

# IN AWE

towards green

CITIES | EVENTS | CSR

OCTOBER 2015

## MAKING OF SMART CITIES IN INDIA

# FROM THE ARCHITECT'S DESK



**GOD GAVE US THE GIFT OF LIFE, IT IS UP TO US  
TO GIVE OURSELVES THE GIFT OF LIVING WELL**

*VOLTAIRE*

## **WE LOVE YOU INDIA !**

On every festival we all pledge of not going over the board in adding to the pollution !

We as citizens have equal responsibility of creating a mess in our living conditions. To get to a level of SMART CITIES as part of our initiative In AWE is holding Capacity Building Workshops, to equip in knowledge all those who want to work in their respective cities.

In this issue we have examined the common problems of each city, Goals set by UN, and some solutions to be seen as examples from around the world !

*In AWE brings SOLUTIONS via Presentations, News & Events!*

\_ Dipika Tuteja

*FROM THE LESSONS THAT FOLLOW,  
THE WRITING ON THE WALL IS VERY CLEAR FOR US,  
OUR ISSUES ARE NOT ONLY*

**GOVERNANCE  
BUT ALSO  
CITIZENS CASUALNESS**

# CONTENTS

4



**INDIAN CITIES**

5



**INDIAN CITIES**

8



**UN SUSTAINABLE CITIES  
GOALS**

10



**PWC- SMART&  
SUSTAINABLE CITIES**

11

**SMART CITIES MISSION  
CHALLENGE 2**

12



**BARCELONA EXAMPLE**

13



**THAILAND EXAMPLE**

14



**NAGPUR EXAMPLE**

15



**NEW YORK EXAMPLE**

# EXAMINING REALITIES OF INDIAN CITIES



**POLLUTION & LANDFILL**



**OUR POLLUTED RIVERS**



Packed Delhi-Gurgaon highway | Photo by [Times Union](#)

**TRANSPORT & MOBILITY**



**INCLUSIVE GROWTH**

# EXAMINING REALITIES OF INDIAN CITIES



**WOMAN SAFETY & SANITATION**



**ELECTRICITY WOES**



**ROADS & MAINTENANCE**



**WATER SCARCITY**

# REALITIES OF ANOTHER COUNTRY BECOME GOALS FOR INDIA



**CLEAR MAPS**



**TRAIN STATION,CLEAR SIGNAGES, CLEAN & NO CHAOS**



**ELECTRIC CHARGING FACILITY**

# REALITIES OF ANOTHER COUNTRY BECOME GOALS FOR INDIA



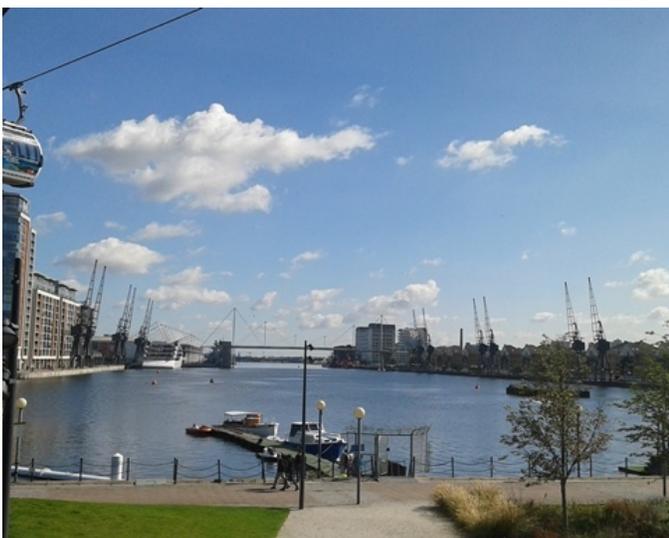
**BLUE LAKE & A BLUE SKY**



**WIND FARM ON HILLS**



**SOLAR ROOF TOPS**



**RIVER FRONT WITH GREEN AREAS**



**INDOOR AIR QUALITY MEASURES**

# UN SUSTAINABILITY GOALS



## UN Goal 11: Make cities inclusive, safe, resilient and sustainable

Cities are hubs for ideas, commerce, culture, science, productivity, social development and much more. At their best, cities have enabled people to advance socially and economically.

However, many challenges exist to maintaining cities in a way that continues to create jobs and prosperity while not straining land and resources. Common urban challenges include congestion, lack of funds to provide basic services, a shortage of adequate housing and declining infrastructure.

The challenges cities face can be overcome in ways that allow them to continue to thrive and grow, while improving resource use and reducing pollution and poverty. The future we want includes cities of opportunities for all, with access to basic services, energy, housing, transportation and more.

[Read more...](#)

# EXAMINING INDIAN CITIES

## India: Crowded Cities



By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums

By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

Strengthen efforts to protect and safeguard the world's cultural and natural heritage

By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning

By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line

[Read more...](#)

# Connecting the dots

## Smart and sustainable cities [www.pwc.in](http://www.pwc.in)



**'Sustainability is about ecology, economy and equity.' – Ralph Bicknese**

Our planet, inhabited by over 7 billion people, is in the midst of a massive transition in terms of the ecosystem, climate change, tectonic plate movements and biological evolution. Among these, climate change, largely attributable to human activities, is one of the most critical issues impacting our planet. Climate change brings with it adverse consequences such as threats to biodiversity and ecosystems, risks to human health, rising sea levels due to accelerated melting of glaciers and ice caps, increasing water stress as well as a decline in agricultural productivity. These issues are driving many worldwide economies and cities to focus on mitigating greenhouse emissions in order to combat the impact of climate change. Cities account for the majority of greenhouse gas emissions and energy consumption across the globe. As cities are economic growth drivers in most of the nations, urbanization is projected to increase further in the near future. This, in turn, will drive the depletion of nonrenewable resources as well as add to the extent of carbon dioxide emissions. To cope with rising urbanization and climate change issues, innovation and digital technology must be leveraged to minimize energy consumption and improve quality of life. Innovation must be combined with energy, digital technology and information and communications technology to address urbanization challenges and ensure sustainability. Sustainability covers not just the environmental aspect but also social equity and the economy.

[Read more...](#)

# INDIA SMART CITY MISSION

## MISSION TRANSFORM-NATION

### THE SMART CITY CHALLENGE STAGE 2

#### Instructions

1. This document must be read along with the Smart City Mission Guidelines. An electronic version of the SCP format is also available on the website Follow: 'Downloads' > 'Memos'.
2. The responses must be within the word limits given. The font size must be 12 Arial, with 1.5 spacing, left aligned paragraphs with one inch margins. All additional information must be given in 20 nos. A-4 size pages in Annexure 3.
3. For the Area-Based Proposal, only one 'Area' should be selected. The Area selected can be a combination of one or more types of area-based developments. This can be retrofitting or redevelopment or greenfield alone or a combination of these, but the area delineated should be contiguous and not at separate locations in the city.
4. The Area-based Development must contain all the Essential Features as per para 6.2 of the Mission Guidelines. Please fill out the following checklist.
5. The pan-city Smart Solution should be IT enabled and improve governance or public services. Cities may propose one or two such Smart Solution(s).
6. In order to make the proposal credible, all claims must be supported with government order, council resolutions, legal changes, etc and such supporting documents must be attached as Annexure 4.

**CITY LEVEL CRITERIA 1.** In the last three years, what efforts have been made by the city to improve livability, sustainability and economic development? Give specific examples along with improvement with KPIs that are in the public domain and/ or can be validated. Your answer should cover, but not be restricted to {Describe in max. 50 words each, mentioning the source of the data}: a) Transportation condition in the city b) Water availability in the city and reduction in water wastage/ NRW c) Solid waste management programs in the city d) Safety/ security conditions in the city e) Energy availability and reduction of outages in the city f) Housing situation in the city, specifically role of municipality in expediting building plan approvals, enhancing property tax collection, etc

[Read more...](#)

# SMART CITIES BETTER LIVES

## EXAMPLES FROM SMART CITIES CHALLENGE



### **BARCELONA: PROMOTING SOLAR ENERGY TO INCREASE SUSTAINABILITY**

The city government of Barcelona issued a Solar Thermal Ordinance in 1999. The ordinance set targets for public and private buildings, making it compulsory to use solar energy to supply 60% of running hot water in all new or renovated buildings. It also put solar powered bus stops on Barcelona's streets.

#### **The Results**

Barcelona has reduced its energy consumption by 25,000 MWh annually compared to 2000 usage levels. It has achieved this by creating a more environmentally friendly energy supply, including more solar and more photovoltaic energy. More than 70 other Spanish cities have followed Barcelona's example.

<http://smartcitieschallenge.in/casestudy/barcelona>

[Read more..](#)

# SMART CITIES BETTER LIVES

## EXAMPLES FROM SMART CITIES CHALLENGE



## BANGKOK: IMPROVING NEIGHBORHOODS THROUGH CITIZEN-LED PLANNING

### The Problem

In the early 2000s, many of Thailand's poorest citizens were living in rundown slums that lacked sufficient homes and basic infrastructure. With an increasing population, the health and welfare of citizens in these neighborhoods was in danger.

### The Solution

Central and local government officials called on affected citizens and communities to offer solutions, and a pilot was launched within the informal settlements along the Bang Bua Canal in Bangkok. Instead of just building houses, the Baan Mankong project empowered some of the poorest people in Thailand to be directly involved in shaping their whole community and encouraged people to see informal settlements as part of the wider city.

<http://smartcitieschallenge.in/casestudy/barcelona>

# SMART CITIES BETTER LIVES

## EXAMPLES FROM SMART CITIES CHALLENGE



## NAGPUR: PROMOTING ENERGY MANAGEMENT PRACTICES TO IMPROVE WATER EFFICIENCY

### The Problem

A 2005 water audit by the Nagpur Municipal Corporation recorded water losses at 62%. Energy costs in 2004-05 were 21.1 crore rupees, accounting for nearly 50% of the city's water operation and maintenance. The city knew that it had to improve its energy management, both to save resources and to help prolong the life of the city's water supply equipment.

### The Solution

After the audit, the Nagpur Municipal Corporation's initiated a study of its water situation that found that pumping system efficiency was low and there was significant potential to both increase energy efficiency and decrease operational costs. The audit recommended setting up an automated water management system. Based on the recommendation, the Nagpur Municipal Corporation rationalised water distribution and pumping systems to reduce static and friction.

SOURCE <http://smartcitieschallenge.in/casestudy/nagpur>

[Read more..](#)

# SMART CITIES BETTER LIVES

## EXAMPLES FROM SMART CITIES CHALLENGE



## NEW YORK: TRANSFORMING STREETS TO INCREASE MOBILITY AND PUBLIC SAFETY

### The Problem

Between 2001 and 2009, motorists killed 3,774 people on New York City Streets. In addition to the deaths, roughly 4,000 New Yorkers suffered serious injuries in road accidents each year.

### The Solution

Using smart data modelling techniques to analyze traffic and pedestrian patterns, New York City's Department of Transportation (NYCDOT) proposed removing motor vehicles from some New York City's busiest roads so the space could be converted into public spaces for pedestrians and cyclists. NYCDOT also oversaw the creation of miles of segregated bicycle lanes and created a bicycle sharing program, which made cycling a viable transportation option for citizens.

SOURCE <http://smartcitieschallenge.in/casestudy/new-york>

# In AWE



*towards green*



## LEADERSHIP WORKSHOP ON



## SMART CITIES

## SUSTAINABLE CONSTRUCTION



### In your City soon !

**Register for Participation** contact: [inawetowardsgreen@gmail.com](mailto:inawetowardsgreen@gmail.com)

[www.inawe.in](http://www.inawe.in)

mobile:9810401315

# In AWE



*towards green*



## LEADERSHIP WORKSHOP ON



# SMART CITIES

# SUSTAINABLE CONSTRUCTION

### WORKSHOP IN CITY

1. DELHI January 2016
- 2 CHANDIGARH February 2016  
DHARAMSALA
3. JAIPUR March 2016
4. AGRA April 2016
5. PUNE May 2016
6. GREATER MUMBAI June 2016

### TARGET CITIES AROUND

- FARIDABAD, GHAZIABAD, KARNAL  
AMRITSAR, LUDHIANA, JALANDAR,  
AJMER, KOTA, UDAIPUR  
ALIGARH, JHANSI  
NASHIK, NAGPUR  
THANE, AURANGABAD, KALYAN DOMBIVALI



## In your City soon !

**Register for Participation** contact: [inawetowardsgreen@gmail.com](mailto:inawetowardsgreen@gmail.com)

[www.inawe.in](http://www.inawe.in)

mobile: 9810401315

# NOTE FOR GOING GREEN & DISCLAIMER

If you print this email, don't forget to **RECYCLE**.

*Recycling 1000kg of paper saves 17 trees, 3 cubic yards of landfill space, 2 barrels of oil, 7,000 gallons of water and 4,100 kilowatt hours of electricity - enough energy to power the average homes for 5 months.* I support PAPER RECYCLING do you?

"This content, picture, visual ....(as the case may be) etc. is a Third Party user generated content taken from the internet and Inawe does not claim any proprietary rights, whatsoever, on the same."

"This website is provided "as is" without any representations or warranties, express or implied. INawe makes no representations or warranties in relation to this website or the information and materials provided on this website. Nothing on this website or the e-newsletter so published constitutes, or is meant to constitute, advice of any kind and may only be treated as personal viewpoint of the Publisher. INawe will not be liable to anyone in relation to the contents of, or use of, or otherwise in connection with, this website. INawe is not responsible for, and expressly disclaims all liability for, damages of any kind arising out of use, reference to, or reliance on any information contained within the site or the e-newsletter. While the information contained within the site is periodically updated, no guarantee is given that the information provided in this Web site is correct, complete, and up-to-date. The site does not provide you with advice or recommendation of any kind and you should not rely upon this site as the basis for any decision or action. You are advised to consult professional advisors in the appropriate field with respect to the applicability of any particular aspect of the contents.

Neither the INawe e-newsletter nor its publishers nor anyone else involved in creating, producing or delivering the newsletter or the materials contained therein, assumes any liability or responsibility for the accuracy, completeness, or usefulness of any information provided on the site or in the newsletter.. All material published in the same undergoes peer review to ensure fair balance, objectivity, independence, and relevance to educational need. The editors of the material have consulted sources believed to be reliable in their efforts to provide information that is in accord with the standards accepted at the time of posting. However, in view of the possibility of error by the authors, editors, or publishers of the works contained in the newsletter, neither INawe, nor its publishers, nor any other party involved in the preparation of material contained in the INawe e-newsletter represents or warrants that the information contained herein is in every respect accurate or complete, and they are not responsible for any errors or omissions or for the results obtained from the use of such material. Readers are encouraged to confirm the information contained herein with other sources.

Further the Copyright in the material or the contents in the form of Articles etc. put up on the website or that are part of the INawe e-newsletter vests in their respective Authors and the Publishers of the said newsletter do not claim any legal Copyright, whatsoever, on the same with the exception of the content / matter exclusively created by the Publisher.

All the brands / trademarks/ logos /taglines etc. so appearing anywhere in the e-newsletter or on the website except the INawe trademark / logo and tagline, are the trademarks of their respective owners and the Publishes do not claim any legal ownership / proprietary right , whatsoever, over the same."