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A nighttime photograph of a city skyline, featuring the Petronas Towers in Kuala Lumpur as the central focus. The towers are illuminated and stand out against a dark sky. Other buildings and trees are visible in the foreground and background, some with lights on. The overall tone is dark and urban.

# WHAT CAN URBAN SUSTAINABILITY EXPERIMENTS DO?

SUMMARY OF DISCUSSION POINTS FROM  
SIDE EVENT AT WUF9, KUALA LUMPUR,  
FEBRUARY 2018

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# INTRODUCTION

This report builds on a side event at the Ninth Session of the UN-Habitat World Urban Forum (WUF9), held in Kuala Lumpur, 8-13 February 2018. The side event aimed to stimulate discussion around the potential for 'urban experiments' to contribute to the implementation of the **New Urban Agenda** (adopted in October 2016 at the United Nations Conference on Housing and Sustainable Urban Development Habitat III, in Quito, Ecuador).

Around 50 WUF9 participants from cities around the world took part in the event. Some of the key learnings from the audience discussion and feedback forms are summarised in the following pages.

The audience discussion responded to a series of short vignettes of urban experimentation which have been profiled in international research projects on **Smart Eco-Cities** and **Urban Energy Transformations**. These were presented by David Hees (on the **iShack solar energy project** in Cape Town, South Africa), Melissa Kerim-Diken (on the **Nelson Mandela Bay Regional Innovation Forum**, also in Cape Town), Rob Cowley (on the ongoing process of experimentation in **Corridor Manchester**, UK), and May Tan-Mullins & Ali Cheshmehzangi (on experimental 'smart city' governance in the city of **Ningbo, China**).

[Watch video](#)[Download slides](#)

## Urban Sustainability Experiments?

Our event drew on recent academic work identifying a global trend towards urban 'governance by experiment'. Rather than relying on traditional policy-led solutions to unsustainable development, local authorities are often acting more at arms' length, enabling local communities, the private sector, NGOs, universities, and other stakeholders

to work in partnership. The local experiments that take place are often small-scale, low-risk 'pilot' activities. Urban experimentation, then, is neither fully 'top down' or 'bottom up', but varies between the two. From a global perspective, this is a process of experimentation in new forms of governance, as much as in new sustainable technologies.

## Key Questions

This report reflects on the following questions, which attracted particular interest during the audience discussion and in feedback forms:

- what are the benefits of urban experiments in terms of implementing the New Urban Agenda and the Sustainable Development Goals?
- how can local cultures of experimental innovation be cultivated?
- how should urban experiments be regulated and evaluated?

# BENEFITS OF URBAN EXPERIMENTATION

Many of our audience members were optimistic about the potential benefits of urban experimentation. A successful experiment opens up the possibility of replication elsewhere, and actively demonstrates the value of 'breaking down silos' and fostering dialogue between different stakeholder groups. But even a 'failed' experiment means lessons can be learnt, social learning has been enabled, and relatively little has been spent upfront. This is clearly appealing for cities lacking the resources or political will to commit to large-scale structural changes, and because it allows risk to be shared.

Small local trials of new innovations may avoid the problems that occur when 'best practice' from elsewhere is insensitively imposed onto urban space. They build understanding of how new ideas should be 'translated' into local contexts. Equally, though, experiments may work to define best practice, and what is learnt can be shared more widely.

*"One government responsibility is to spread awareness of successful experiments among the public. This can create a new wider mindset of hope for the future"*

*(Audience member)*

These potential benefits are well aligned with the New Urban Agenda's (UN, 2017) emphasis on collaborative governance processes, capacity building, and knowledge sharing. Among other things, it actively promotes "the systematic use of multi-stakeholder partnerships in urban development processes" (153), "co-production networks" (154) and cross-sectoral efforts to "develop and manage basic services and infrastructure" (91), with businesses called upon to "apply their creativity and innovation to solving sustainable development challenges in urban areas" (133). It urges better "access to science, technology and innovation and enhanced knowledge-sharing on mutually agreed terms" (126), and inclusive collaboration in shaping the "organizational and institutional governance processes" through which decisions are made (148).



iShack experimental solar power in Enkanini, South Africa  
Photograph: David Hees (2016)

# BUILDING LOCAL CULTURES OF EXPERIMENTAL INNOVATION

Can processes of local experimentation be intentionally stimulated? The hope of doing so may be misplaced if, as one audience member suggested, it is necessity rather than policy-making that is the mother of invention. However, in the absence of external encouragement and information, it should be supposed that many new ideas will go untested. Other clever local innovations, furthermore, will go unnoticed, and wheels will endlessly be reinvented.

Local authorities may play a useful catalytic role by supporting 'niches' where innovations can be trialled, and activating processes of broader uptake in cases where individual experiments produce beneficial results. In our audience's view, a minimal level of 'steering' would involve:

- giving official but selective recognition to experimental activities
- facilitating dialogue between different groups of innovators on the ground
- actively forging links between local communities and the private sector
- helping communicate successful outcomes more widely.

But, as some observed, local authorities themselves may need convincing. There may be little political will to support experimentation. Local authorities may see their own developmental roles in more cautious, reactive, and proscriptive terms. Some hesitate due to expectations of high costs, and because relevant management processes are not in place.

Encouraging a more joined-up, ongoing culture of multiple experimentation may therefore require making the case actively that:

- experimentation can take place at relatively little cost to a local authority
- it appeals elsewhere precisely because it is low-risk and does not imply long-term commitment
- it can usefully be woven into a broader communications strategy to encourage inward investment.

*"Convincing bureaucrats and administrators means showing them good examples again and again and again"*  
(Audience member)

The case of Manchester's 'Corridor', which has supported multiple urban sustainability experiments over the last decade, highlights the potential for success to breed success. Local groups gaining confidence in their own abilities will be more willing to collaborate on further projects; and having a history of experimental activity may give potential investors confidence to support new activity.



New transport infrastructure accompanying wider processes of experimentation in Manchester (UK)  
(Photograph: Armita Afsahi, 2016)

# GOVERNANCE AND REGULATION

Some audience members urged caution, pointing to the potential dangers of urban experimentation. It was suggested that experiments can be uncomfortably aligned with cost-cutting, and deemed 'successful' when they lead to potential profits or electoral support, regardless of their social or environmental impact. We were reminded that 'partnerships' are not always formed on equal terms and through free choice, and that civil society does not always pursue progressive goals. Equally, we should think carefully before assuming that local communities will be happy to be 'experimented on'.

There is no guarantee, then, that outcomes of an unregulated process of experimentation will be aligned with the Sustainable Development Goals. Building a local culture of experimental innovation should also involve paying close attention to power imbalances within governance arrangements, and active attempts to channel individual interests into collective gain. Official support should be based on clear criteria in line with the New Urban Agenda, and enable inclusive processes through which concrete goals relevant to the local context can be collectively agreed.

*"For experiments to have wider benefits for society, it's vital first to develop shared understanding of objectives and broader goals between all the agencies involved"*  
(Audience member)

Nevertheless, experiments do not always sit well with regulation: their intentional role is often to challenge accepted ways of doing things. Our audience was therefore divided over the usefulness of detailed prescriptive 'standards' to shape or evaluate individual experiments. Applying these may miss the point that innovation takes place at the edge of the status quo, and the most welcome outcomes of experiments are often unexpected.

*"Today's innovation is tomorrow's standard"*  
(Audience member)

But even if innovation will tend to be one step ahead of regulation, our audience were insistent that experiments cannot be allowed to contravene the law. More broadly, we should be suspicious of experimental governance which actively seeks to bypass incumbent institutional processes. Crucially, conducting or enabling urban experiments should also entail accountability and responsibility for what results.



New technology and governance approaches on display at the Ningbo Smart City Science & Technology Museum (China)  
(Photograph: Jin Sheng, 2016)



# FURTHER READING

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## Urban experiments and the New Urban Agenda

Bulkeley, H. & Castán Broto, V. (2013). Government by experiment? Global cities and the governing of climate change. *Transactions of the Institute of British Geographers*, 38(3): 361–375. DOI: [10.1111/j.1475-5661.2012.00535.x](https://doi.org/10.1111/j.1475-5661.2012.00535.x)

Caprotti, F., Cowley, R., Datta, A. Castán Broto, V., Gao, E., Georgeson, L., Herrick, C., Odendaal, N. & Joss, S. (2017). The New Urban Agenda: key opportunities and challenges for policy and practice. *Urban Research & Practice*, 10(3): 367–378. DOI: [10.1080/17535069.2016.1275618](https://doi.org/10.1080/17535069.2016.1275618)

Caprotti, F. & Cowley, R. (2017). Interrogating Urban Experiments. *Urban Geography*, 38(9): 1441–1450. DOI: [10.1080/02723638.2016.1265870](https://doi.org/10.1080/02723638.2016.1265870)

Evans, J., Karvonen, A. & Raven, R. (2016). *The Experimental City*. London: Routledge.

Raven, R., Sengers, F., Spaeth, P., Xie, L., Cheshmehzangi, A. & de Jong, M. (2017). Urban experimentation and institutional arrangements. *European Planning Studies*. Advance online version. DOI: [10.1080/09654313.2017.1393047](https://doi.org/10.1080/09654313.2017.1393047)

United Nations (2017). *New Urban Agenda*. Online: [www.habitat3.org/the-new-urban-agenda](http://www.habitat3.org/the-new-urban-agenda)

## Reports on smart eco-city experimentation in the UK and China

Caprotti, F., Cowley, R., Flynn, A., Joss, S., & Yu, L. (2016) *Smart-Eco Cities in the UK: Trends and City Profiles 2016*. Exeter: University of Exeter (SMART-ECO Project).

Caprotti, F., Cowley, R., Bailey, I., Joss, S., Sengers, F., Raven, R., Spaeth, P., Jolivet, E., Tan-Mullins, M., Cheshmehzangi, A. and Xie, L. (2017). *Smart Eco-City Development in Europe and China: Opportunities, Drivers and Challenges*. Exeter: University of Exeter (SMART-ECO Project).

Cowley, R. & Caprotti, F. (eds.) (2017). 中国与欧洲的智慧生态城市：2016年发展趋势与城市摘要 [*Smart-Eco Cities in Europe and China: Trends and City Profiles 2016*]. Exeter: University of Exeter (SMART-ECO Project).

Tan-Mullins, M., Cheshmehzangi, A., Chien, S. and Xie, L. (2017). *Smart-Eco Cities in China: Trends and City Profiles 2016*. Exeter: University of Exeter (SMART-ECO Project).

The reports above, along with others on smart-eco development in Holland, France and Germany are available from the [publications page of the Smart Eco-Cities project website](#).

## South Africa

Reports from Sustainable Energy Africa on urban energy innovations (available April 2018 at [www.urbanenergytransformations.co.za](http://www.urbanenergytransformations.co.za)):

*Pathways to urban transformation in South Africa – the case of the City of Johannesburg and Polokwane*. Cape Town: Sustainable Energy Africa.

*Exploring the challenges and niche innovations of energy service delivery in urban South Africa: An overview of seven cities*. Cape Town: Sustainable Energy Africa.

Nelson Mandela Bay Regional Innovation Forum website: [www.innovationeasterncape.co.za](http://www.innovationeasterncape.co.za)

iShack project website: [www.ishackproject.co.za](http://www.ishackproject.co.za)



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