme of *Urban Solutions #9*, which included an interview with Minister for National Development Lawrence Wong as well as opinion pieces by city mayors including Basuki T. Purnama, Ko Wen-je and Olaf Scholz. The issue also spotlighted 2016 Lee Kuan Yew World City Prize laureate Medellín, Colombia as an example of urban innovation and transformation.

The opportunities and challenges of diversity in cities were at the forefront in *Urban Solutions #10*. The benefits experienced by Cape Town, Vienna and Rotterdam after putting in place inclusive, equitable social and physical infrastructure were discussed, as were social policies for interaction in Singapore and a call for empowering marginalised communities.

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Publications Highlights



Retrofitting Resilience: Lessons from New York City



captured in Professor Alexandros Washburn for Lecemble and Rendent Cittee Lecemon

Future-Proof: Experimental urban solutions in Singap

Big things.... can come from small groups of peop

"If we tap on sources like big data and so on, these can become part of the architectural and arkon design proposition that we make for Singapore and beyond in the fature" - Volume Tomos Sinsafet Associate Inset of Plac Academias and Sahinda Gsag, Singapon University of Sarsociaty and Guito (UTO)

usatianable urban exhibition in Singapore. Projects wuth as MOHAs Skylville bruning project and SUTD's adaptatie anbiblion pavilion give us a girrope of the drive potential to societ more substatible, hiveble and self-actificatir: while campoing Administry, also designed by WOHA, combines social spaces for the eatinry with oblidance floatilites, allowing ooth groups to interact and mutually support one another to more with quality of life in the neighbourhood.

Advancements in technology are also creating new opportunities for urban design. The use of new compute design methods by SUTD is enabling designers to adjue early to environmental conditions. The providers at the Portuge and the second second second the second second the second secon

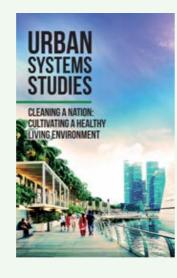
Better Cities

CLC's monthly newsletter provides a strategic channel for the CLC's friends and partners to learn about its work and to garner support as it distils, creates and shares knowledge on liveable and sustainable cities. It reaches a growing audience from government, media, academia, private sector and international and non-governmental organisations.

Better Cities shared thought leadership by various notable individuals in FY2016, including then-Mayor of Salt Lake City Dr Ralph Becker and then-Mayor of Eindhoven Rob van Gijzel. Access archived issues online.

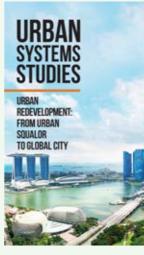
Urban Systems Studies Book Series

Cleaning A Nation: Cultivating a Healthy Living Environment



The story often told about the cleaning and greening of Singapore is that it was done mainly for the purpose of attracting international business and investments. However, it is less well-known that the political leadership prioritised public cleanliness for the well-being of citizens so that they would enjoy a higher quality of life. The simple wisdom that health leads to happiness had been applied to the entire nation. Read more in this *e-book*.

Urban Redevelopment: From Urban Squalor to Global City



2

Rapid redevelopment transformed Singapore's Central Area from an overcrowded, slum-filled and heavily-polluted urban centre in the 1960s into a global financial centre. Yet Singapore, despite its lack of land and natural resources, achieved social, economic, and environmental goals through innovative planning strategies and development decisions. Read more in this *e-book*. "Most people expect a newly independent state might focus on nation-building priorities like the economy and defence. However, Singapore's leaders in 1965 displayed the vision and commitment to also protect the environment, proving it can and should be a priority among the country's top goals."

> Edwin Seah Executive Director Singapore Environment Council

Port and the City: Balancing Growth and Liveability

URBAN

SYSTEMS

STUDIES

PORT AND THE CITY:

BALANCING GROWTH

AND LIVEABILITY

Singapore's port is one of the busiest in the world, and its maritime industry makes up some 7% of its gross domestic product. Faced with regional competition on top of internal competing land uses, how has the city-state maintained the primacy of its port and ultimately balance port growth with urban liveability? Find out in this *e-book*.

Partnerships Highlights

CLC is not alone in its mission to distil, create and share knowledge on liveable and sustainable cities. Following the successful MOUs signed with the National Development and Reform Commission (NDRC) and the Development Research Center (DRC) of the State Council of the People's Republic of China, CLC is also collaborating with new partners such as UN-Habitat, 100 Resilient Cities Network, World Bank, Urban Land Institute, Seoul Institute and National University of Singapore School of Design and Environment to strengthen the collective body of knowledge on city and urban development.



CLC undertook joint research publications with the Seoul Institute (left) and the Urban Land Institute (right).



Temasek Foundation International-National Development and Reform Commission Leaders in Urban Governance Programme (TFI-NDRC LUGP)

A key deliverable of the MND-NDRC MOU signed in 2015, the inaugural TFI-NDRCLUGP trained a total of 22 Chinese officials, with a focus on urban governance and building a competitive economy while maintaining a sustainable environment

Participants also took part in learning journeys to understand how Singapore's urban best practices are exemplified, and held practical action plan discussions with CLC experts to tackle their cities' urban challenges.

MFA Training Programmes for Senior Chinese Officials

Given the positive feedback from participants in previous years, CLC was reappointed to organise two-week training programmes for senior Chinese officials. This is part of the high-level collaboration between Singapore's Ministry of Foreign Affairs (MFA) and China's Central Organisation Department (COD).

A total of 52 senior Chinese officials participated in two separate training programmes in 2016.

Calendar of Events

the Publ Create (Urban	20 Jun - 1 Jul 3rd MFA Senio Chinese Officia Study Visit		nal 1 Urban ce	• 10 Jul Book La Urban S (Special Innovati	olutions #9 Focus:	12 Jul Book Launch: Urban Systems Studies – Urban Redevelopment: From Urban Squalor to Global City	
2016	7 May CLC Lectu Pointers fo Heritage P France, Sin Region Speaker: Di	(City EXCEL) re: Lessons and or the Future in reservation in ngapore and the dier Repellin, Gin, Pamelia Lee	1 Jun Customised Capability Development Programme for Jakarta City Government	10 - 1 World	10 Jul 7th World Summit N Forum	B Li tr or 10 Jul 3rd World Cit Summit Youn Leaders Symp d Cities	g	

Calendar of Events

Reforms in Urban17tGovernance:CitInsights from theLexDevelopmentPro			y of e School 1 and	Sri Pla Go Pro Min an Live De Ch Vis	Visit to Singapore Study Visit – Sichuan			n Harvard e School - 30 Sep A Senior nese Officials dy Visit —	 17 - 28 Oct National Development Reform Commission – Temasek Foundation International Leaders in Urban Governance Programme (NDRC- TFILUGP) 18 Oct Book Launch: Transformative Partnerships: Case Studies on Urban Governance 17 - 28 Oct 31 Oct CLC Lecture: Scotland's Transition to a Low-Carbon Economy Speaker: Chris Stark 					
Ju	July August			Sej	September					October				
	12 Jul MOU with Seoul Institute 12 Jul CLC Lecture: The Future of Ports and Their Relationship with Cities Speaker: Bart de Wever, Toshihide Hirahara, Andrew Tan 12 Jul Booklet Launch: Sustainable Singapore Bluep (International Version)		18 - 19 Sri Lan Ministe Wickre Visit to	Jul Ikan Prime er Ranil emesinghe's o Singapore	22 Aug - 10th Exe Develop and Gro Exchang Program (EDGE)	ecutive oment owth ge			7 L	29 Sep CLC Lecture: Participatory Planning for Dive Treasure Hill Urb Conservation in and its Public Po Implications Speaker: John KC	ban Taipei blicy Liu	18 Oct MOU v UN-Ha	with	26 Oct Book Launch: Creating Liveable Cities Through Car- Lite Urban Mobility

Calendar of Events

 7 - 11 Nov Temasek Foundation International Leaders in Urban Governance Programme (TFILUGP) 21 - 25 Nov 19th and 20th City Executive Leaders Programme (City EXCEL) 			28 Nov CLC-ULI Lecture: Creating Liveable Cities through "Car- Lite" Urban Mobility PanelLists: Chou Mei, Scott Dunn, Mizah Rahman, Markham Shaw, Kenneth Wong 1 Jan Book Launch: Urban Solutions #10 (Special Focus: Living with Diversity)					Jan LC Lecture: Urban Renewal an Economic and Social atalyst: The Conversion ad Development Efforts of ormer Military Bases in the hilippines eaker: Arnel Paciano Casanova 1 Mar CLC Lecture: Planning for Liveable and Resilient Cities: Lessons from New York City Speaker: Alexandros Washburn 9 20 - 24 Mar Strategic Urban Governance Programme (SUG)					ban
	November		December	January				Februa	iry	March			
4 Nov CLC-NDRC Seminar: China's 13th Five-Year Plan: Towards Sustainable and Higher Quality Growth		2r Pl Ce Le Ge 21 Nov CLC-SII Lake Ci in the 2	R Nov - 2 Dec nd Town & Country lanning Office (India entral Government) eaders in Urban overnance Programme P Lecture: Salt ity: Liveability 21st Century : Ralph Becker	2017	and Data	ng Complexity a Science to Urban Solutior		Innovatio	20 - 24 Feb 21st and 22nd City Executive Leaders Programme (City EXCEL) (City EXCEL)		Market of a Gl Proper	Archited	

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