



# Smart India will be ushered in sooner than we believe is possible

**KARUNA GOPAL, PRESIDENT, FOUNDATION FOR FUTURISTIC CITIES**, could easily qualify as the most famous of Smart City proponents not just in India but globally as well. Evidence of that can be seen from her response to **SHRIKANT RAO'S** questions.

Evidence on the ground suggests that a Smart City of the kind Songdo is will be a long time in coming in India, currently strapped in terms of infrastructure and political will. Realistically speaking, what kind of an approximate 'smart' new urban landscape can we hope to have in place over the next few years?

If we strip off the 'surrealistic aspects' that accompany the concept of a smart city, we notice that it's nothing but a city that is efficient, livable and sustainable. Only that technology has made it all possible! Given the simplified version, I think India will very soon see some 'modest versions' of the same. In fact, the grandiose plan

of Songdo, I heard is not proving to be a cruise. As far as India is concerned we are soon going to have a "Framework" for smart cities, both for "mint fresh" and legacy cities. Given that India was a 'reluctant urbaniser' – urbanisation happened to us when as a nation we were singing paeans to our rural hinterland – we are doing quite fine. We woke up rather late but soon realised that it is an inevitability. It dawned on us that urbanisation and economic development are like conjoined twins – so we are preparing to become robust economically by urbanising sensibly.

**Do we have such early bird Smart City hopefuls in place? If not how easy or difficult will it be for India to raise 70 new Smart Cities?**

All tier 2, tier 3 cities can be shaped into smart cities. Small cities have a greater potential as they are not unwieldy due to size or administrative complexities, or acquired heterogeneity. Therefore they can be easily brought under the scalpel.

**Could you identify the key infrastructural elements that need to be woven into the fabric of such cities to make them smart -**

**at least from an Indian perspective if not international?**

Today India is talking about Intelligent Transportation, Smart Grids, Control and Command centers like those in Rio de Janeiro and Barcelona. India is keen on predictive policing and surveillance enabled safety corridors, we're talking about wi-fi zones and Cities on Cloud. This wish list needs connectivity that is ubiquitous, anytime, anyplace access to high-bandwidth. We need Cloud-Computing as a service and 'Smart Devices' primarily designed for accessing services from the cloud via a wi-fi or 3G network. We should have Collaboration Platforms for integrating discrete technologies. Open Standards, open access to public data – India threw open its public data a few months ago – video surveillance/image processing, face and gesture recognition software and most importantly, human capital to analyse this Big Data generated by smart infrastructure.

**How correct would it be to assume India has the wherewithal to construct smart cities?**

There's enough knowledge both at policy and implementation levels – there are



more than adequate technology vendors in the Indian landscape and more than enough international best practices to emulate. It's just a matter of articulating an agenda for smart cities.

**Could you name a few EPC majors/construction materials suppliers/design and architectural principals/IT firms/transportation czars, telecommunication, utilities and other service providers with experience in Smart Cities and those that will be crucial to the establishment of such urban zones?**

I will give you a heady mix that includes System Integrators and Management Consultants. I have seen most of these companies at work: Schneider Electric, Accenture, Arup, Alstom, Alcatel Lucent, CISCO, GE, Hitachi, Honeywell, Huawei, IBM, Intel, Landis GYR, Microsoft, Oracle, Toshiba, Siemens, S&C Electric Company, ABB, ITRON....

**What would be required to get global smart city players interested and involved in India's 'smart' plans when 'doing business' parameters in India are nothing to write home about?**

Prima facie there is a lot of interest among international players to work with India's 'Smart City Agenda'. Yes, on the subject of doing business in India, though the prospect is good, actually initialising it has been difficult. But I notice that gestations are high elsewhere too. Cisco and IBM invested around 10 years each and millions of dollars before they landed projects. Microsoft with their "City Next" suite is scouting for clients that respond faster. India, as mentioned by me before has to do get ready for technology absorption.

**Is finance easily available globally for the construction of smart cities? From an ROI perspective wouldn't funds be difficult to get for such projects? Shouldn't PPP the route for India's smart cities to take? Considering the performance of PPPs what hope do we have in hell for 70 smart urban zones to come up in the near term?**

Smart cities are a huge investment game – it is estimated between \$ 10 billion for Plan IT Valley and \$35 billion for Songdo – and globally financing remains one of the greatest challenges facing smart city

initiatives. I notice that funding comes from both the public and private sectors: Songdo and Plan IT Valley rely on investments and capital from international companies with governments providing incentives through various forms of indirect support and tax relief. For some projects, such as Masdar, Nanjing, Meixi Lake, and Tianjin governments provide a significant portion of the funding through state-owned banks or direct public sector financing. However, in some cases, it is expected that private developers and third parties will provide most development capital after the initial development phase is completed. What is really important to note is that in the past, urban development was viewed as a form of public works handled by national, regional, or other government agencies but in Smart Cities, development is increasingly being undertaken as an investment, particularly in emerging markets. As a result, smart cities are being constructed and operated as commercial enterprises.

All smart city initiatives expect to collect some revenue from real estate sales, long-term leases, and office rentals, while some include technology-based royalties to offset the capital requirements. This revenue is used to repay banks and other capital providers. Several projects plan to offer government-based economic and tax incentives to encourage corporations to establish offices in the city, which will drive demand for both office space and residential real estate. Some projects have developed an economically viable low-carbon model or a sustainability-oriented approach.

**Availability of skilled labour and latest technologies would be crucial to the construction of smart cities? How should India address this deficit?**

The supply of skilled and unskilled manpower for the construction sector is being estimated to be falling short by over 10 million. According to the National Skill Development Corporation (NSDC), a public-private partnership tasked with funding and directing private skilled programmes, approximately 12.8 million people will join the job market every year in the coming decade. Unfortunately, the paradox being that even with this influx we will experience a major labour

shortage in the country. As an industry, we have realised, and recognised the fact that industry will need to put the measures in place to make this situation better. There will be an inherent need to train and empower the labour force to increase not only productivity but also their overall social standing and lifestyle. If the issue is not addressed then we may see an increased use of mechanisation over manpower to cope with the shortage in the supply of labour.

**In your view what should India do get its smart cities agenda translated into action? China seems to be several decades ahead of India in the Smart Cities zone?**

Since we are just 30 per cent urbanised and will soon be 700 million living in cities as opposed to 450 million now, we should plan to build many small cities. First India should look at planned urbanisation, look at small compact dense cities. Building a smart city 'ground up' is easier than retrofitting existing cities. Parallely we should develop a 'Smart City framework' for existing cities on the lines of "City Protocol" of Barcelona. This will ensure existing cities are not left out of the game. Isolated but important smart efforts in Smart Grids, Smart Transportation, smart water supply and smart built environment have to be initiated. Many POCs (Proof of Concept) and Use cases have to be built using Public Data. Big Data competencies have to be developed

**Do you see Smart Cities as inevitable – and is there political urgency? What is your outlook for Smart India?**

Yes. Smart Cities is a global trend. It is aspirational. It stems from the need to build a sustainable world. Most advanced cities, national governments, international organisations and transnational corporations are increasingly viewing the smart city concept as the base of sustainable growth, and the best solution for the challenges of world's urbanisation. In India, all political parties fighting the national elections have Smart Cities on their agenda. Technologies that tools around Big Data and Cloud Computing – India is working on them – will usher in the era of a Smart India – and all this, sooner than we believe is possible. ♦