



WORLD CITIES SUMMIT 2022

Liveable and Sustainable
Cities: Emerging Stronger

—
Conference Report



ABOUT THE WORLD CITIES SUMMIT

The biennial World Cities Summit (WCS) is an exclusive platform for government leaders and industry experts to address liveable and sustainable city challenges, share integrated urban solutions and forge new partnerships. Since its inauguration in 2008, WCS has been attended by over 250 global cities and supported by leaders from government, business, international organisations and academia. Jointly organised by Singapore's Centre for Liveable Cities (CLC) and the Urban Redevelopment Authority (URA), the biennial WCS returns to an in-person conference in 2022 after a largely virtual Summit in 2021. WCS 2022 was held in conjunction with our key partner, the Asia Infrastructure Forum. Highlights of the Summit include the Lee Kuan Yew World City Prize and the WCS Mayors Forum.

For more information, visit www.worldcitiessummit.com.sg.

For recorded conference sessions and other exclusive content, visit www.youtube.com/WorldCitiesSummitWCS.

How do cities remain liveable, sustainable, and more resilient in these trying, unsettling times of pandemic and climate change?

The 8th edition of the World Cities Summit sought to address this with its theme of "Liveable and Sustainable Cities: Emerging Stronger". The Summit is a convening point for global mayors, business leaders and knowledge experts to exchange and co-create city solutions for liveable and sustainable cities, and engages cities, businesses and experts at the highest levels to discuss how cities can emerge stronger through prolonged and unpredictable disruptions.

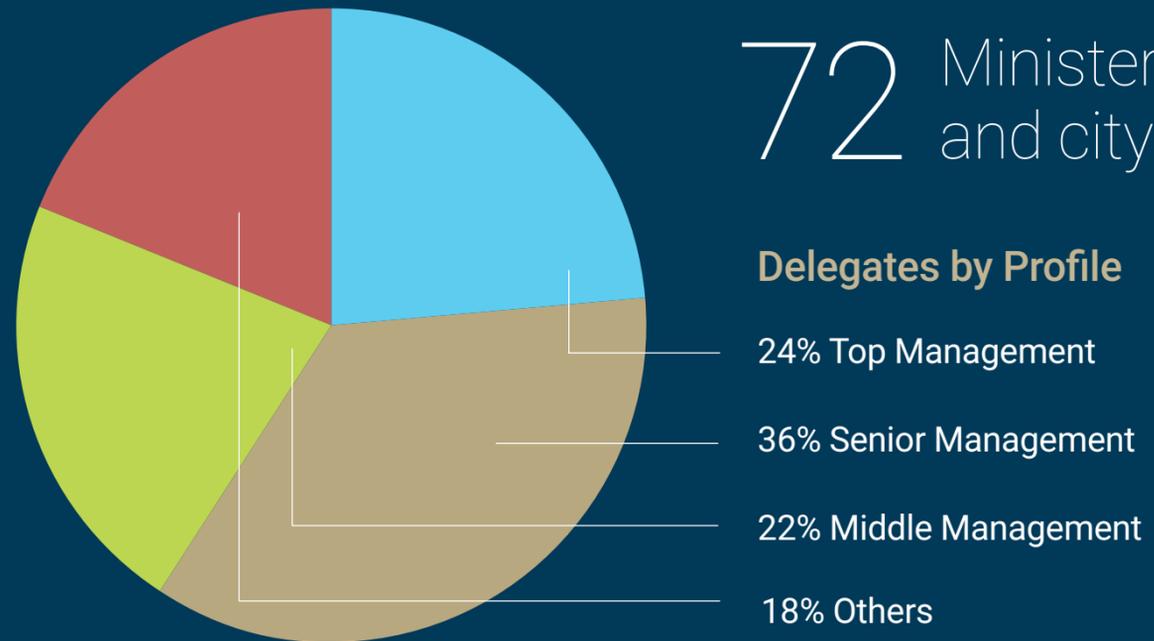
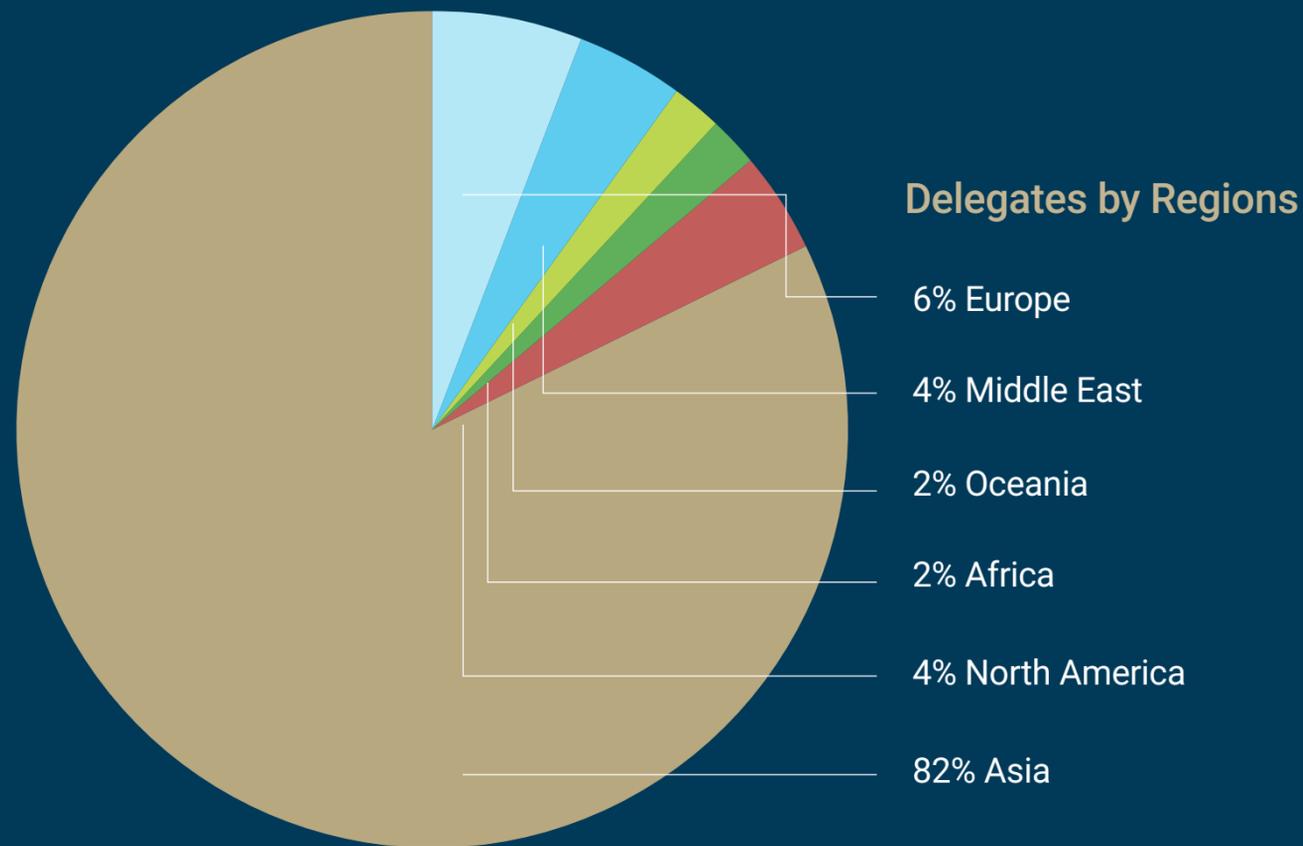
The 4-day in-person event comprised the main conference, which includes plenaries and tracks, and other key events such as the Lee Kuan Yew World City Prize Lecture & Forum, Award Ceremony and Banquet, WCS Mayors Forum, WCS Young Leaders Symposium, and an expo.

This year, the Summit also saw the inaugural in-person WCS Smart Cities Workshop, following the success of the virtual edition in 2021. WCS sessions, networking, physically co-located events and partner events also took place at the Summit, organised by partners and sponsors.

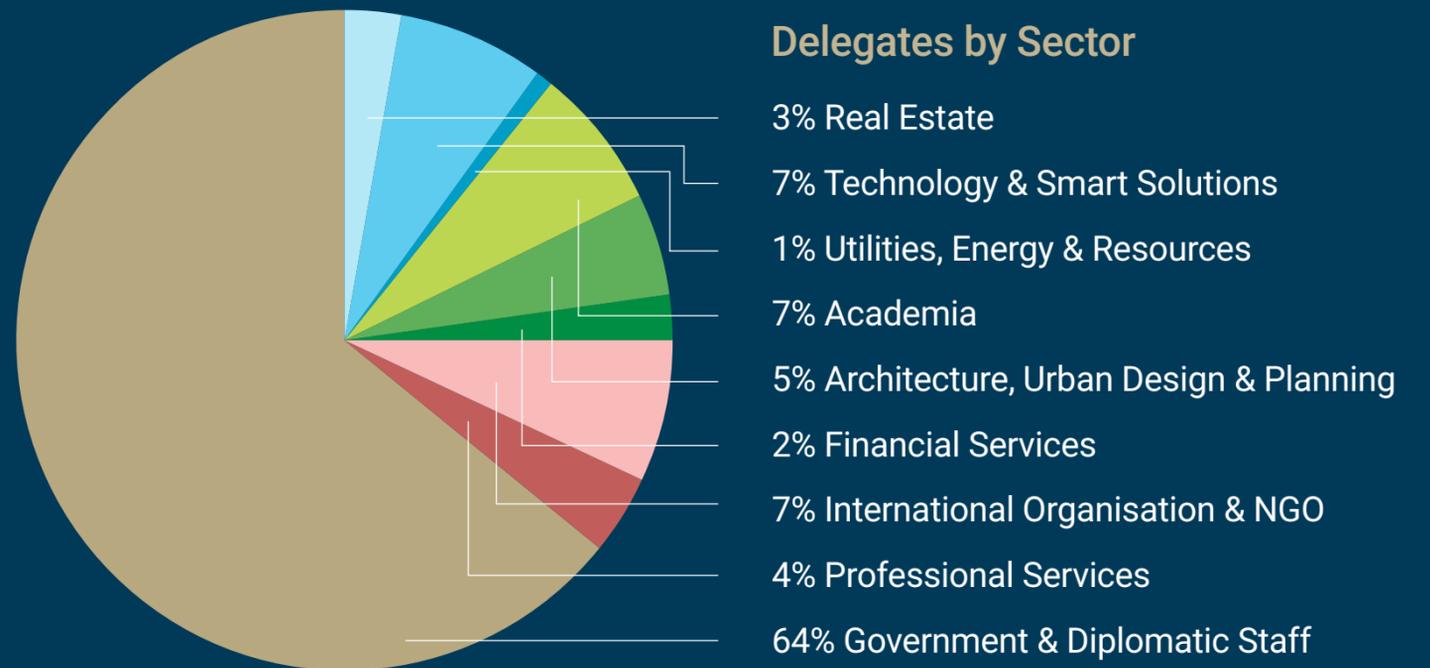
Through the plenaries and tracks of the main conference, delegates engaged with the theme on how cities can emerge stronger from contemporary disruptions across five tracks: Sustainable Financing, Smart Cities, Development and Planning, Urban Resilience and Liveable Future Cities.

KEY FIGURES

>2,500 attendees from
56 countries and regions



72 Ministers, Mayors and city leaders



21 sponsors

31 partners

2 media partners

34 expo booths & exhibitors

363 media pieces



Liveable & Sustainable Cities: Emerging Stronger



The ongoing pandemic and crises triggered by climate change and digital disruptions have intensified both challenges and opportunities for creating more liveable and sustainable cities. To emerge stronger, cities must strike a balance.

Singapore's Minister for National Development Desmond Lee opened the plenary by sharing two key strategies for this balance: citizen participation and innovation. This was further explored by the speakers who brought up three key factors during the session. Firstly, the importance of involving citizens and understanding their needs when planning for resilient cities. Secondly, that multilateral collaboration across the globe and across sectors is also important for cities to move forward and emerge stronger. Lastly, technology, and innovation should be used to build up resilience to disruptions and improve citizens' quality of life.

In his special address, Singapore's Senior Minister and Coordinating Minister for National Security, Teo Chee Hean explored how cities can achieve the benefits of both concentration and distribution, growth and sustainability, and staying open and cohesive.



— SPECIAL ADDRESS:



“While good planning for the hardware of a city, its physical infrastructure, provides the foundation for a more sustainable and liveable city, another key element is the firmware – the processes, rules and regulations that translate policy intentions into actual actions by agencies, property owners, developers and citizens.”

Senior Minister Teo Chee Hean
Senior Minister and Coordinating Minister for National Security, Singapore

— MODERATOR:



“Disruptions do need response, from our societies, from the infrastructure builders, from our mayors, policy makers, and our citizens... Resilience, of sustainability, of social inclusion... are key elements that we really need to deal with as we go forward.”

Professor Simon Tay
Chairman, Singapore Institute of International Affairs, Singapore



— OPENING ADDRESS:

“Through more R&D collaborations amongst the Government, the research community, and our private sector, we hope that the cross-pollination of ideas will strengthen our innovation eco-system for our urban Built Environment and help our city better address our emerging challenges ahead.”

Minister Desmond Lee
Minister for National Development, Singapore



“Because urbanisation is a reality. And our cities were not built for the all the millions of people that we find in our cities nowadays. So investment in infrastructure is key. Not only do we need to build new infrastructure but we also have to maintain existing infrastructure. We have to retrofit existing infrastructure to make them green buildings, water saving in your buildings, electricity saving in your buildings.”

Minister Patricia de Lille
Minister of Public Works and Infrastructure, South Africa



“Nature-based solutions is one of the powerful tools used by cities to enhance resilience, addressing the floods and extreme heat, improving the life and urban resilience and also protecting biodiversity.”

H.E. Maimunah Mohd Sharif
Executive Director of UN-Habitat



“The COVID-19 pandemic and digital transformation have magnified the vulnerabilities of those in the low-income bracket. That is why Seoul Metropolitan Government is placing top priority on going together with vulnerable and is pursuing various policies to support the underprivileged.”

Mayor Oh Se-Hoon
Mayor, Seoul



“As we slowly recover from the pandemic, it’s more important than ever to think about how to connect people in a way that can quickly ‘revitalize’ communities and make our cities truly vibrant places, where people can come together with confidence... Data and technology is meaningful if, and only if, it can help people make better decisions.”

Dr Chi Young Cho
President & Chief Innovation Officer, Hyundai Motor Group



Liveable & Sustainable Cities: Combating the Climate Crisis



Cities are at the heart of the climate crisis. They generate over 70% of global greenhouse gas emissions and are especially vulnerable to climate risks. In her keynote address, Second Minister for National Development Indranee Rajah pointed out that cities hold the keys to a sustainable future, as they have the resources and capabilities to bring about a positive change to the environment. She urged the audience to do their part in demonstrating climate leadership and setting good examples for others.

Three key strategies to combat climate change were brought up during this plenary – firstly, the need for innovative solutions in urban planning for climate change adaptation, including renewable energies, new technologies, and investing in research and development. Secondly, how it is necessary to mobilise green financing, including green bonds for accelerating technologies, and creating bankable projects for building climate resilience into cities. Lastly, the importance of public, private, and people collaboration in projects to effectively combat climate change.



— KEYNOTE ADDRESS:

"[Climate action] will require a multi-stakeholder whole-of-nation effort for Singapore to achieve our sustainability goals. This will be enabled by a Green Government, with the public sector leading in environmental sustainability; and Green Citizenry, where individuals, communities and businesses play their part."

Minister Indranee Rajah

Second Minister for National Development, Singapore

— MODERATOR:



"I used to work with the Green Building Council. We tried to combat climate change by one green building at a time, and we subsequently realised that we can't do that, we have to tackle the whole city and tackle a series and network of cities."

Professor Tai Lee Siang

Programme Director, Design and Artificial Intelligence, SUTD



"A crisis does not just need crisis management; we try to put a signal of crisis equals new opportunity."

Mayor Ahmed Aboutaleb

Mayor of Rotterdam



"The burden is not universal. Some cities are facing the brunt more than others... in Bagio, Phillipines, through the ASEAN-Australian smart cities trust fund, ADB is working with the city government on a gender transformative flood forecasting and early warning system to mitigate impacts and protect residents, particularly those who are more vulnerable."

Ashok Lavasa

Vice President for Private Sector and Public-Private Partnerships, Asian Development Bank



"We can utilise the seed of innovation and technology as much as possible, but the key is how we can accelerate this type of technology and innovation across the world... by issuing green bond, we have to opportunity to further investment to renewable technology and innovation, such as hydrogen firing and ammonia firing gas turbines."

Osamu Ono

Senior Vice President, Chief Regional Officer, Asia Pacific and India, Mitsubishi Heavy Industries



WCS Mayors Forum

This by-invitation only platform enabled mayors and city leaders to discuss the long-term trends of digitalisation and decarbonisation, and how cities can act on the opportunities, while concurrently addressing accompanying challenges.

At this year's Mayors Forum, the Centre for Liveable Cities and the Seoul Metropolitan Government also inked an Agreement for the city of Seoul to host the WCS Mayors Forum in 2023, as is the tradition for Lee Kuan Yew World City Prize laureates.

OPENING AND CLOSING ADDRESSES

In his Opening Address, Forum Chair Desmond Lee, Singapore's Minister for National Development, spoke about how digitalisation and decarbonisation are two long-term trends that will shape the future of cities, and that it is important to mitigate the associated risks and capitalise on the opportunities that arise. He said for cities to bring their people together to achieve success in digitisation and decarbonisation, they must build trust with their people and involve them in the city's plans and effort.

The Mayor of Seoul, Oh Se-hoon, closed the Forum by highlighting the responsibilities of mayors to prepare their cities for future challenges and disruptions, for cities to continue to prosper. He pointed out that cities would no longer be able to thrive with the existing growth formulas, especially in light of the fast-growing digital transformation, the climate change crisis, the COVID-19 pandemic, the war in Ukraine, and many other challenges. He also recognised the growing polarisation of society due to the gap between rich and poor that has been exacerbated by the pandemic, and shared that Seoul would be introducing initiatives that will help the under-privileged in society move up the social mobility ladder.

Thematic discussions

These sessions kicked off with mayors and city leaders sharing case studies on their respective cities. The floor was then opened to all in moderated discussions.

Digitalisation

Mayor of Rotterdam, Ahmed Aboutaleb, shared that digitalisation is only a tool that we use, that can make things effective and efficient, but it doesn't replace human capital... Digitalisation can be used to protect vulnerable groups in the city. For example, those in blue collar jobs are the first to be hit during the pandemic, digitalisation allows work and labour to be remotely performed from these vulnerable neighbourhoods, if the city invests in the infrastructure (e.g. fibre cables).

The Chairperson of Mayors' Committee & Mayor, South West District, Singapore, Low Yen Ling spoke about challenges in digitalisation, such as increasing the smart quotient of the country; especially of vulnerable groups. Singapore uses a multi-stakeholder approach in this effort, working between various agencies, the private sector, and the community to promote and develop programmes and initiatives to increase digital skills and literacy, for example, digital ambassadors to reach out to seniors on using the government's digital tools and services (such as TraceTogether). This approach was

complemented with a special Seniors Go Digital programme that teaches seniors digital skills and literacy (such as making WhatsApp calls, using health apps, and avoiding phone scams).

Mayor, Johor Bahru City Council, Dato Haji Mohd Noorazan Bin Dato Haji Osman, said that the pandemic exposed a challenge of digitalisation, as many areas were lacking the necessary digital infrastructure and coverage to fully adapt to using digital tools and services. Partnerships with governments were essential in overcoming this.

Executive Director, UN-Habitat, H.E. Maimunah Mohd Sharif highlighted that digital technologies have the potential to serve people, improve public services and working conditions, however, a persistent digital divide remains. The digital revolution must be directed and governed in a democratic and inclusive way. This is why the UN-Habitat is launching their flagship programme, the People-Centred Smart Cities programme.



"Smart cities don't exist; the only thing smart is you."

Mayor Ahmed Aboutaleb
Mayor of Rotterdam

Decarbonisation

Director General of International Affairs Bureau, Yokohama, Toru Hashimoto, opined that as 30% of carbon emissions are produced from households, behavioural change at this level can be effective. Yokohama believes that children are potential role models for sustainability and drivers of change. The Yokohama Eco School is a collaboration with businesses and NGOs to share sustainability related knowledge with children to drive this behavioural change. He also put forth that Yokohama deems it is important to share knowledge and expertise to help other cities decarbonise. This is done via international cooperation, through organisations like C40 and the Carbon Neutral Cities Association, or through direct city to city partnerships.

Lord Mayor of Melbourne, The Right Honourable Sally Capp, shared that Melbourne had declared a climate emergency in 2019, and has committed to the City of Melbourne being 100% powered by renewables by 2030, with net-zero emissions by 2040. Melbourne has led the transition towards decarbonisation through several major initiatives, such as a 10-year renewable energy group purchase agreement for local governments, universities, private corporations, Power Melbourne – a project driven by citizens and small businesses for renewable energy, and BREATH where universities and the private sector retrofit commercial buildings to reduce emissions. These initiatives would spark a wave of innovation in solutions and in commercial models, driving employment.

Mayor of Dhaka South City Corporation, H.E. Sheikh Fazle Noor Taposh, spoke about Bangladesh being one of the most vulnerable countries in the world to climate change, even though it contributes to less than 0.5% of global carbon emissions. He shared that Dhaka South City Corporation's vision for mitigating climate change and driving decarbonisation is based on "going back to nature and giving back to nature", including initiatives like (re)planting 10,000 trees and saplings over three years, cleaning and re-naturalising the city's canals, lakes, and water bodies, building playgrounds and green public spaces to serve the city's 5 million inhabitants, improve air quality, and act as a carbon store, and optimising bus routes for public transportation and design a pedestrian friendly city to reduce the demand for private vehicles and reduce fuel consumption.

Executive Mayor, Cape Town, Alderman Geordin Hill-Lewis, shared that South Africa's energy supply is >90% dirty coal which is extremely carbon intensive. South Africa also suffers from energy insecurity due to old and unreliable infrastructure. Therefore, Cape Town's priority is energy security and not reducing emissions, although it is a secondary benefit of the energy security programme. Investment in renewables and creating the right environment for uptake of renewables among the public and private businesses will increase Cape Town's energy security and decrease reliance on dirty coal by 15%.



"Since all of us are part of a global community, we share the same fate and destiny in the face of the climate crisis."

Mayor Oh Se-Hoon
Mayor, Seoul



AWARD CEREMONY & BANQUET AT THE ISTANA

On the evening on 1 August 2022, some 110 invited guests attended the Lee Kuan Yew World City Prize Award Ceremony & Banquet, held for the very first time at The Istana.

Her Excellency Halimah Yacob, President of Singapore, presented the 2020 Prize Laureate award to Vienna; while the certificates for the Special Mentions were handed out by Singapore's Minister for National Development, Desmond Lee.

Guests were also treated to a performance by students from School of the Arts (SOTA) – 'Gold from the Stars' from the musical, 'Mozart!', a critically acclaimed musical originally produced in Austria.

Lee Kuan Yew World City Prize

The Prize is a key highlight of World Cities Summit 2022. The World Cities Summit hosts city leaders from the 2020 Prize Laureate – Vienna and 2020 Special Mentions – Antwerp, Boston and Lisbon, as well as jury members and past Laureates to share on their respective cities, and to celebrate successes.

Dr Cheong Koon Hean, Chair of the Prize Nominating Committee, delivered the opening address at the Lee Kuan Yew World City Prize Lecture & Forum – a dedicated session for the 2020 Prize Laureate and Special Mentions to share their urban transformation stories.

The 2020 Prize Laureate Vienna was represented by Mayor & Governor Dr Michael Ludwig, while the 2020 Special Mentions Antwerp, Boston and Lisbon were represented by Mayor Bart De Wever, Mr Brian Golden (Director Emeritus of Boston Planning & Development Agency), and Ms Sofia Mourão (Municipal Director of Urbanism) respectively. The speakers then participated in a fruitful panel discussion moderated by Prof Marilyn Taylor and Mr Wong Mun Summ, members of the Prize Nominating Committee.



Sustainable Financing of Cities: A New Normal?

Why the focus on the sustainable financing of cities? Cities are both vulnerable, and central to tackling climate change. As they are concentrations of people, systems, assets, and economic activity, cities are also where innovations that are required for the transition to Net Zero will happen.

The sustainable financing of cities calls for an integrated and systemic approach to how urban projects are funded in cities. This requires financing models that address inter-linked issues including environmental, social, governance (ESG), resilience, and decarbonisation, that go beyond the technicalities of infrastructure financing.

● KEY OBSERVATIONS >

The Net Zero pathway is the combination of the energy switch and the urban transition.

“The Net Zero pathway is the combination of the energy switch and urban transition. All of these things require investment, and the challenge is that the level of investment required to decarbonise our cities is much greater than the amount of capital that city governments themselves control. This is the conundrum. How do we generate the capital required to make the investment in the transition that is needed, given that cities do not control enough capital to do all of the work on their own? We are at that moment, where the private sector has introduced the concept of sustainable finance. The idea that finance ...can be an active ingredient, bringing with it incentives, behavioural change, new business models and new financial models. In other words, finance is going to be a creative element of this transition towards sustainable cities.”

Greg Clark

The importance of defining Sustainable Financing

“There is a very clear difference between what we mean by integrating ESG factors into the way in which funds are applied or invested, with what is the real impact that is brought to the economy or the world, planet or people. And when we think about that kind of thing, we try to define Sustainable Finance around that intentionality. Has it got to do with the Sustainability focus of that fund or portfolio? Or does it have an impact investing outcome that is in mind?”

Desmond Kuek

Cities in the developing countries are facing challenges in implementing Sustainable Financing

“As a city in a developing country...we need a lot of funding. We need to discuss the issue of the financial relation between the central government and the city level, and how the city level could get access to international funding. This is the issue that I believe we need to address in the near future, for the cities in ASEAN countries.”

Nuon Pharat

Imbalances in the global implementation of Sustainable Financing

“The need for investment in sustainable infrastructure is around 3-4 trillion per year, of which we estimate about a quarter of that is being met, so the gap is indeed quite large...We looked at some data for green, sustainable and sustainability-linked bonds being issued by cities in municipalities in 2021 and saw that about 60% of issuance was coming from North American Cities, about 33% from Europe and only less than 10% from APAC. This is quite interesting when you consider the fact that over 50% of the world's urban population actually resides in Asia. So, there is also an opportunity, I would say, to look at some of the imbalances in where that progress is being met.”

Gene Fang

“It is important to recognise the diversity of Chinese cities in terms of levels of development, industrial structure and natural resources, and proactively plan for an orderly climate transition, instead of expecting all cities to reach carbon neutrality at the same time. Cities should develop differentiated pathways and strategies of decarbonisation.”

Dr Ma Jun

Urbanisation is the gold mine of today and tomorrow's cities.

“Climate change is a global issue so we need investment everywhere, and whereas a small economy or a city can think of investing more because of this climate change without less consumption; on the global level, that cannot be so. So, as the global economy wants to invest more because of the climate challenge, then we must inevitably cut down consumption as well, and this is something we must keep in mind and a far more difficult message. This is why I am emphasising this basic idea that...we should aim at making the entire financial market sustainable by creating the incentives to do that... making the entire financial market responsible. Urbanisation is a great ally. It is the gold mine of today, because it is far easier to implement environmentally-friendly solutions in cities, and by building bigger cities, we create value.”

Juhana Vartiainen

There is a need to establish a prudent Sustainable Financing framework for cities to start borrowing

“The reality today is that many subnational governments and cities do not have the ability to borrow independently from the national government. If the national government is able to set up a prudent framework for subnational borrowing that enables the cities and local municipalities to take increased accountability and responsibility for their finances, then that is a very good way to go.”

Isabel Chatterton

PANEL DISCUSSION

Gene Fang

Associate Managing Director, Moody's Investors Service

Isabel Chatterton

Director and Regional Head of Industry, Asia Pacific, Infrastructure, International Finance Corporation

Desmond Kuek

Head of Sustainable Finance APAC, Global Head of Sustainable Finance Group, Chairman Optimus Foundation Singapore, UBS

Dr Ma Jun

President of Institute of Finance and Sustainability; Adjunct Professor, Peking University

Juhana Vartiainen

Mayor, Helsinki

Nuon Pharat

Vice-Governor, Phnom Penh

MODERATOR

Greg Clark

Global Advisor on Cities, Transport and Innovation



How can Partnerships Transform the Development of Cities

Cities are increasingly divided along social and economic lines, where spatial separation threatens cohesion and even growth. With the growing complex challenges cities are grappling with, it is necessary to seek synergies across the value chain, and harness all-of-society approaches and global communities to find solutions and build better cities.

● KEY OBSERVATIONS >

Governments and stakeholders play a key role in involving its people in city developments, as shared visions and goals based on common values are a strong unifier. Through this, collective action and resources can be better mobilised.

“Essen’s transformation from grey to green made the city a place where people like to live and work in. It provided energy for its local economy and for the next transition phase towards hydrogen, an ecosystem of leading companies and research institutes is being built. They are then brought together as advisory boards to develop and implement projects... We must not work against people but with people. To reach their hearts and minds, authentic communication is the key. It is not just about the “how” but the “why”.”

Thomas Kufen

“Singapore balances land use needs through a planning process involving community and other long-term stakeholders. In our Long-Term Plan Review, we recognised the need for flexibility based on a range of possible futures. To arrive on a shared vision, 15,000 people gave their feedback to identify common aspirations and concerns.”

Hwang Yu-Ning

“The development of cities must be both top down and bottom up. City leaders need a clear direction that bring partners who can implement projects along on the journey. If you have a clear vision, it is easy to move things down to other parts of the government and translate them into reality with implementable actions... Links are important – for example, decarbonisation is not only about buildings but other parts of the ecosystem like transport.”

Chintan Raveshia

Importance of institutional sharing and capacity building through collaboration across public and private sectors, partnerships between local municipalities, cities and countries.

“Cities with different levels of development need to cooperate more to develop together, especially in bringing along those that are still figuring out their development direction. Ho Chi Minh City has been pushing on this front with Singapore, Germany, Japan and France through joint urban planning projects and memorandums. We must regularly exchange expertise to drive the concerted development of Asian cities.”

Vo Van Hoan

It is essential to create a balance between the aspirations and needs of local communities, multi-spectral stakeholders and global interests.

“It is important to think global and act local to bring people together. No matter whether you are Mayor or CEO, people and companies should aim to reach common targets.”

Thomas Kufen

Enduring and equitable partnerships must be a continuous process; the key ingredients to building these include an overarching vision, a clear message, open-mindedness and authenticity of all parties, balanced interests, and robust engagement.

“Through a recent project in Boulder, Colorado, we understood that not all citizens experienced COVID-19 the same way. We looked at who was hurt and how those people can be part of the process. We identified that communities were most in need of (1) economic opportunity (2) housing affordability (3) and mental health services and social resilience. As of now, 85% of the money has been allocated. This has helped to raise the level of collaboration with the community as well as people’s expectations of the government. Successful partnerships are about getting communities to trust their government and creating shared goals together, with an understanding of where the other side is coming from.”

Amy Chester

“How do you, at the onset, align the requirements and objectives of government and the private sector? We need to strike the balance then, so that the risks and rewards are reflective, and expectations can be met.”

Thulci Aluwihare

PANEL DISCUSSION

Thulci Aluwihare
Deputy Managing Director, CHEC Port City Colombo (Pvt) Ltd

Vo Van Hoan
Vice Chairman, Ho Chi Minh

Thomas Kufen
Mayor, Essen

Chintan Raveshia
Southeast Asia Cities Leader, Arup

Amy Chester
Managing Director, Rebuild by Design, USA

MODERATOR

Hwang Yu-Ning
Chief Planner and Deputy Chief Executive Officer, Urban Redevelopment Authority



Smart City Priorities: What's Next?

The COVID-19 pandemic is an opportunity to reinvent cities. It has accelerated digitalisation and strengthened the case for smart cities, but has also surfaced concerns ranging from data security to digital inclusion.

● KEY OBSERVATIONS >

A smart city should be understood as an adaptive system, with a balance between planning and intentionality, and taking an emergence approach. Here, technologies should be harnessed to provide richer data for cities to effect better systemic adaptation measures.

An inclusive smart city is planned with all strata of society in mind, which sets a higher standard for digital adoption by the entire city. Digitalisation can be daunting for citizens who are not digitally-savvy, hence pathways that put citizens' perceptions at the forefront help to ensure that their needs are met in the process of technological transformation.

“The role of city and technology providers is to create a platform for businesses and the people to imagine a better future for all, where the end goal is not about command and control but about having better information to act collectively.”

Professor Luis Bettencourt

“Every planner's dream is to anticipate all scenarios and issues, and plan for them. But in our experience, we found it is better not to try and accomplish everything but instead, take a human-centred approach to real-world problems and tackle them one by one. It is not the grand solutions but the simple solutions that make a difference.”

Chng Kai Fong

Cities need to show leadership in harnessing digitalisation to prepare for and face challenges in sustainability and climate change. In the future, cities will play a bigger role in the decision-making process in times of crises, and hence will need to be better prepared and agile. This can be done with the support of a holistic coordination across various national and municipal agencies enhanced with technologies.



"Cities must be prepared for crises as this will be the new reality. This preparedness requires a holistic conception and coordination to create synergies across different technologies."

Mihhail Kõlvart



"The key issue today is how cities can reduce their carbon footprint to be more competitive, resilient and create a better quality of life. The opportunity is here for cities to show leadership in digitalising to drive the push towards sustainability and decarbonisation goals."

Chew Men Leong



"The greatest potential of decarbonising the industry is in the design of the project rather than the operation. (A) Virtual twin provides a better way to operate the city but most importantly, it helps cities to better design and plan to face all the challenges."

Jacques Beltran

KEYNOTE

Jacques Beltran

Vice President, Cities and Public Services, Dassault Systèmes

Prof Luis Bettencourt

Professor and Pritzker Director of the Mansueto Institute for Urban Innovation, University of Chicago

Chew Men Leong

President of Urban Solutions, ST Engineering

Chng Kai Fong

Second Permanent Secretary, Smart Nation and Digital Government, Singapore

Mihhail Kõlvart

Mayor, Tallinn

Sanjeev Sanyal

Member, Economic Advisory Council to India Prime Minister; Secretary, Government of India

MODERATOR

Wee Wei Ng

Country Managing Director and Senior Managing Director, Accenture



What does the Future hold for Cities?

While the pandemic has undoubtedly impacted the liveability of cities, there are also other pressing issues of our time, such as climate change, ageing populations, and de-globalisation. Cities need to prepare for alternative futures and continue to deliver liveability in an inclusive way.

● KEY OBSERVATIONS >

The pandemic has led to changes in the consumption and engagement patterns within cities; causing demographic shifts, geo-political tensions, and global resource scarcity. Together with climate change, these phenomena pose major challenges. A systems-level transformation is, therefore, needed to ensure resilience in delivering fundamental needs.

“Cities are at a post-pandemic transition moment. We are seeing some permanently-changed circumstances over the past few years, such as changes in modes of working, health risks from high concentrations of people in cities. And all these amid a context of high interest rates, scarcity of capital, geo-political tensions, and disruptions in supplies.”

Dr Simon Baptist

“The challenge we have collectively is the transformation of complex systems at scale. What we know now is that net zero is not enough, we need a pathway through net zero. ‘Sustainable’ gets us back into balance, ‘restorative’ starts to repair the damage that we have made, but we have to move towards a more ‘regenerative’ world where ecosystems grow in harmony with each other.”

Josef Hargrave

“We are living through an era of huge transformation and challenge because of climate change and other factors. Do we know where the food and energy in our cities come from? What happens if there is a global supply crunch for resources? We need to re-architect our systems to meet the fundamental food, energy and water needs of our planet and our cities.”

David Wallerstein

Cities will be able to leverage on technology successfully, as long as there are robust dialogues and collaborations between city leaders, and technologists and innovators.



“Over the next few years, cities will transform a lot, and I’m excited about the potential to leverage technologies such as machine learning, on-demand autonomous vehicles, digital twinning and simulation for new urban solutions. Small differences at a large scale can make a big impact in terms of people’s wellbeing.”

Craig Lawton

The pandemic foregrounded the importance of addressing the safety, physiological, psychological, and emotional needs of people in cities. To do this well, city leaders need to be empathetic leaders.



“Even with the pandemic, cities will continue to be locations that people will want to go to. But, while we had been so focused on growth, innovation, the economy, and a city’s physical infrastructure, the pandemic has re-focused our minds on the humanistic city. That is, placing the human at the centre of the city. Urban leaders and managers have to listen to people, not just through data, but through the heart.”

Professor Lily Kong

PANEL DISCUSSION

Flemming Borreskov
LKYWCP Prize Jury; President, Catalytic Society

Josef Hargrave
Global Leader of Foresight, Arup

Prof Lily Kong
President, Singapore Management University

Craig Lawton
Technical Chief of Global Smart City Programmes, AWS

David Wallerstein
Chief eXploration Officer, Tencent

Hou Yongzhi
Director-General and Research Fellows, Department of Development Strategy and Regional Economy, DRC

MODERATOR

Dr Simon Baptist
Global Chief Economist, The Economist Intelligence Unit



Cities Facing Extremes: How Do We Adapt?

It is essential for cities to understand the interplay of extreme disruptions, such as 50 deg Celsius heat waves, frequent raging storms and prolonged droughts; and adapt for greater urban resilience.

● KEY OBSERVATIONS >

By 2050, more than half of humanity will live in cities, resulting in higher energy consumption, more infrastructure needs, and increased carbon emissions. Cities must achieve net-zero carbon and carbon positivity to protect themselves against climate-related disasters and consequent economic losses.



“Our cities are key to adapting for greater resilience. Cities can take full advantage of their potential and recognise that investments in greener, more efficient cities benefit not only the environment, but also the jobs market, public health, the well-being of communities, and the overall liveability and sustainability in an urban area.”

Dr Yoo Young Sook



“We must start with carbon zero as the foundation... cities must go back to green spaces, pedestrians and interactions, not about the cars and concretes.”

Amit Midha

A key contributing factor to urban resilience is the circular economy, which would alleviate environmental sustainability and resource availability issues. The circular economy is a multi-dimensional systems solution – solving environment and resource issues and bringing about opportunities for economic growth and job creation at the same time.

“A circular systems approach means to have a ‘cradle to cradle’ approach, to tighten the entire resource lifecycle in cities. From the very upstream, cities need to both extend the lifespan of products and services, and reduce unnecessary resource consumption.”
Professor Zhu Da-Jian

“Refuse, reduce, reuse, repurpose, and recycle... Surat has become a good example of what it means to reuse, and of a circular economy.”
Smt. Hemali Boghawala

“Creating resilience requires good leadership, long term planning, and systems thinking. We cannot solve these issues in isolation, they all rely on each other.”
Søren Brøndum

Cities should view responses to challenges and building urban resilience as opportunities.

“Every generation has their challenge. Our challenge as a generation is to confront climate change and equity, head on. The challenge is immense, but so are the opportunities for innovation and collective action.”
Lauren Sorkin

“The wisdom of the community, when combined with the knowledge of experts, always exceeds what one can offer without the other.”
Lianne Dalziel on the importance of community co-creation and engagement in “building back better”

“The determination of cities have resulted in some of the boldest achievements, and that sets us up well for acting urgently on climate change.”
Sally Capp

KEYNOTE

Yoo Young Sook
Chairperson, Climate Change Center,
Former Minister of the Korean Ministry of
Environment

PANEL DISCUSSION

Hemali Boghawala
Hon. Mayor, Surat, India

Søren Brøndum
Managing Director of Buildings (Global,
Ramboll)

Sally Capp
Lord Mayor, Melbourne

Lianne Dalziel
Mayor, Christchurch

Amit Midha
President, Asia Pacific & Japan and Global
Digital Cities, Dell Technologies

Zhu Da Jian
Head of Shanghai Tongji University
Department of Public Management
and Policy; Policy Advisor for Shanghai
Municipal Government, China

MODERATOR

Lauren Sorkin
Executive Director, Resilient Cities Network

WCS RoundTable sessions were held for the first time in 2022. Co-organised with partners, these sessions were focused discussions between urban experts. These created an ecosystem of synergies with the high-level content discussions at WCS tracks.



Real Estate Developers RoundTable: Transforming Cities' Development in 4D

Co-organised with the Urban Land Institute (ULI) Asia Pacific and the Jakarta Property Institute (JPI)

The urban development and real estate of cities must transform based on a 4D strategy – decarbonisation, digitalisation, de-centralisation and disclosure, to thrive and face urban challenges such as ageing buildings, evolving lifestyles, and the climate crisis. This session brought together leaders with deep regional experience to discuss how the building and development sector in APAC cities are delivering on the four strategies, debate the strengths and tensions of different approaches, and strategise actionable steps to advance into the 'new normal'.

“Different markets face different phenomena. In Singapore, more companies want employers to return to offices, hence physical offices are still necessary. In general, Asian countries still value a place to collaborate and remain hopeful on seeing positive rental trends. However, this is different in Western countries where people resist.”

Kwek Eik Sheng

Group Chief Operating Officer,
City Developments Limited

“The baseline of many companies is about energy savings. Technology can then be used to close the loop. It is also important to ensure lower-graded buildings are not left behind – developers and businesses can bring in more multi-usage facilities to such buildings.”

Nina Yang

Chief Executive Officer,
SJ CityGlobal

“Vietnam's real pressure is its rapid urbanisation that is projected to increase by 10% in the next 10 years. To relieve the pressure on already dense cities, planning needs to be done outside of them. I have been working with the provincial networks to enlarge the area of Ho Chi Minh City by 30%... We are also adopting a new township model which include office buildings so that people do not have to commute and it is more sustainable. The focus then is how we can entice locals and businesses during the development phase, so that a community can be built and integrated seamlessly.”

Minh Nguyen

Deputy Chief Executive Officer,
MIK Group



Building a Green City through a Sustainable Investment Pipeline

Co-organised with the International Finance Corporation (IFC)

This by-invite session convened mayors from selected cities to exchange views on the challenges and potential roadmap to achieve climate targets, and how to leverage sustainable finance and the private sector to accelerate progress.



“At IFC, we are already providing investment and advisory services to private companies and subnational governments in emerging markets to help build the infrastructure of the future”. IFC indicated it would continue to provide more climate-resilient and inclusive urban infrastructure and services across the region.

Isabel Chatterton

Director and Regional Head of Industry, Asia Pacific, Infrastructure, International Finance Corporation

Dynamic Cities: A New Way to Measure Progress

Co-organised with Bloomberg New Economy

This session introduced the Bloomberg New Economy Dynamic Cities Framework to city leaders, experts, and practitioners. The framework captures multiple dimensions across 6 pillars: fair, sustainable, happy, innovative, data driven and responsive, allowing for cities to evaluate, track, and advance progress on a set of metrics that is important for cities to be sustainable, vibrant, and responsive hubs for talent and innovation. The discussion which arose from the session contributed to the framework’s development and launch as an Index in November 2022.



“(We are) less interested in how they (cities) compete with each other, but how to make a global system of cities work.”

Greg Clark

Global Advisor on Cities, Transport and Innovation



Accelerating Urban Water Resilience: On the Road to the UN 2023 Water Conference

Co-organised with the Resilient Cities Network and the Kingdom of the Netherlands

This roundtable convened a group of game-changing cities and partners to highlight the importance of consolidated action on water resilience for sustainable development. It was also a platform for city leaders to discuss disruptors hindering actions to water-related shocks and stresses and share solutions that are successful in building urban water resilience.

- **Senior Minister Tharman Shanmugaratnam** contextualised the session by highlighting that water is at the heart of many of today's complex and interconnected challenges, which includes climate change, biodiversity loss and equity and the importance of governance across all scales to address the water crisis.
- **Global Director of Programs at Resilient Cities Network, Katrin Bruebach**, reiterated the role of cities in addressing water issues, with water being a key resource for a city's success, liveability, and sustainability but also its vulnerability to shocks and stressors.
- **Dutch Special Envoy for International Water Affairs, Henk Ovink**, underscored the commitment on global cooperation through the setting up of the Global Commission on the Economics of Water and the UN 2023 Water Conference, as key platforms for us to come together and enhance resilience in our urban water systems.
- **Mayor of Rotterdam, Ahmed Aboutaleb**, echoed the sentiments on the criticality of water in our cities and emphasised the importance of collaborations across sectors, regions and countries on knowledge sharing and technologies and the commitment of strong leadership to steward investment into critical water infrastructure to support a resilient urban water system while maintaining positive public sentiment.



83 talented young leaders participated in the WCS Young Leaders Symposium in 2022. Members came from a variety of both private and public industries, including the Executive Mayor of Cape Town, Alderman Geordin Hill-Lewis, Chief Economist of Helsinki, Mikko Kiesiläinen, Mayor of Dipallog City, Darel Dexter T. Uy, and leaders from ARUP and Aurecon.

The Young Leaders examined several key topics including futureproofing cities, and top priority areas to achieving a net-zero future.

“As each nation, city, town and any unit of habitation is retooling its economy and social infrastructure to make it sustainable, we must remember the factors that are driving it today include population growth, the advent of AI, and rebalancing of geopolitics. These may also change in the years to come and as leaders, we must ensure that the cities of the future are also sustainable to constant change itself.”

Sambhav Gupta

Head of Industrial Projects

“With 60% of the world’s population living in urban spaces by 2030, cities will face unprecedented shifts. At WCS 2022, I witnessed the shared urgency among stakeholders across public and private space from over 50 countries to not just secure, but futureproof our living within the next decade. As a young leader and a tech-startup founder, I was privy to the collective thinking and shared best practices in order to achieve a resilient, net-zero, inclusive micro-city”

Nalini Veeraghanta

CEO Founder, Naturethings



The Smart Cities Workshop serves as a platform for businesses and cities to meet, renew old ties and make new acquaintances, overcome urban development and sustainability challenges, and grow together. Inaugurated virtually in 2021, the Workshop was held in-person for the first time this year, with the prevailing mindset that Singapore is in an ideal position to steer its own growth, and encourage the borderless pursuit of solutions to challenges.

Officials from 22 cities that were enthusiastic in seeking smart city solutions, met with representatives from 29 Partners from international financial institutions, urban development and infrastructure consultancies, mentor cities, and homegrown as well as Singapore-based companies

specialised in the field of energy, water, waste, environment and infrastructure, finance, health, safety and security, building communities, etc.

Officials from Surat (India), Seberang Perai (Malaysia), and Jambi (Indonesia) presented their respective smart city projects following close partnerships with CLC and its Resource Persons under the Temasek Foundation Urban Resilience Programme. These cities showed cleared examples of how their projects were improved, on consultation, in terms of rethinking their infrastructural plans, efficiency of their waste and water management frameworks, and high quality of life for their communities.



The WCS Science of Cities Symposium convenes international researchers, city and industry leaders to share scientific insights and methodologies on tackling urban challenges.

At this year's inaugural Symposium, speakers emphasised the importance for the city to be recognised as a system-of-systems, which could be better managed with feedback loops that are informed by the effective use of big data. As cities are inherently unpredictable, the challenge for city planners is to make long-term plans that are robust, while having comprehensive transition management, even as assumptions, real world conditions, and technologies evolve. This makes real-time data increasingly important to realise optionality rather than to predict exactly what would happen next.

Presenters at the symposium also discussed the principles and various integrated strategies, designs, and innovations to enable a regenerative approach to cities. Such an approach would ensure a thriving society in a climate resilient city. Solutions brought up included nature-based solutions, participatory design, and governance structures to enable inclusive, ecologically and socially responsive communities, using digital monitoring and modelling systems, sensors, and cost-benefit analysis.

ASIA INFRASTRUCTURE FORUM AND CO-LOCATED EVENTS



WCS 2022's key partner is the Asia Infrastructure Forum (AIF). The Forum is the foremost platform for infrastructure players and thought leaders to discuss key issues such as the future state of infrastructure, sustainable financing, technological innovation and collaboration.

This year, AIF 2022 was held on 2 and 3 August. It focused on "Scaling Up Sustainable Infrastructure", and was attended by over 1,000 delegates from more than 30 countries who shared their experience and insights on the latest developments and sustainable solutions in regional infrastructure.

WCS 2022 also saw several Co-Located Events (in-person) and Virtual Partner Events, which complemented the main WCS programme. These included a special convening of City Possible's 24-Hour Cities Network working group, and workshops held by the Singapore Land Authority (SLA), Maritime and Port Authority of Singapore (MPA) and Port of Rotterdam, and the UNDP Global Centre.

MEMORANDUMS OF UNDERSTANDING AT WCS 2022

Four Memorandums of Understanding (MOU) and agreements were inked during WCS 2022, paving the way for collaborations between cities and stakeholders in the public, private, and people sectors.



Mayor of Seoul, Mr Oh Se-hoon, the Lee Kuan Yew World City Prize Laureate for 2018, signed an agreement of behalf of the Seoul Metropolitan Government with the Centre for Liveable Cities to host the WCS Mayors Forum 2023, and shared on Seoul's latest city initiatives.



The Singapore Land Authority (SLA) signed a Memorandum of Understanding with the National Environment Agency to develop the use of Global Navigation Satellite System (GNSS) data obtained from SLA's Singapore Satellite Reference Network (SiReNT).



The Maritime and Port Authority of Singapore and the Port of Rotterdam Authority signed a partnership the world's first Green and Digital shipping corridor between the two maritime cities of Singapore and Rotterdam.



Enterprise Singapore supported the signing of an MOU amongst the Healthy Building Consortium, made up of Gush, Arid Indoor Air Solutions, Integrated Facilities Services Consulting (IFSC), Smarten Spaces, uHoo and GreenA Consultants, for healthy buildings in the built environment.



List of Exhibitors

Sponsors Booths

Accenture Pte Ltd
 Port City Colombo (Pvt) Ltd
 greehill
 Hyundai Motor Group
 Keppel Corporation Limited
 Singapore Management University

ST Engineering
 U.S.-ASEAN SMART CITIES PARTNERSHIP
 City of Vienna
 City of Seoul

Singapore Pavilion

Agency for Science, Technology and Research (A*STAR)
 Building and Construction Authority
 DesignSingapore Council
 Enterprise Singapore
 Housing & Development Board
 Infocomm Media Development Authority

JTC Corporation
 Land Transport Authority
 National Parks Board
 Singapore Food Agency
 Singapore Land Authority
 Sport Singapore
 Urban Redevelopment Authority



List of Exhibitors

Smart Cities Expo

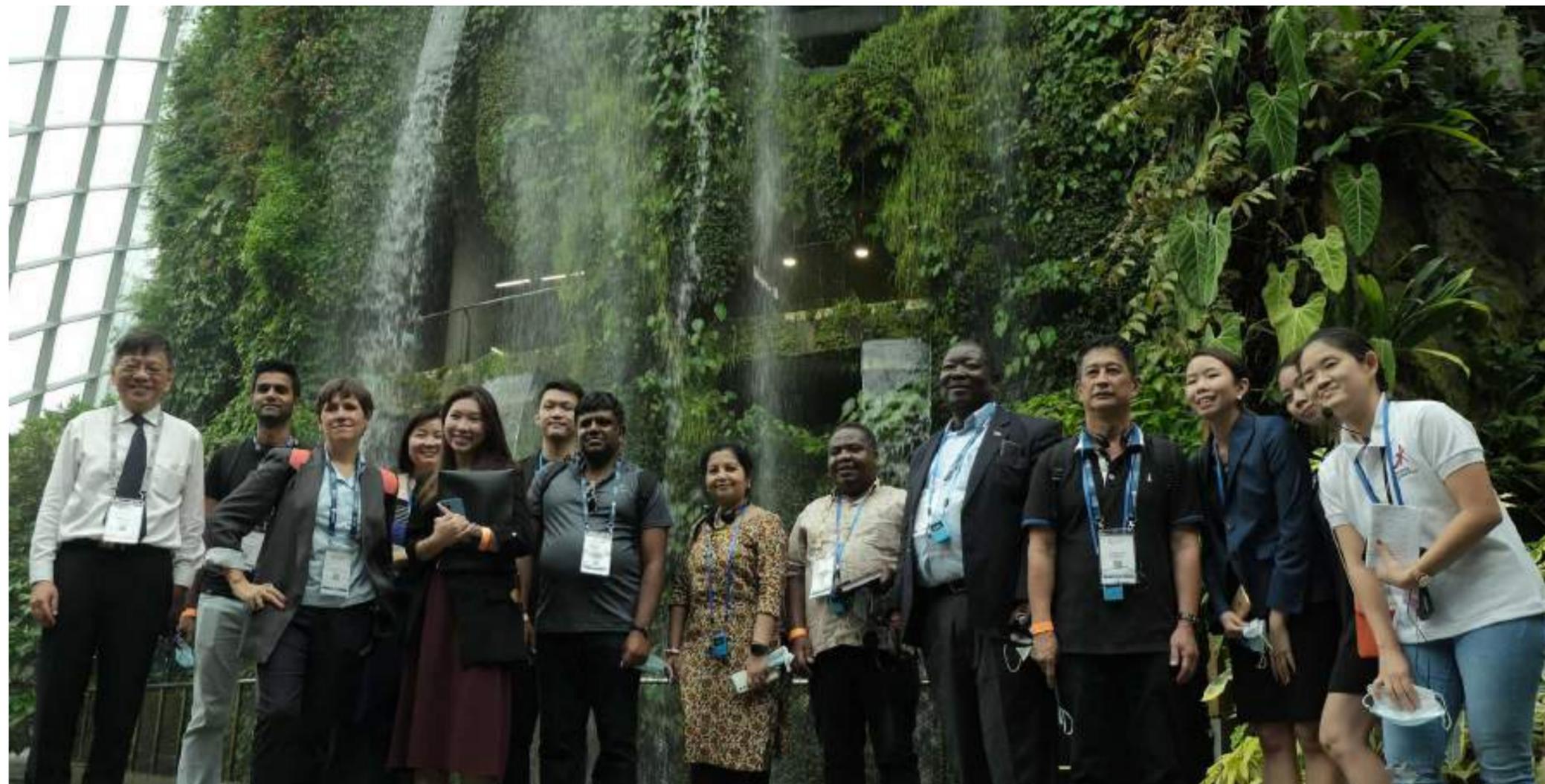
Association of Small & Medium Enterprises (ASME)
 enCity Urban Solutions Pte. Ltd.
 Graymatics SG Pte Ltd
 FloatingOn Pte Ltd

Seventh Sense Artificial Intelligence Private Limited
 Heron Technology Pte Ltd
 Vizzio Technologies Pte Ltd
 Embry-Riddle Aeronautical University

Insect Feed Technologies
 Skyports Pte Ltd
 Singapore University of Technology and Design

SITE VISITS

Three site visits were organised during WCS 2022 for delegates to experience Singapore as a Sustainable, Liveable, and Loveable City. They could choose a tour of – Marina Bay and Gardens by the Bay, Tanjong Pagar, or the Bras Basah. Bugis precinct.



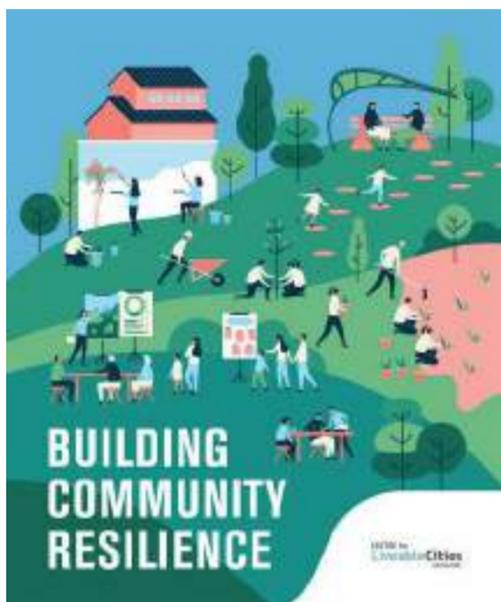
PUBLICATIONS LAUNCHED



URBAN SOLUTIONS ISSUE 21: EMERGING STRONGER

Cities are at the frontline of the climate crisis, and womb to the innovations and resources needed to spawn solutions. How then can cities create sustainable futures fast enough, while emerging stronger in the process? Featuring interviews and guest articles by city leaders and experts, this issue of Urban Solutions explores the vision of a stronger and sustainable urban future.

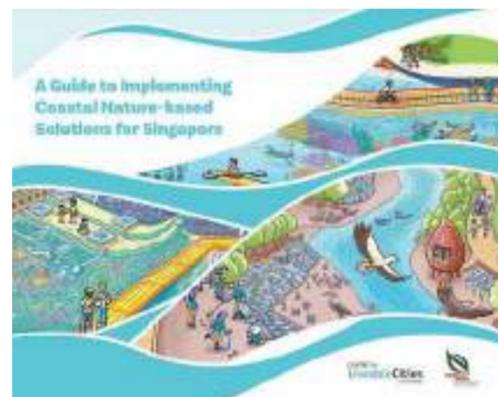
[Read >](#)



BUILDING COMMUNITY RESILIENCE

This publication is a documentation of the Centre for Liveable Cities' exploration into developing a framework to measure and build community resilience in the built environment. It documents the pilot climate action project that was undertaken with the community at Singapore's Cambridge Road, which became a vehicle to test the indicators and study the impact of community-driven interventions on building community resilience.

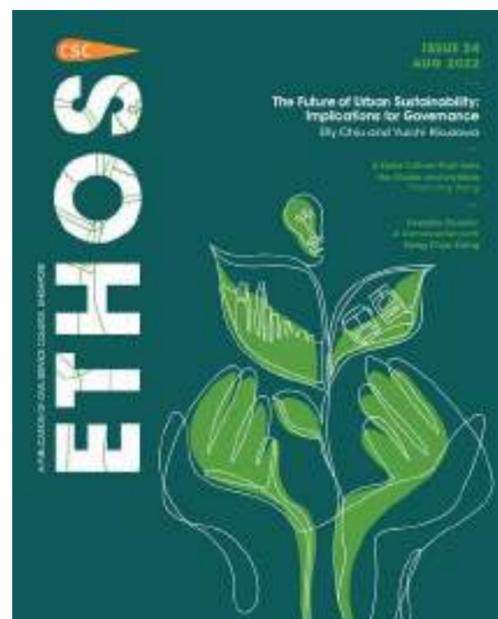
[Read >](#)



A GUIDE TO IMPLEMENTING COASTAL NATURE-BASED SOLUTIONS IN SINGAPORE

To strengthen resilience to climate change, cities can leverage Nature-based Solutions that could be applied adaptively, to simultaneously restore nature and provide human benefits. This guide was jointly developed through research convening a wide range of stakeholders and experts. It aims to document a shared understanding on the important principles and enablers for Nature-based Solutions to be applied in an urban coastal context, to reduce climate risks, regenerate ecosystem services and deliver greater societal gains for a City in Nature.

[Read >](#)



ETHOS ISSUE 24: THE FUTURE OF URBAN SUSTAINABILITY

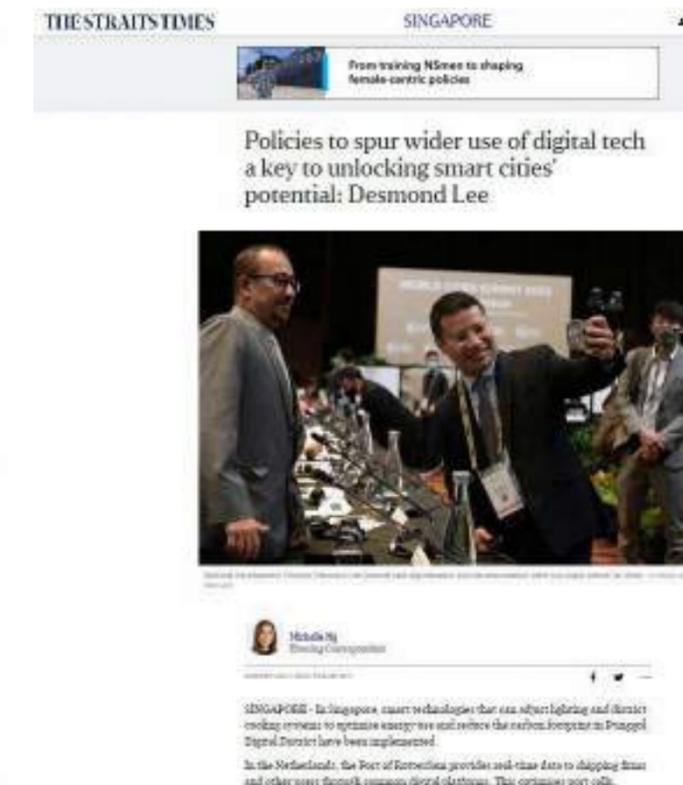
ETHOS is a practitioner-oriented journal of public policy and governance matters published by Singapore's Civil Service College. Since 2006, ETHOS has featured insights and contributions from respected experts and senior leaders in related fields. This special issue of ETHOS, produced in partnership with the Centre for Liveable Cities, explores the theme of urban sustainability. The global pandemic, followed closely by unsettling geopolitical conflict, has led to a cascade of disruptions to the supply chains that for decades have helped lift the well-being of billions around the world.

[Read >](#)

MEDIA & PUBLICITY EFFORTS

WCS 2022 partnered with local and international media platforms Channel News Asia and CNBC.

Media efforts garnered over 350 pieces of media coverage across more than 20 countries, including broadcast clips on local primetime news channels. WCS 2022 was also widely shared on social media platforms like Facebook and LinkedIn by sponsors, speakers, and industry leaders and stakeholders.



SPONSORS AND PARTNERS

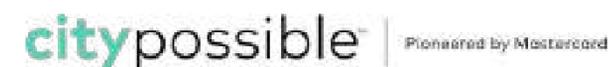
LEE KUAN YEW WORLD CITY PRIZE SPONSOR



PATRON SPONSORS



PLATINUM SPONSORS



KNOWLEDGE PARTNER



CORPORATE SPONSORS



ABOUT THE ORGANISERS



Set up in 2008 by the Ministry of National Development and the then-Ministry of the Environment and Water Resources, the Centre for Liveable Cities (CLC) aims to distil, create and share knowledge on liveable and sustainable cities.

The CLC's work spans four main areas: Research, Capability Development, Knowledge Platforms, and Advisory. Through these activities, it hopes to provide urban leaders and practitioners with the knowledge and support needed to make our cities better.

For more information, please visit www.clc.gov.sg



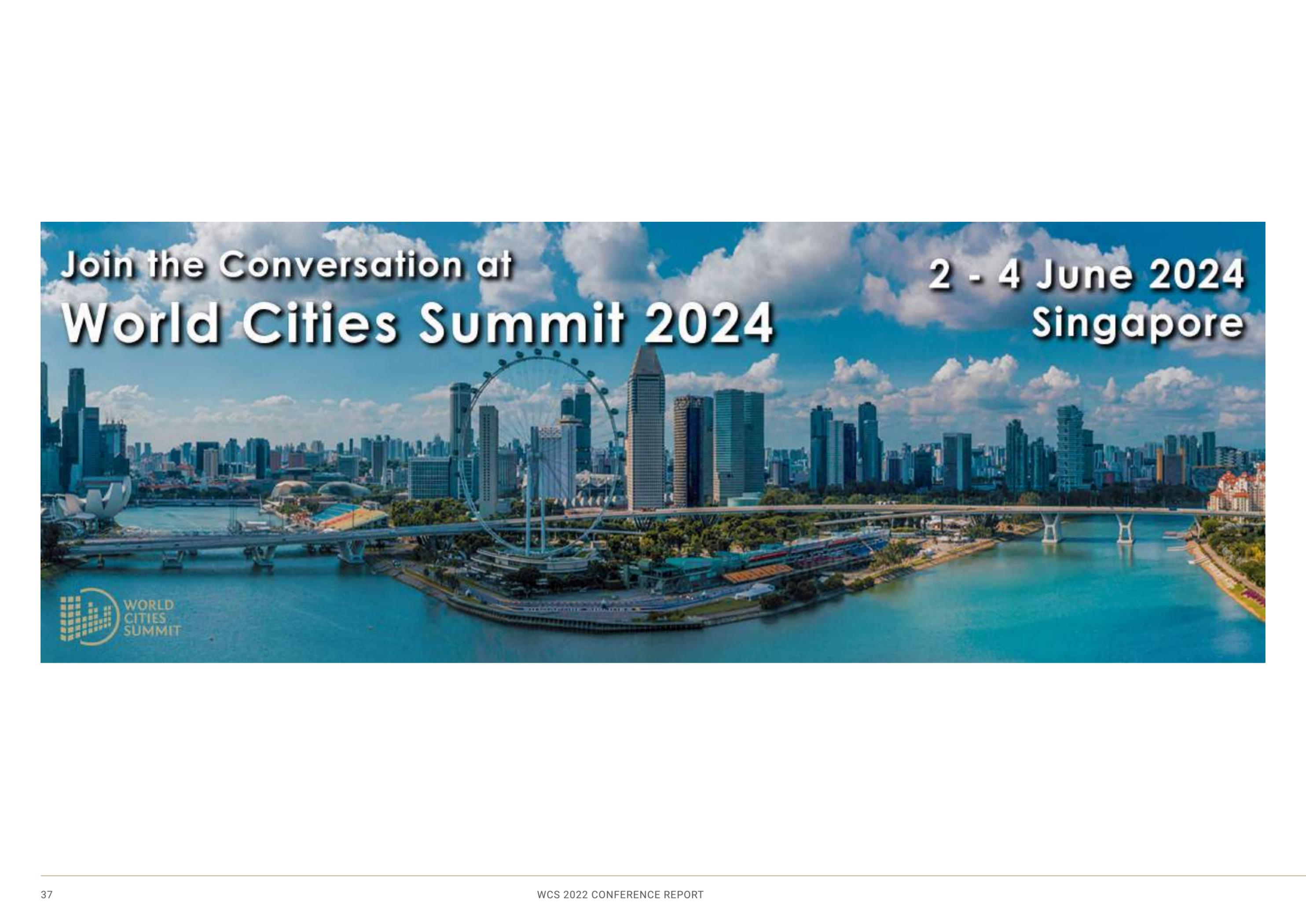
To make Singapore a great city to live, work and play

The Urban Redevelopment Authority (URA) is Singapore's land use planning and conservation agency. Our mission is 'to make Singapore a great city to live, work and play'. We strive to create an endearing home and a vibrant and sustainable city through long-term planning and innovation, in partnership with the community.

URA's multi-faceted role includes being the main government land sales agent. We attract and channel private capital investments to develop sites that support planning, economic and social objectives. We also partner the community to enliven our public spaces to create a car-lite, people-friendly and liveable city for all to enjoy. In shaping a distinctive city, URA also promotes architecture and urban design excellence.

Visit www.ura.gov.sg for more information.





Join the Conversation at
World Cities Summit 2024

2 - 4 June 2024
Singapore



