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## Unlocking India's potential through smart cities

Ahead of the International Green Building Conference 2016, Eco-Business speaks to smart city expert Karuna Gopal, who has spent the past decade tackling challenges such as balancing growth with competitiveness and sustainability in India.



An aerial view of Mumbai, India. The country is set to add a quarter of a million people to its cities between 2008 and 2030. Image: Pixabay.

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By **Vaidehi Shah**

Tuesday 30 August 2016

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Urbanisation is arguably the trend that will define much of Asia Pacific's future in the coming decades, as more than half the continent's 4.3 billion population is expected to live in cities by 2018, tipping the region over from a predominantly rural one to an urban bloc.

Some of the region's most rapid urban growth is set to take place in India. The McKinsey Global Institute estimates that the country's urban population will soar from 340 million in 2008 to 590 million in 2030, an unprecedented rate of urbanisation for the nation.

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But this shift comes with growing pains.

Not only have India's burgeoning cities struggled with overcrowding, extreme poverty and the lack of basic amenities such as housing, water, and electricity, they are also plagued by polluted waterways, piles of untreated waste, and some of the worst air quality levels in the world.

Cities such as Mumbai and Chennai are frequently wrecked by catastrophic floods, which many analysts have [blamed on the breakneck pace of urbanisation](#) resulting in improper city planning and drainage.

India's government, acutely aware of the need to address these issues, launched a national Smart Cities Mission in July 2015, which aims to develop 100 smart cities across the country.

Each of these cities will boast, among other things, reliable water and electricity supply, good solid waste management infrastructure, efficient public transport systems, and affordable housing. They will also be hubs of technological innovation and economic growth.

But for urban development expert Karuna Gopal, the future of India's cities was a personal preoccupation long before India's leadership turned its attention to the issue.

In 2005, Gopal, set up the non-profit advisory organisation Foundation for Futuristic Cities (FFC) with the aim of helping to solve the planning, governance, and financial challenges that India would encounter as it urbanised.

“Though much of India lived in villages at the time, I knew that the country’s future was heavily dependent on how we shaped our cities,” she tells Eco-Business in a recent interview.

“I wanted to see the country’s economic potential translate to performance,” adds Gopal, who will be presenting at the upcoming International Green Building Conference in Singapore from September 7 to 9.

She will be speaking on how the policy and technical tools that make a city smart — such as data analytics, e-governance, and widespread internet and communications infrastructure — also help improve its sustainability.

### **Trend-setting urbanisation tools**

Since FFC was founded, the Hyderabad-based think tank has over the years delivered several knowledge initiatives such as maintaining a stable water supply as cities become more densely packed; providing essential services to the urban poor; and developing financing strategies for urban improvement projects across the country.

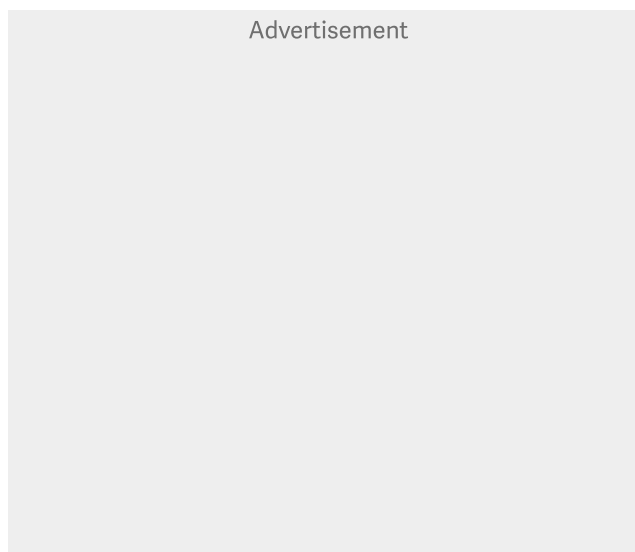
One project which has perhaps had the most enduring legacy is [Sculpt Your City](#), a 2009 publication which offers 21 strategies for improving Hyderabad’s quality of life, administration of public facilities and its environmental performance.

The project, which took a crowdsourcing approach to urban policy, consolidated strategies gathered from some 100 Scientists, information technology professionals, business leaders, professors and students on how to make Hyderabad a globally-renowned city.

The Sculpt Your City report, though published years before India’s Smart Cities mission, contains several technologically advanced suggestions to transform Hyderabad, and even help it become a carbon neutral city.

These include: implementing sensor-based traffic management protocols; embedding sensors in city infrastructure; using GPS (Global Positioning System) navigation and mobile data technologies to better manage the city’s transport fleets; and a slew of energy efficiency measures across the city.

It also addresses gnarly environmental and social issues such as pollution and poverty through strategies to upgrade city slums and provide better amenities to their residents; and measures to clean up and protect local lakes and rivers.



“Sculpt Your City is a guidance document to make every city liveable,” says Gopal, adding that at the time, it was a disruptive tool because its emphasis on weaving citizen perspectives into city policy was unprecedented.

The citizen consultation in Hyderabad was a pilot project, but the development protocol that resulted from the exercise is applicable to all Indian cities, says Gopal. This framework was also recognized as a national best practice by the Indian government, she adds.

About 10 cities in India, including Mumbai, Pune, Delhi, and Nagpur have already adapted many of the strategies laid out in the document, shares Gopal, noting that many of the insights are also relevant to the rest of Asia Pacific’s developing cities.

These days, Gopal and her team are focused on putting together a Smart City Protocol, an advisory document to guide India’s mission to transform its cities into smart centres. In March 2014, she also entered India’s political ranks by joining the ruling Bharatiya Janata Party (BJP).

A key element of the Smart City Protocol is the private sector’s involvement, which is just as important as engaging citizens, says Gopal.

“Business cannot succeed if cities fail,” she says. “Cities, too, need business as an economic driver”.

The Smart City Protocol outlines numerous ways for companies to get involved in a city’s attempts to reinvent itself, including events which bring business leaders together to develop

urban solutions for cities in India and worldwide, and setting up an advisory group made up of businesses with corporate social responsibility programmes that improve cities.

“Through this model, corporates can realise their triple bottom line goals, while governments can deliver better governance with less resources,” says Gopal. “Citizens will be the ultimate beneficiaries of this.”

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## **Business cannot succeed if cities fail. Cities, too, need business as an economic driver.**

*Karuna Gopal, president, Foundation for Futuristic Cities*

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She is also confident that India’s Smart Cities mission will have no negative social or environmental impacts, and that it will be economically sustainable.

“Our mission does not envisage just steel and glass buildings,” she says. “We are not building 100 new cities that will require billions of dollars of investment.”

Rather, the mission is upgrading existing cities and is counting on innovative models of financing, local entrepreneurship and international best practices in governance to succeed, she notes.

### **International knowledge exchange**

Here, she sees a wide range of opportunities for collaboration between Singapore and India. The city state is already helping India build its first smart city, Amaravati, which will be the capital of Andhra Pradesh.

Gopal also wants to set up an institution similar to Singapore’s Centre for Liveable Cities — an urban issues think tank founded by the Ministry of National Development and the Ministry of the Environment and Water Resources — and aims to replicate Singapore’s traffic management solutions, which rely heavily on big data analysis.

Also on her wish list is partnering with Singaporean universities on material and water science research.

Meanwhile, India also brings valuable lessons to the global conversation on smart and sustainable development, she says.

For one thing, the country’s workers are used to navigating ambiguity and complexity — traits that are unavoidable in development efforts as the world becomes more globalised and politically

uncertain.

The country is also a key player in the global push towards sustainable development, notes Gopal, referring to the International Solar Energy Alliance launched by Indian Prime Minister Narendra Modi and French President Francois Hollande at the UN climate conference in Paris last December.

Whether it is mitigating climate change or developing smart cities, “India and Singapore should collaborate to ensure that these goals are achieved,” she says.

*[Karuna Gopal will be speaking at the annual International Green Building Conference \(IGBC\) 2016, which runs from September 7 - 9. To hear more from her and other experts, register here.](#)*

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