

# At the nexus of urbanization and sustainability

A review of the panel discussion on Sustainable Cities

Featuring: Dr. Timothy Stone CBE

## FORESIGHT

A Global Infrastructure Perspective



The world is in the midst of dramatic change and upheaval. On the one hand, we are seeing an unprecedented population shift as people flock into urban areas seeking new opportunities and a better quality of life. On the other is the urgent and dire priority of sustainability – both environmental and financial – to reduce the cost and impact of our growing and increasingly ravenous populations and economies.

And at this nexus of urbanization and sustainability lies infrastructure. Indeed, as we look around the world, it becomes increasingly obvious that governments, businesses and populations are looking to infrastructure to not only deliver on carbon reduction targets, but also to ease the swelling of our urban areas.

Last week, as part of the Global Summit focused on the business perspective on sustainable growth, I had the pleasure of hosting a panel of industry experts in a lively and wide-ranging discussion on the challenges and opportunities of leveraging infrastructure to create

truly sustainable cities. Joining me on stage were Dr. Anne Kerr, Director of Sustainable Development at Mott MacDonald; Andreas Klugescheid, Vice President of Governmental Affairs at BMW Group; Rachel Kyte, Vice President of Sustainable Development at the World Bank; and Marcelo Maocy, Director of the International Division at Foz do Brazil.

Over the course of two hours, we discussed and debated some of the most significant imperatives facing governments and urban developers as they strive to respond to these two urgent issues. The following is a short

summary of what we found and some of the practical responses that – with dedicated and collaborative effort – could be brought to bear on the inextricably interlinked challenges of urbanization and sustainability.

**Urban Planning:** The panel identified the need for a new perspective on urban planning. For one, urban planners will need to think about what can be provided naturally by harnessing the surrounding environment to reduce the impact and increase the sustainability of our cities. At the same time, technology can – and indeed, must – be leveraged to bring new ideas and approaches to the fore.

For example, panelists discussed the potential for innovative multi-purpose infrastructure such as road traffic management systems that also monitor and mitigate flood waters, or road tunnels that capture and channel storm water away from urban areas at risk of flooding.

**Water:** In much of the world, water scarcity is fast becoming one of the greatest sustainability challenges for cities. But – almost universally – water is highly subsidized by governments who (rightfully so) deem access to water to be a basic civic right. As a result, water is often wasted: in Brazil, almost 40% of water is lost through leakage; Hong Kong loses more than 25%; Singapore, on the other hand, wastes only around 6%. And while the goal of many Master Planners is to capture and re-circulate 100% of water within cities, there is still much work to be done before this goal is realized.

A number of practical solutions were raised by the panelists including smart metering for waste water and greater innovation in areas such as porous surface design and water-efficient building materials. Policy and cultural change will also be critical in order to incentivize city-dwellers to reduce their consumption and reuse waste water for irrigation and landscaping.

**Transportation:** One of the greatest (and most talked about) challenges facing cities lies in connectivity. But when we start to look at decarbonizing transportation, urban infrastructure development often becomes much more complex. In part, this is because the development of mass transit systems often takes a number of decades to fully realize and – even then – tends to also require significant cultural changes in the way that populations interact with their environment.

But, as members of the panel pointed out, connectivity and transportation does not always require new subways or metros to achieve sustainability. For example, Bus Rapid Transit systems are increasingly being seen as a simple way to provide low-carbon transport within the existing urban infrastructure.

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Municipalities are also starting to look at urban renewal as an efficient way to increase density within close proximity to commercial areas, thereby reducing travel times and the need for extensive transportation networks.

But the really hard part of decarbonization of transport is decarbonizing freight, especially in those (many) countries where a large proportion of the freight is carried by road. There are few, if any practical and realistically deliverable solutions available or in sight.

**Political will:** Achieving a long-term vision for infrastructure is a significant challenge for governments. In part, this is because infrastructure development generally massively outlasts the terms of most politicians and, as such, creating and maintaining a consistent infrastructure strategy is often a challenge within an environment where both governments and their mandates frequently change. Policy is also a common barrier to infrastructure development, particularly in urban areas where responsibility can often be shared between different levels and sectors of government. The lack of knowledge – perhaps as asset condition registers – of exactly what existing infrastructure assets are in operation and require maintenance and sustainable management is a serious blockage to responsible management of infrastructure.

Politicians must strive to take a more pragmatic approach to infrastructure development to ensure that priority is given to policies that encourage both sustainability and economic growth. This will require a greater focus on not only encouraging greater cooperation between national and municipal governments, but also enhancing public sector capacity in key sustainability and urban planning capabilities.

If there was one message that came out loud and clear from the panel discussion, it was that traditional approaches to infrastructure planning are no longer sufficient – or appropriate – when faced with the nexus of urbanization and sustainability. Instead, today's urban planners must balance a range of considerations such as growth, connectivity, resource use, financial viability and sustainability to create a new vision of the urban environment.

*To learn more about the KPMG Global Summit on Business Perspectives on Sustainable Growth or the findings of our Panel Discussion on Sustainable Cities, we encourage you to contact one of our global infrastructure professionals or your local member firm.*

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## Contact us

**Laura Jablonski**  
Sr. Marketing Manager,  
Global Infrastructure  
KPMG in Canada  
T: +1 416 777 8849  
E: [ljablonski@kpmg.ca](mailto:ljablonski@kpmg.ca)

**Cristina Cerqueira**  
Marketing Manager,  
Global Infrastructure  
KPMG in Canada  
T: +1 416 777 8799  
E: [ccerqueira@kpmg.ca](mailto:ccerqueira@kpmg.ca)

[kpmg.com](http://kpmg.com)

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