

SPEECH BY MR CHOI SHING KWOK, PERMANENT SECRETARY FOR THE MINISTRY OF THE ENVIRONMENT AND WATER RESOURCES, AT THE CITIES:POSSIBILITIES FORUM ON TUESDAY, 8 NOVEMBER 2016 AT GRAND HYATT HOTEL

Mr Ton Büchner,

CEO, AkzoNobel

Ms Jessica Cheam,

Founder and Editor, Eco-Business

Distinguished guests,

Ladies and gentlemen,

1 A very good afternoon to you. It is my pleasure to be here to join you today at the inaugural *Cities:Possibilities* forum. I am glad that so many distinguished individuals are gathered here to discuss the future of sustainable cities, and how we can all play a part towards achieving a high quality of life without placing too much strain on the environment and our natural resources.

Singapore's environmental challenges

2 The world we live in today is a complex and challenging one, particularly for countries like Singapore. As a small island-state with a land area only slightly larger than 700 sq km, we have the unenviable task of having to balance our land uses between many different competing needs – from defence, industry and housing, to transport, infrastructure and also recreation. This is further compounded when you consider that we have a population of 5.6 million that is still growing, and a population density that is higher than many other developed cities.

3 With limited natural resources, it has been necessary for us to adopt a conservation mindset, since the early days of Singapore's development, to wisely utilise what we have. It was a very difficult struggle in the beginning to ingrain such values but it has slowly taken root. Going forward, it is even more vital for Singaporeans to embrace environmental sustainability and to cherish and carefully manage essential resources such as energy and water, so as to ensure their availability for future generations.

4 Another challenge that Singapore faces as a low-lying state is the vulnerability to impacts of climate change. The Centre for Climate Research Singapore (CCRS) has projected that we will experience more intense rainfall, higher temperatures and a rise in sea levels by the last few decades of this century if not earlier. Within the government, we have been quietly but steadily preparing for climate change adaptation and will continue to invest in efforts to shore up our resilience to these impacts through long-term planning and timely intervention.

5 In September this year, Singapore ratified the Paris Agreement, which formalises our pledge to reduce our emissions intensity by 36% from 2005 levels by 2030 and to stabilise emissions with the aim of peaking around 2030. More recently, with the ratification of the Agreement by 100 other countries, the Paris Agreement came into force four days ago. Even though Singapore is a small nation contributing only 0.11% of global carbon emissions, we are committed to reduce our carbon footprint towards fulfilling our pledge under the Agreement to reduce the global impact of climate change, while strongly urging others to do the same.

Sustainable Singapore Blueprint (SSB)

6 Some of you may be aware that we have developed a whole-of-government response to all these challenges under the Sustainable Singapore Blueprint (SSB). The SSB sets out our national vision and plans for the next phase of sustainable development until 2030, and comprises three themes: A Liveable and Endearing Home; a Vibrant and Sustainable City; and an Active and Gracious Community. It encapsulates our belief that we can balance our approach towards both growing the economy and protecting the environment – or in other words, we want to have our cake and eat it too! Indeed, we believe that it is not only possible to have a liveable and sustainable home while fulfilling the need to make a good living for all Singaporeans, it is essential that we do so!

7 The SSB is a national effort, with contributions by many public agencies as well as inputs from consultations with industries, businesses, NGOs and community groups. To better streamline the efforts of all agencies, we have identified five focus areas under the SSB. Under A Liveable and Endearing Home, we aim to create “Eco-smart” Endearing Towns and a “Car-lite” Singapore. Under a Vibrant and Sustainable City, we work towards becoming a “Zero Waste” Nation and a Leading Green Economy. And all of these can only be achieved if we have the foundation of an Active and Gracious Community. I will share briefly on these 5 focus areas.

An “Eco-Smart” Endearing Town

8 Firstly, we are building “Eco-Smart” Endearing Towns that will embed smart technology and eco-friendly features all over our towns and inside our homes, to allow Singaporeans to enjoy a better quality of life while leading a more sustainable lifestyle. We can look forward to precincts designed with sustainability in mind and greater use of smart technology in housing estates, like smart car parks, smart lighting, and digital infrastructure in flats to help residents save energy and water. There will also increasingly be ‘smart’ and sustainable features like a Pneumatic Waste Conveyance System, which transports waste and recyclables through a network of underground pipes to central collection centres by air suction.

9 At the broader level, we can also look forward to more green and blue spaces, parks and waterways as well as community facilities nearer to homes, and less urban inconveniences such as litter and noise around our neighbourhoods.

A “Car-lite” Singapore

10 Next, to promote a “Car-Lite” Singapore, we are enhancing our rail and bus network and creating better connections such as sheltered walkways to improve the public transport experience. As part of this vision, we are also turning Singapore into a cycling-friendly city. Cycling paths are being built, bicycle parking facilities are being added, and from next year, a bike-sharing system will be available at the Jurong Lake District. More than 1,000 bicycles will be made available across 100 docking stations at any time, to allow residents to make short trips from their homes to transport nodes or key amenities within the estate. This scheme could also be extended to Marina Bay/City Centre as well as Tampines and Pasir Ris. Over time, we hope that walking, cycling and public transport would become the choice modes of commuting in Singapore.

11 Smart, on-demand point-to-point transport options could also soon become a reality. Imagine using your phone to summon a self-driving shuttle that sends you home after you exit an MRT station? Such a system of shared mobility on-demand service would be powered by autonomous driverless vehicles, to serve first-and-last mile connections and intra-town travel.

12 By mid-2017, Singapore will also launch a nationwide electric vehicle (EV) car-sharing programme. Such car-sharing programmes enable more people to have occasional access to the use of a car, without having to own a car. This programme will be rolled out progressively across Singapore, starting with HDB towns such as Ang Mo Kio, Jurong East and Punggol, and by 2020, a total of 1,000 electric cars and 2,000 charging points will be rolled out. There are also plans to conduct fleet-based trials for e-taxis and e-buses, which will enable Singapore to move towards a greener and more sustainable transport system.

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Towards a Zero Waste Nation

13 Another focus area we are working towards is to become a Zero Waste Nation, an urgent task for us. The amount of solid waste we generated has grown by 50% in the last decade. If we allow this rate of growth to continue, our only offshore landfill – Semakau Landfill – will be filled up by 2035 and we would need to build a new waste-to-energy plant every 7-10 years. This is not sustainable in land-scarce Singapore. We need the commitment of business, community and Government to reduce the consumption of resources and recover as much as we can from our waste streams.

14 One project we are planning is the development of an Integrated Waste Management Facility, which will be able to process and treat various waste streams such as food waste and recyclables. The plant will be co-located with a water reclamation plant to achieve waste-water-energy synergies so as to maximise energy and resource recovery efficiencies, and will be integral to meeting Singapore's used water and waste management needs far into the future. Besides this, we are also working towards designing a nation-wide system to deal with another waste stream of particular concern, i.e. electronic waste. We encourage everyone to make "zero waste" our way of life, and hope to eventually make zero landfill a reality so that we can free up our land for more meaningful uses.

A Leading Green Economy

15 The fourth focus area is to build a Leading Green Economy. We aim for our companies to adopt greener practices and more efficient and sustainable processes, which will in turn generate more high quality green jobs for Singaporeans. We aim to be among the leading cities in green innovation and deployment, with living labs to test-bed ideas that improve lives and protect our environment.

16 Through continued research and innovation efforts, we aim to bring forth new breakthroughs in urban planning, and to develop and implement smart and sustainable urban solutions. This year, more than \$900 million of new public sector funding has been committed for the next five years for R&D in the Urban Solutions and Sustainability sector. This funding will boost our innovation capabilities in the Cleantech industry, which has been identified as a key economic growth area. In addition, our research centres for clean energy such as the Solar Energy Research Institute of Singapore (SERIS) and the Energy Research Institute at NTU (ERI@N), are collaborating with the industry to support the government's efforts towards large-scale deployment of solar systems. Singapore is also availing our national urban infrastructure for companies to develop, test and commercialise innovation solutions. An example we can look forward to is the Jurong Innovation District, which will bring together researchers, students, innovators and businesses to develop products and services and to create the industrial park of the future. These efforts aim to build up our urban solutions expertise, and to turn Singapore into an attractive destination for developing urban solutions for the region.

17 The Economic Development Board is also accelerating solar deployment in Singapore by promoting and aggregating solar demand across government agencies. HDB has led the way by installing solar panels on HDB blocks, and PUB, Singapore's National Water Agency, will also be operationalising the floating solar panel testbed on Tengeh Reservoir by the end of the year. We plan to have solar energy contribute 350 MWp of Singapore's energy system, or 5 per cent of the total electricity needs, by 2020. This will pave the way for greater adoption of cleaner and more sustainable energy in Singapore.

An Active and Gracious Community

18 And finally, an Active and Gracious Community is indispensable to creating a high quality living environment. We are working to inculcate a sense of shared responsibility among Singaporeans and develop greater stewardship for the environment. By practicing simple actions on our own part, and encouraging others to join us in our green habits, we can spread and grow the Sustainable Singapore Movement. It is only through the collective effort from everyone that we will be able to realise the outcomes in the SSB. That we have events like today's forum is also an encouraging sign that this movement is growing and I commend you all for being part of it.

Conclusion

19 Let me conclude, I have shared Singapore's sustainability challenges earlier. The future is daunting but also exciting. We have made much progress as a nation because we worked together to keep Singapore clean and green as our nation developed. Our journey ahead will not be an easy one, and we will need everyone to work together to push ahead towards building a sustainable Singapore. I am sure you have many ideas as to how to do this and I look forward to hearing them during the panel discussion. Thank you.

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