

## NEWS FEATURE:

# City limits

Most city councils are still struggling to raise environmental standards for buildings.

Elisabeth Jeffries

Property markets are booming. Real estate transaction volumes across the world are expected to exceed US\$1 trillion by 2020 — up from US\$700 billion in 2015 — according to a 2016 study by property consultants Jones Lang LaSalle. But as buildings go up, their lighting, insulation, air conditioning and water systems are rarely the most efficient. City emissions are unknown, but UN estimates suggest they are up to 70% of the total; of which the built environment is a major proportion.

Nobody has managed to slay this hydra, least of all the councils running the cities that are home to the most buildings and people. The Paris Agreement has, for the first time, expressed cities as a separate layer of agency, but this needs to mature. The commercial power of real estate is formidable and competitive forces intense; they squeeze tightly against the perceived nobler and costlier goals of environmental protection.

Pat McAllister of Reading University, UK, is an expert on the relationship between the financial and environmental performance of buildings. As he explains: “Development can be saturated with risk. Different risks emerge at different stages of the process. Some are project specific — planning, poor operational decisions, cost shocks. Some are market-driven — fall in value.” Developers compete with each other for sites and, once their buildings are under way, for tenants. The developer with the highest bid acquires the site. In cities where land is short, or where governments desire more real-estate development, environmental standards are the first to be cut. At the same time, local government cannot always set aggressive rules, because business can threaten to relocate, with a knock-on economic effect. In the Chinese city of Tangshan, for example, the aspiration for greener buildings was trumped by the need for quick results. “There was so much pressure to start building that they rushed construction and built on foundations not yet set. They needed to deliver fast for political reasons, strictly to sustainability



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standards, but the buildings fell apart after a year or two,” comments Roman Mendle, Smart Cities Program Manager at the ICLEI — an international network of over 1,000 cities, towns and regions aiming for sustainable development.

A similar story holds for sub-Saharan Africa, where some of the continent’s largest cities, such as Dar es Salaam, Tanzania, and Nairobi, Kenya, have experimented with ‘urban fantasies’<sup>1</sup>. Re-visited in the image of Dubai, Shanghai and Singapore and draped in the rhetoric of ‘smart’ or eco-cities, there are plans to modernize them and turn them into gateways for international investors. However, the most likely outcome is actually a worsening of current conditions<sup>1</sup>.

In the UK, which is one of the busiest markets for real estate transaction, housebuilding rates are falling and political pressure thus acute. “Central government is obsessed by housing numbers. If you impose extra costs on the building process, that will cut output. That’s not necessarily correct, but played out very well by property developers,” comments Martin Crookston, a housing and regeneration consultant to the public and non-profit sectors. Accordingly, more ambitious zero-carbon standards were abolished in 2015.

Macroeconomic conditions mean central-government funding for housing has, in many countries, been reduced, and the housing market is changing in favour of private sector development. According to the United Nations Economic Commission

for Europe, for instance, countries with a mature social housing sector are reassessing the future of state funding and finance, whereas several EU countries have significantly cut funding for this sector following austerity measures<sup>2</sup>.

As a result, many cities are more commonly working with the private sector through public-private partnerships or similar platforms. “In the past five to ten years, we have seen a reshuffling of company structures allowing them to enter the city market,” says Mendle. But this is not always the most favourable mechanism, whatever the sector. “If a city lacks funding, for energy efficient streetlights for example, it may not be able to pay the upfront costs to buy LED bulbs. So councillors find a creative business model to access the finance. However, the energy savings come out as profits for the private sector. If the city had made the investment upfront, it would have made more money than through outsourcing,” he says.

Smaller cities are particularly vulnerable to pressures to cut corners, lower standards or worse, accept bribes. “The mayor of New York has all the pull in the world to deal with larger companies. But in smaller cities everywhere, the council may not be able to engage with large companies with big legal departments and may not have the expertise, so this [collaboration] may be risky,” says Mendle.

Nonetheless, cities in the C40 network ([www.c40.org](http://www.c40.org)), which are among the largest in the world, have made progress. Here, improvements often originate from an individual such as a flamboyant mayor. Seoul, Rio de Janeiro, São Paulo, Vancouver, Houston, Seattle, San Francisco and New York are examples. In Houston, Mayor Bill White in 2004 signed a green building resolution targeting Leadership in Energy and Environmental Design certifications for new construction, with the aim of avoiding fossil fuel power station construction. White also contracted new renewable energy for municipal use. Following this leadership, the city

real estate culture is now more focused on energy efficiency with a number of innovative finance mechanisms in place to assist buildings owners and tenants across most buildings classes. Like all US cities, the municipality sets building codes, and mandatory benchmarking of energy use is proposed.

Yet work by the Stockholm Environmental Institute (SEI) draws attention to city limits: “a lot of cities are constrained, especially when you go beyond more affluent cities,” says Derik Broekhoff, a senior scientist. The SEI has surveyed the sector globally. Voluntary rivalry on green labels makes some impact on investment attractiveness in commercial property, but this tends only to affect leading property companies owning, or managing, the ‘class A’ (larger) buildings. “There is competition because the ‘boy scout’ rating works. Developers like to be in front and build big things and make their mark on the world,” comments urban design consultant Jonathan Barnett. Voluntary ratings provide advantages in terms of corporate social responsibility, and attract tenants in cities with low vacancy rates.

But behind the green glitz of showcase buildings runs a long, dirty tail of commercial and residential property that still escapes control. Caught between central-government policies increasingly using property as a tool for economic growth, a cut-throat property market, and local pollution campaigns, city-council efforts are often compromised. Their buildings lie within their boundaries, but they are not always in a position to act.

Owning the assets helps. “You can have all the control in the world over transport but if you have none over the energy supply, how can you get a change of fuel source?” points out Cathy Oke, councillor in Melbourne, Australia. At the city’s Queen Victoria Market, the council feels more empowered because it owns the land. It aims to maximize energy efficiency, invest in off-site renewable energy, integrate green infrastructure and introduce a number of other environmentally friendly initiatives. “It’s a game changer. Specs have gone through for efficient housing, six-star ratings and sustainability features. The state government does not require that,” says Cathy Oke.

Control over building codes is another useful instrument, and some councils across the world benefit from this, such as in the US and China. However, consistent building codes set on a national level help prevent businesses from moving between cities. The final council strength is power over planning. But as Broekhoff points out,

cities are restrained, for instance, in terms of fiscal transfer from national government or access to private capital. “They are restricted technically in terms of expertise and capacity and in terms of the legal authority to act. What they want to do is often contradicted by national policies. Globally, cities are falling woefully short of meeting climate mitigation goals.”

Hence, policymakers expect the Paris Agreement to help fashion the role of the city as a distinct entity. It could help create an individual stratum for negotiation in the face of often weak national legislation or good legislation that is not enforced. This could improve governance and influence regulation. Among the objectives of city councillors is greater collaboration. “Melbourne would like to have a voice at the table at the federal level. It’s the ambition of our citizens. We are the closest level to the people. We can only realize these goals if national government includes us in these big decisions,” states Oke.

This is more than political frustration or localism. “Even where there is an ambitious national government, there are certain elements of the policies in which city governments really need to play a role such as in building out the public transport system, zoning, and spatial planning on new development, which requires a lot of engagement with local stakeholders. They know the circumstances and the conditions — the traditional purview of local government,” says Broekhoff.

The SEI draws attention to the need for greater support from national governments<sup>3</sup> but also explains why central government action does not suffice. For 40% of urban abatement potential, it suggests the ideal role for cities is as the critical implementer of nationally applied policies. Opportunities here are greatest in the residential and commercial buildings sectors. Cities are described as appropriate policy architects and leaders in spatial planning, transit systems and waste management.

The SEI recommends a vertically integrated approach, in which different levels of government coordinate climate actions to be as efficient as possible, with agencies at each level doing what they do best. “We’ve set a roadmap of what progressive cities can agitate towards ... envisaging an ideal to aspire to, knowing it is hard to achieve, and focusing on enabling actions that governments can take,” says Broekhoff.

Fiscal and economic policies driving real estate, of course, tend to be set by central government in many countries. So many cities respond, seeking to attract businesses for jobs and council rates. However, they can leverage their traditional influence

on spatial concerns and housing type, for example, to encourage newer and lower-cost business models.

“Part of the role of city councils is to find a third way, to experiment with low-cost housing production to make a difference; they are generally intended to experiment with new procurement and designs such as self-build and co-operatives. But there is less money available than ever before,” says Crookston.

New opportunities could open up, however, with innovative methods over which local government has a strong degree of power. In their book *Ecodesign for Cities and Suburbs*, planning experts Larry Beasley and Jonathan Barnett recommend increasing district-based development, both for new build and retrofit<sup>4</sup>. One example includes the Stockholm district of Hammarby Sjöstad in Sweden. This has achieved considerable self-containment and resource efficiency through systems such as biogas, wastewater treatment, and efficient waste use for local heat and other purposes. Other prototypes cited include Masdar City in Abu Dhabi and Southeast False Creek in Vancouver.

“If these [sustainable] concepts are going to be economic, it will be at the district level,” says Barnett. Councils could work district by district. As he contends, the motivation to purchase new energy-saving systems, Sun and wind energy, and convert waste to energy and useful by-products is driven by their economic attractiveness compared to conventional systems. “The individual building is too small to carry the necessary expenditure, and an entire city is too large to deploy these new systems all at once. Hence the district-based approach.” According to Barnett, this approach is already within reach of city and county councils, at least in the US and Canada, where they have the necessary development regulation powers. However, inertia and outdated attitudes mean “they don’t always use them as creatively as they could. We are still at the early stages of making these new systems work, and these examples are driven by government agencies. I am hopeful that these systems will prove to be economic as more of them are created and the economics of scale kick in.” □

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