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MAGAZINE ON E-GOVERNANCE

Anniversary  
Issue

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SPECIAL ISSUE

elets  
**SMART CITY SUMMIT**  
CONFERENCE | AWARDS | EXPO  
**GURUGRAM**  
1 February, 2018

### EXCLUSIVE INTERVIEWS



**Zodintluanga**  
Minister for Urban Development  
and Poverty Alleviation,  
Government of Mizoram



**Kadakampally  
Surendran**  
Minister for Co-operation,  
Tourism and Devaswom,  
Government of Kerala

### SPECIAL INTERVIEW



**Dr Anup  
Chandra Pandey**  
Infrastructure & Industrial  
Development Commissioner,  
Government of Uttar Pradesh

### INDUSTRY PERSPECTIVE



**Ajay Girotra**  
Managing Director,  
AG Dauters Waste Processing  
Private Limited



**Rajiv Banga**  
Managing Director and CEO,  
IL&FS Rail Ltd



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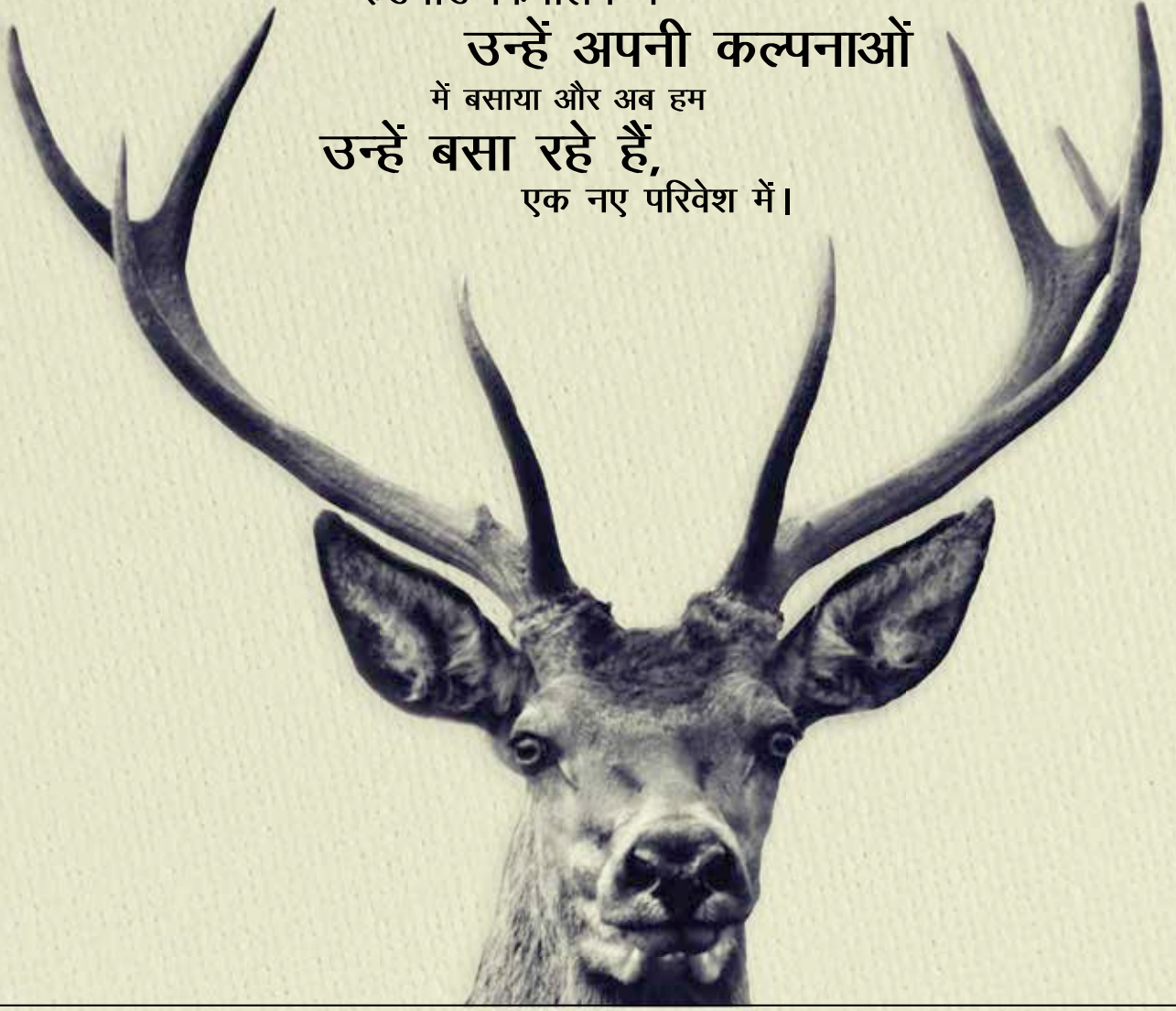
Co-location Services, e-procurement, Videoconferencing, Authentication service

### NEW INITIATIVES

Solar Power, e-waste Management, Power Line Projects

### CORPORATE SOCIAL RESPONSIBILITY

रुडयार्ड किपलिंग ने  
उन्हें अपनी कल्पनाओं  
में बसाया और अब हम  
उन्हें बसा रहे हैं,  
एक नए परिवेश में।



“ओएनजीसी बारासिंघा (ईस्टर्न स्वैम्प डीअर) संरक्षण परियोजना”  
एक दुर्लभ प्रजाति को विलुप्त होने से बचाने के लिये  
ओएनजीसी की सीएसआर पहल।

असम में पाये जाने वाले बारासिंघा या ईस्टर्न स्वैम्प डीअर (*Rucervus duvaucelii ranjitsinhi*) आज विलुप्त होने की कगार पर है। प्रसिद्ध लेखक रुडयार्ड किपलिंग ने जिस से मंत्रमुग्ध हो कर उसकी सुन्दरता को अपनी दूसरी किताब 'द सेकंड जंगल बुक' में कैद किया हो, उस जीव के लिये यह काफी दुखद स्थिति है।

ओएनजीसी ने इस प्रजाति को विलुप्त होने से बचाने के लिये अपने कदम बढ़ाये, और वो भी बिल्कुल सही समय पर।

इसके पहले चरण के अन्तर्गत इनकी अनुमानित आबादी, अनुकूल पर्यावरण, पशु-चिकित्सा अंतःक्षेप एवं सामान्य अध्ययन और जागरूकता अभियान किया गया। इनके स्थानांतरण के लिये मानस राष्ट्रीय उद्यान को चुना गया, जो इनके रहने के लिये बिल्कुल उपयुक्त स्थान था।

काजीरंगा राष्ट्रीय उद्यान से 19 बारासिंघो को मानस में स्थानांतरित करना बहुत ही कठिन काम था। योजना के इस अत्यंत कठिन दूसरे चरण को दक्षिण अफ्रीका से बुलाये गये वन्यजीव विशेषज्ञों ने बहुत खास तरीके से अंजाम दिया। 19 बारासिंघो का स्थानांतरण खास तंबुओ में किया गया, जिनको अन्दर से उनके प्राकृतिक आवास जैसा ही बनाया गया था। कुछ ही महीनों में 6 नवजात बारासिंघो ने झुण्ड में जुड़कर, स्थानांतरण की खुशी को दुगना कर दिया।

इस योजना के विस्तार के तीसरे चरण के अन्तर्गत 20 अतिरिक्त बारासिंघो का स्थानांतरण किया जा रहा है।

यह परियोजना संतुलित पर्यावरण की ओर ओएनजीसी की एक शुरुआत है। लुप्तप्राय प्रजातियों का संरक्षण करने के लिये प्रेरित, हमारा संगठन प्रकृति की असली सुंदरता को बनाये रखने के लिये प्रतिबद्ध है।



ऑयल एण्ड नेचुरल गैस कॉर्पोरेशन लिमिटेड

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Founded in 2005, eGov magazine is published in both  
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OF THE MONTH

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### Smart City Summit

**Dr Jitendra Singh**

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### PSU Summit

**Vishnu Deo Sai**

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Government of India



### 11th eINDIA

**P P Chaudhary**

Union Minister of State for Law and Justice;  
and Electronics and Information Technology,  
Government of India



### Urban Development Summit

**K T Rama Rao**

Minister for IT, Municipal Administration &  
Urban Development, Government of Telangana

## > MAGAZINE

It compiles ICT-related advancements being introduced, exercised by various government organisations via eGovernance module.

## > NEWS

Dealing with various key developments and policy-related decisions that define Indian governance style at large, this section throws light on the most important aspects.

## > WEBSITE

With a reach of sixty lakhs, the website is pushing the Digital India campaign of the Government of India. It highlights various dimensions of anything and everything related to the changing trends of governance in India.

## > EVENT REPORTS

This segment narrates the discussions and deliberations of participants at the occasional conferences held nationally or internationally.

## > CASE STUDIES

It deals with in-depth detail of various projects being implemented in any part of the country, worth inspiring others in providing solutions.

## > VIDEOS

The youtube channel 'EletsTV' deals with live recorded versions of tech-experts and key decision makers who participate in key debates or discussion of Elets knowledge conferences.

## > INTERVIEWS

This section highlights various stakeholders, bureaucrats and policy makers influencing governance in the country.

### Gurugram – A Mirror to View India's Rise

Having emerged as a city, best known as an employment hub and a marvel of modern architecture in the neighbourhood of national capital city, Gurugram is certainly one of India's most happening places.

Despite its own set of opportunities and challenges, it is being developed on the lines of Smart Cities Mission by Manohar Lal Khattar-led Government in Haryana.

But how this real estate hub and a centre for corporate houses is being shaped up as a Smart City? Which institutions and leaders are making a difference to make this big dream of Smart City happen?

In this 13th Anniversary Special issue of eGov magazine, we have tried to explore and underline all this and much more, with our cover story 'Gurugram – Millennium City to Smart City'.

A battery of influential leaders, experts, and government officials are featuring in this issue to share how a big change is unfolding in different ways. Some of them include: Municipal Corporation of Gurugram's Additional Commissioner Narhari Banger, Joint Commissioner Gaurav Antil, and Chief Accounts Officer Om Prakash Sharma.

We have also featured a Special Story to find out how India's proactive approach to policies, and programmes is bringing the much needed change with adoption of modern technologies.

Our exclusive interviews include personalities like Zodintluanga, Minister for Urban Development and Poverty Alleviation, Government of Mizoram, and Kadakampally Surendran, Minister for Co-operation, Tourism, and Devasom, Government of Kerala.

We have a special interview of Dr Anup Chandra Pandey, Infrastructure & Industrial Development Commissioner, Government of Uttar Pradesh.

We also have a special article by Dr Gaurav Dahiya, Mission Director, National Health Mission, Gujarat.

Other distinguished personalities in this issue include Vishal Kumar Dev, Commissioner-cum-Secretary, Sports and Youth Services Department, Government of Odisha, S.S. Rajpoot, Director, Urban Administration and Development, M Thennarasan, Commissioner of Surat Municipal Corporation, Sunil Chavan, Additional Municipal Commissioner, Thane Municipal Corporation (TMC) and Chief Executive Officer, Thane Smart City Limited, Gaurava Mishra, CEO, Raipur Smart City Limited, Jan Luykyx, Ambassador of Belgium to India.

Offering an industry perspective, this issue also features special interviews of Ajay Girotra, Managing Director, AG Dauters Waste Processing Private Limited, and Rajiv Banga, Managing Director and CEO, IL&FS Rail Ltd.

With such a bouquet of special stories, interviews and articles, we hope to get an invaluable feedback of our readers.



रविगुप्त

**DR RAVI GUPTA**

Editor-in-Chief, egov magazine, and CEO,  
Elets Technomedia Pvt Ltd

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सत्यमेव जयते



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MoS for Ministry of Chemicals & Fertilizers  
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## MESSAGE

It gives me immense pleasure to know that the 'Municipal Corporation of Gurugram' along with 'Elets Technomedia Pvt Ltd' is organising 'Smart City Summit, Gurugram' on 1 February, 2018.

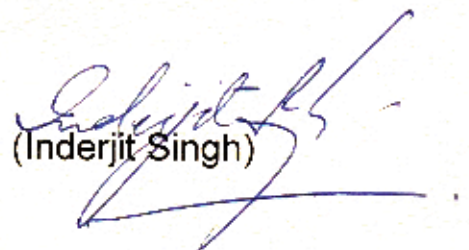
As Hon'ble Prime Minister Shri Narendra Modi has embarked upon the journey to effect urban transformation through his visionary 'Smart Cities Mission', the State Governments along with the Government of India are working relentlessly, making this mission a grand success.

At this juncture, the Municipal Corporation of Gurugram has done the right thing by organising 'Smart City Summit' which will bring together stakeholders from the Government and industry for knowledge-sharing at a common platform to find ways to build Gurugram a futuristic Smart City. I congratulate them for this initiative.

I also congratulate Elets Technomedia for contributing to the cause of building a Knowledge Society by publishing magazines and organising conferences in the domain of IT & e-Governance, Urban Development, Health, Education and the BFSI sector.

I have learnt that a special issue of eGov magazine, India's first and Asia and Middle East's premier magazine, is to be launched during the conference and I extend my wishes for this.

Gurugram has huge potential to become a Smart City. I trust that the outcomes of this Smart City Summit will take a step ahead to make Gurugram a futuristic Smart & Sustainable city.

  
(Inderjit Singh)





के. जे. अल्फोंस  
K. J. ALPHONS



पर्यटन राज्य मंत्री (स्वतंत्र प्रभार)  
भारत सरकार, नई दिल्ली  
MINISTER OF STATE (IC) FOR TOURISM  
GOVERNMENT OF INDIA, NEW DELHI

### MESSAGE

I am pleased to learn that Municipal Corporation of Gurugram, along with Elets Technomedia Pvt Ltd. is organising Smart City Summit in Gurugram and coming out with special eGov souvenir which will be launched at the Summit.

The Government of Haryana has shown appreciable commitment towards creating platform for collaboration between the smart city stakeholders, private players, and the Government machinery to evolve an affordable and livable ecosystem. I congratulate them for this initiative.

I applaud the dedication of the State Government to generate awareness across the smart cities on promoting new ideas and initiatives in Smart City domain especially the ICT initiatives, Technology interventions, innovations in Urban sector and the Best practices in rest of country and their delivery, which is dream of our Hon'ble Prime Minister also.

I once again congratulate the Municipal Corporation of Gurugram, the team of Elets Technomedia Pvt Ltd. and wish them best of luck on this occasion.

  
(K. J. ALPHONS)  
January, 2018

# GURUGRAM MILLENNIUM CITY to SMART CITY

Gurugram, which is a prominent city of Haryana, is considered to be one of the most influential places of North India. It has become real estate hub and a centre for corporate houses that has been providing lucrative job offers over the past decade. A large population from tier-II and tier-III cities is moving towards Gurugram due to the employment opportunities and other available facilities. With the State Government developing the city as a Smart City, it has led to the rapid development of projects, writes **Priyanka Sharma** of **Elets News Network (ENN)**.

The current population of Gurugram is estimated to be close to 2.5 million and is expected to grow to 4.3 million by 2020. As the industrial and financial centre of Haryana, this city has witnessed the third largest increase in per capita incomes in India (after Chandigarh and Mumbai). Almost 45-48 per cent of Haryana's revenue accrues from Gurugram by way of excise duty, sales tax, stamp duty and registration. This is the hub of the prolific and massive real estate development that is happening in the State today.

Although Chandigarh is the capital of Haryana and Punjab, but Gurugram is considered to be the second capital of the State. Over the years, the Government has targeted Gurgaon as city for attracting global investors and domestic capitalists over Chandigarh. Gurugram, earlier known as Gurgaon, may not have made it to the Smart Cities list of the Centre, but still is making itself smart in line with the

vision of the Government of Haryana.

### Some of the projects where Gurugram has made a mark are:

#### WASTE MANAGEMENT:

For effective waste management in Gurugram, foundation stones for 11 solid waste transfer stations were laid by the Chief Minister of Haryana Manohar Lal Khattar recently.

The stations will serve as temporary waste centres where the waste collected from households will be kept till it is transferred to Bandhwari for further processing.

Residents will be required to segregate waste at source into two separate bins, categorised as dry and wet waste. They can even check the arrival time of garbage vans through an app.

The State has signed a Memorandum of Understanding (MoU) with Ecogreen Energy Private Ltd to develop Haryana's first integrated solid waste management project.

"We have signed an agreement with the Ecogreen company, selected through a global tender. They now collect door-to-door garbage and convert it into compost and also waste-to-energy. They will install a power plant there. Less than 10 per cent inert is used for the landfill. This is all in compliance with the Supreme Court order," said Narhari Banger, Additional Commissioner, Municipal Corporation of Gurugram while speaking to ENN.

### SMART SECURITY

The Gurgaon Metropolitan Development Authority will install more CCTVs for enhanced security and better traffic management.

The Rs 40 crore project will be implemented in the next two years. The city currently has around 60,000 CCTV cameras and they, too, will be part of the project.

The CCTVs feed will be monitored at the Police Commissioner's office and can be utilised by all the Gurugram departments.

As a part of the project, 61 CCTV cameras have been installed in Old Gurgaon at 15 points between Sector 4/7 Chowk and Sadar Bazaar.

Residents of Gurugram can utilise the control room through "Emergency Communication Box", in case of an emergency.

*The Gurugram administration has opened a single window system for all clearances and approvals for subsidy, net metering etc at the Renewable Centre in Leisure Valley, in Sector 29.*

There is also a provision to track criminals who try to harm the cameras.

### SMART TRANSPORT

The Gurugram Metropolitan Development Authority (GMDA) has forwarded its report to the Haryana Mass Rapid Transport Corporation (HMRTC), to expand the metro route from HUDA City Centre to Dwarka Sector 21.

Gurugram Rapid Metro is also expanding. Work is in progress for second phase of Gurugram's Rapid Metro from Sikandarpur metro junction to Gurgaon Sector 56.

Fullfilling their promise of Smart transport in Gurugram, a special app is being designed for Kundli-Manesar-Palwal (KMP) expressway.

There is an opportunity in short travel distances that makes this city walkable and cycle-friendly. This strength needs to be leveraged. The maximum daily trip length is less than 5 km, as per the Integrated Mobility Plan for Gurgaon.

A bicycle sharing system will soon start in the Millenium city. China-based start-up Mobike will soon launch an app-based bicycle sharing service in the city.

Under the Memorandum of Understanding (MoU) signed between Mobike and DLF Foundation, the project will start from Golf Course Road. The bicycles made by Mobike will have built-in GPS technology, so that they can easily be tracked.

The company will launch nearly 5,000 bicycles on Gurgaon roads.



## Housing and Infrastructure

To protect homebuyers rights, Haryana has implemented Haryana Real Estate Regulatory Act (H-RERA). Municipal Corporation of Gurugram (MCG) has also launched the door-to-door tax collection service for its citizens.

"We have started door-to-door payment collection in collaboration with the ICICI bank. Residents can pay the property tax and utilities bill at the click of a button by sitting at the comfort of their homes," Om Prakash Sharma, Chief Accounts Officer, Municipal Corporation of Gurugram

Detailed Project Reports of every area can be accessed through MCG website. No Objection Certificate for Fire and Emergency services can also be obtained online. It also provides facility for online approvals of building plans. Any change or correction in Property Tax records can be done online. Marriages can be registered online

too. MCG has started an online system to grant permissions, approvals and monitoring of outdoor advertisements. Trade licenses are issued online.

Gurugram Police recently started Project Jagruk with the help of Home Credit India Finance Pvt. Ltd to create awareness amongst the police personnel on cybercrime and financial frauds.

*The State has signed a Memorandum of Understanding (MoU) with Ecogreen Energy Private Ltd to develop Haryana's first integrated solid waste management project.*

### SMART GRID FOR SMART GURUGRAM

Gurugram is aiming at 24x7 uninterrupted power supply to consumers.

The city wants to make itself a diesel generator-free city, and for that the Dakshin Haryana Bijli Vitran Nigam (DHBVN) has launched a Smart Grid Project for the Millennium City.

The project, at a cost of Rs 1,600-crore will reduce AT&C (Aggregate Technical & Commercial) losses and overhead cost.

The grid is integrated with latest technology and it also ensure consumer participation.

In the phase 1, all the overhead 11 kV lines will be converted to underground except wherever it is not feasible.

There are also plans to lay optical fibre so that internet connectivity can be made possible.

### SMART ENERGY

The energy roadmap for Gurugram needs to progressively increase the share of renewable energy resources and generation. Haryana is gearing up to contribute to India's ambitious target of generating 175 gigawatts of solar power by 2022, and Gurugram is in a position to leverage the state-level policies to scale up application and make more off-grid solutions possible. The plummeting cost curve of solar power generation is an opportunity. As energy demand and consumption grows steadily in the city, increased share of solar power will not only de-carbonise energy but also reduce toxic pollution from power generation. Haryana gets a high intensity solar radiation for 320 days in a year; the state's overall solar potential is 4.5 GW.

The Municipal Corporation of Gurugram is also undertaking LED streetlighting project worth Rs 50 crore. The Energy Efficiency Services Limited (EESL) will replace more than

48,568 streetlights by LED this year, which in turn, will save 11 million units per year for Gurugram.

Under the New Solar Policy of 2016, Haryana has set itself a target of solar renewable purchase obligation (solar RPO) which would be scaled up from the current 0.25 per cent to at least 8 per cent by 2021-22. The solar capacity target is 3,200 MW by 2021-22 -- of this, 1,600 MW will be from rooftop solar.

The policy encourages setting up solar plants on barren panchayat lands and on canals, enabling mechanisms for off-grid solar applications, creating a green energy fund and facilitating wheeling of solar through utilities. The scaling up of solar power generation will happen in diverse ways.

Haryana's solar initiatives are spearheaded by the Haryana Renewable Energy Development Agency (Hareda). Currently, the State's solar power installed capacity is about 25 MW through rooftops and small solar power projects.

Haryana is the second State after Tamil Nadu to have mandated the use of solar by buildings of and beyond 500 square yards.

Recently, a new solar policy has been unveiled. Net metering has been operationalised and the local administration has launched a 'single-window' for all clearances and approvals for solar PV and solar thermal. Research and development on solar power is being done at the Gurgaon National Institute of Solar Energy (NISE).

In Gurugram, 17 MW of solar rooftops have been installed without subsidy, while 1 MW has been installed with subsidy. Gurugram district has been allocated a large target for providing subsidy to the

tune of 11 MW till March 2017 for grid-connected rooftop systems.

The subsidy will be 30 per cent of the project cost or Rs 20,000 per kW, whichever is less. Haryana has put in place all the elements to operationalise net metering. The net metering regulations from Haryana Electricity Regulatory Commission (HERC) were issued in November 2014 and were further finetuned in July 2015.

***Haryana's solar initiatives are spearheaded by the Haryana Renewable Energy Development Agency (Hareda). Currently, the State's solar power installed capacity is about 25 MW through rooftops and small solar power projects.***

Net metering ensures that consumers can become power exporters by installing net meters at their premises and exporting surplus power to the grid – this enables them to get a discount on their power bill (after offsetting exported units) from the Dakshin Haryana Bidyut Vitaran

Nigam Ltd (DHBVNL).

The Gurugram administration has opened a single window system for all clearances and approvals for subsidy, net metering etc at the Renewable Centre in Leisure Valley, in Sector 29.

The application for subsidy, net meters etc can be made online. As per the policy, the electricity generated from such systems will be cumulatively adjusted at 90 per cent of the electricity consumption during the financial year.

In February 2016, Gurugram completed net metering of a 10-kWp rooftop grid-connected SPV power plant at Rajiv Gandhi Renewable Energy Park. In addition, in 2015-16, an incentive at 25 paise per unit was also provided on bills on the solar power thus generated.

Several policy initiatives are in place – what is now needed is a time-bound implementation plan. The optimistic sign is that increasingly, solar photovoltaics are getting cheaper for large scale deployment. [egi.gov](http://egi.gov)

*“Municipal Corporation of Gurugram involves its citizens in local project planning and execution. It is one of the most active local governing bodies in bringing RWAs, NGOs and corporates to the table in critical decision-making.”*



From being an economic wasteland to becoming a millennium city, Gurugram has evolved to be a city globally reckoned with development. As the city embraces the next wave of growth, it has host of impactful stories and initiatives to tell, says **Dr Narhari Banger**, Additional Commissioner, Municipal Corporation of Gurugram, in conversation with **Gautam Debroy** of **Elets News Network (ENN)**.

## ‘Informed and Involved Citizens’ Participation in Governance key to Realising Smart City Gurugram Dream’

### **What initiatives have you undertaken to develop Gurugram as a Smart City?**

We are embracing change and working at multiple levels as Gurugram enters the next wave of growth. There are many initiatives which are aligned with

‘Smart City’ encompassing waste management, inclusiveness, reducing road congestion and resource depletion, creating healthy localities, developing open spaces, making governance citizen-friendly and cost effective and promoting public transport solutions amongst others.

To highlight few initiatives, on the solid waste management front, we are working on 'Integrated Solid Waste Management' project with Eco Green Energy Pvt. Ltd. as the partner for end to end solution implementation. The project aims to roll out a modern and effective way of managing solid waste right from door-to-door collection, segregation of waste, waste transportation, processing and energy generation. The project will address the municipal solid waste of over 1,600 tons per day; from both Gurugram and Faridabad and uses modern equipments and technologies at all levels.

Gurugram with its unprecedented population growth has led to increased power requirements for the city. As an effort in this direction, we are aiming to replace over 55,128 conventional street lights with energy efficient LED lights. MCG has signed an MoU with Energy Efficiency Services Ltd (EESL) for rolling out this initiative which will result in effective energy savings per year of over 4.5 MW or 19.71 MU.

We are working on various other initiatives like setting up of cultural complex and also a command and control centre which will provide integrated view of city use cases including CCTV surveillance, smart LED street lights, parking areas, waste, safety, security, traffic etc.

We have overhauled our service delivery model with e-Governance.

### **Please tell us more about the e-Governance initiatives rolled out by MCG.**

With our concentrated efforts towards embracing Digital India, host of e-Governance initiatives were introduced, allowing citizens to access various citizen-centric services through online mediums. Today online services are being offered for building plans approval, marriage registration, birth and death registration, community centre

booking, Hoarding / advertisement space booking, property ownership transfer, to pay property tax, etc. Digital is emerging as the preferred mode with citizens, as that saves both time and money. Over 2,42,017 property owners paid their property tax last year out of which more than 50 percent chose to pay their taxes through online mediums. We are shifting official business services and transactions to digital mediums and are emerging as a paperless, cashless and faceless agency for our citizens.

### **Please elaborate on citizen involvement in the civic initiatives, projects and governance.**

Success of all government projects depend on the degree of citizens' participation. If citizens are involved in any project, its success is ensured automatically.

There are many examples of citizen engagement making a positive impact on government initiatives; most notable being the Swachh Bharat Abhiyan. By exhorting people to join forces with the government, the campaign has successfully created a nationwide movement towards a cleaner, better India.

Municipal Corporation of Gurugram has also been involving its citizens in local project planning and execution. It is one of the most active local governing bodies in bringing RWAs, NGOs and corporates to the table in critical decision-making and managing the city's civic amenities. MCG has been collaborating with the people of Gurugram on multiple offline and online forums. As expected, citizens are showing greater level of interest in joining hands with the government.

Smart governance involves the creation and mobilisation of communities which can contribute significantly towards its own welfare and upliftment. In this regard, MCG is catering to the interests of residents of specific urban localities

within Gurugram by giving them the power to make a change. This has been done by funding local RWAs to take up the job of managing public amenities that belong to a certain area. Over 400 parks and about 50 community centers in Gurugram are managed by the local RWAs. Numerous inner roads and lanes throughout the city are also managed by the local RWAs and NGOs. This has emerged as a win-win proposition for both MCG and its citizens, who are now empowered to take ownership of the maintenance of an amenity that they use on a daily basis.


Today, technology has brought citizens closer to the city administration, enabling better planning and decision making. We are receiving complaints and feedback essentially through online mediums, which are continuously monitored and resolved at MCG level. Citizens are using Facebook, Twitter, MCG website, WhatsApp, email and Toll Free number as mediums to flag off complaints or pendency of works including sanitation, roads, electricity etc.

Smart Governance with citizen engagement is clearly strengthening the roots of democracy.

### **Tell us something unique about Gurugram and Haryana.**

Gurugram is progressing by leaps and bounds but it also has deep-rooted and rich religious legacy. As per the Puranas, two of the Chiranjivis or, the immortal living beings; Ashwatthama and Kripacharya have their connect with Gurugram.

अश्वत्थामाबलिव्यासोहनुमांश्च विभीषणः  
कृपश्चपरशुरामश्च सप्तैतेचिरंजीविनः।

The city is also known for the Eklavya Tirth and the name 'Gurugram' has its roots from Guru Dronacharya's ashram. We are proud of the rich religious legacy of Gurugram. 



**Gaurav Antil**  
Joint Commissioner  
Municipal Corporation of Gurugram

*“Like other metropolitan cities, transportation is one of the major challenges in the Gurugram. To resolve this issue, we have planned an intra-city bus service. For this we have formed Gurugram Metropolitan City Bus Limited.”*

## Converting Challenges to Opportunities: Gurugram’s Transformation through Waste & Transport Management with Innovation

To ensure planned development, proper waste management and transportation are the two key components. In an exclusive interaction, **Gaurav Antil**, Joint Commissioner, Municipal Corporation of Gurugram, shares strategies of the Municipal Corporation for improved waste management and transportation to **Gautam Debroy** of **Elets News Network (ENN)**.



Rapid Metro, Gurugram

### **Tell us something on the waste management process of Gurugram.**

A concession agreement has been signed between the Government of Haryana, Municipal Corporation of Gurugram and Municipal Corporation of Faridabad. The agreement was signed in the presence of our Chief Minister Sheri Manohar Lal Khattar on 14 August, 2017. Under the agreement M/S Ecogreen energy Gurugram Faridabad Pvt Ltd, a subsidiary of a Chinese company is working for us.

They are into solid waste management. The solid waste management is done in four stages.

In the first stage, door-to-door garbage collection is done by the company. Separate containers for bio-degradable and non bio degradable waste. Green containers for wet waste and blue containers for dry waste.

In the second stage, the collected waste is taken to a secondary collection points in closed motorised vehicles. The collection points are in the form of



underground and on-ground bins with different capacities. The minimum capacity of a bin is 500 kg. Around 400 bins will be placed in four zones of Municipal Corporation Gurugram.

In the third stage, the garbage from these bins is taken to the transfer stations. Every zone has one transfer station. At these transfer stations, the waste is compacted and transferred for final processing.

In the last stage, the waste is transferred to processing units for creating electricity or to a landfill site. The current landfill site is spread across 2.7 acres. At the landfill site, the waste is converted into compost.

**You have initiated cluster based approach for solid waste management in Haryana and especially in Gurugram. Tell us something on that.**

Haryana's urban population is approximately 88 lakh as per census 2011. This is 34.88 percent of total population of Haryana. The current waste generation in Haryana is about 4265 tons per day which is likely to be increased to 7500 tons per day by 2035. We have 80 Urban Local Bodies (ULBs) grouped into 15 clusters. And the clusters formed based on parameters such as existing treatment plant, optimal transport distance and waste projections.

The cluster based project will be developed on Develop, Built, Finance, Operate & Transfer (DBFOT) model on PPP mode. The private developers have also been selected through an open competitive bidding process.

The total population of cluster is around 23 lakhs as per 2011 census. And Gurugram has 8.86 lakhs and Faridabad has 14.14 lakhs.



Green Gurugram

*“The cluster based project will be developed on Develop, Built, Finance, Operate & Transfer (DBFOT) model on PPP mode. The private developers have also been selected through an open competitive bidding process.”*

**To resolve the traffic problem of the city, what measures have been taken?**


Like other metropolitan cities, transportation is one of the major challenges in the Gurugram. To resolve this issue, we have planned an intra-city bus service. For this we have formed Gurugram Metropolitan City Bus Limited.

To operationalise the project, we have signed a MoU with Delhi Integrated

Multi Modal Transit System Ltd.

Following the MoU, we have chalked out a comprehensive mobility plan under which the routes for various buses and locations of the bus stops will be decided. Other components are the construction of bus depots and hiring of concessionaire for the bus service. For the city bus service, we have adopted a Gross Cost Model. In this model, the complete cost of buying and maintaining the buses is born by the concessionaire.

**How does the Gurugram Metropolitan Development Authority (GMDA) functions?**

The GMDA will look after development projects on pan Gurugram basis. I am looking after a few projects of GMDA. One of the components is city bus service. We are also planning to start public bicycle sharing system. Under the system, people will be able to share their bicycles with other peoples to reach their destinations. Services of different private companies will be used to bring back the bicycles to a parking near metro which will be constructed by the GMDA. Another project is of laying web cables across the Gurugram city for better connectivity. 



**Sudhir Singh Chauhan**  
Senior Town Planner  
Municipal Corporation of Gurugram

# Municipal Corporation – Laying Foundation of Smart Gurugram

To make a city clean and green, its effective waste management is significant. A Green Plan is being prepared for Gurugram city under which the city's beautification is also proposed, says **Sudhir Singh Chauhan**, Senior Town Planner, Municipal Corporation of Gurugram in an interview with **Gautam Debroy** of **Elets News Network (ENN)**, while sharing active participation of citizens, civic bodies, private organisations and NGOs will help Gurugram shape up as a Smart City.



*“For Gurugram, the situation is different. It is a Millennium City, a city of hope. It is the IT city in whole Delhi-NCR region. Gurugram is not a city of Haryana only, it is a global city.”*

## **How do you view the concept of building Gurugram as a Smart City?**

Gurugram is already a smart city. But we are doing so many other things to make the city smarter. Smart city means a city which is sustainable and the services provided by the agencies are without any flaw and queue. For better cooperation among citizens and government, we are trying to provide 80 per cent of the services online. The

services include building plan approval, taxation, billing and tender processing. More or less, we can say that for most of the processes we are working online.

**In Gurugram City, there are lots of issues like transportation, waste management etc. Do you think the construction in Gurugram is one of the major factors for all such problems?**

For Gurugram, the situation is different.

It is a Millennium City, a city of hope. It is the IT city in whole Delhi-NCR region. Gurugram is not a city of Haryana only, it is a global city. Being an international city, the city is expanding very fast due to which some key aspects are lagging behind. We are chasing those aspects and trying to bridge the gap very soon. Many agencies including GMDA and Municipal Corporation are working to address the problems and soon the city will be worth living as one of the Smart Cities.

### What are the different areas, the corporation is focussing on?

Gurugram Municipal Corporation is endeavouring in most of the fields nowadays. We are into health and running a diagnostic centre in Sector-39 of Gurugram. We are also building two hospitals in association with GMDA, of which one is a 500-bed hospital. We have also received 800 acres of land from HUDA. We are having a street vending project for livelihood of street vendors. We are planning for a photographic museum where the pictures, older than 100 years, will be preserved. We are coming up with a cultural centre which will be the hub of performing arts and to encourage people's interest in regional arts and the culture. Besides, we are having development and road projects. There is a development project of around Rs 140 crore undertaken by us. underpass at three major locations -- IFFCO Chowk, Hero Honda Chowk and Rajiv Chowk in Gurugram, will be constructed by us. Authorities have now cleared Dwarka Expressway. We will also start constructing a multi level parking very soon.

**Being a Senior Town Planner in Gurugram Municipal Corporation, what can be done to attract more real estate agencies and builders to construct flats, houses and develop living spaces?**



Nowadays the by-laws in the city are better than the earlier ones. Every waste generator (the builders and societies) have to take the sanction for proper waste management before constructing a building. Eco Green - a Chinese Company has been given the task of waste management and they are also using the waste to generate electricity. To make a city clean and green, it is very important to manage the waste effectively. We are also developing a green plan for Gurugram city under which beautification of the city is also proposed. We are also renovating different ponds in Gurugram. We are trying to enhance the natural beauty by planting more and more plants and many NGOs are also helping us in this regard. As there is good number of high rise building in the city, we are encouraging Resident Welfare Associations (RWAs) to construct Rain Water Harvesting plant and compost plant for each building.

**How important is the participation of private and public players for developing a smart city?**


It is tough to realise the dream of smart cities only with the contribution from

government or civic bodies. We are encouraging RWAs and NGOs to participate at the greatest level. We have asked RWAs to renovate the community centres and parks around them for this cause.

**What major challenges you are facing in developing Gurugram as a Smart City?**

The biggest challenges we are facing is the lack of manpower. We are outnumbered in terms of workforce required for development projects with respect to the population growth. We do have plans but due to lack of manpower, we are lagging behind.

**Gurugram Municipal Corporation along with Elets Technomedia Pvt Ltd is coming up with a smart city summit on February 1. How do you think the summit will help in exchange of best ideas for developing a Smart City?**

Knowledge is power and if we are not exchanging the ideas, we will not get the knowledge. We shouldn't be blind folded and always ready to accept the ideas from even a child. Exchange of ideas actually enhances the capacity and leads to a sustainable vision. 



**Om Prakash Sharma**  
Chief Accounts Officer  
Municipal Corporation of Gurugram

*“There is need to motivate people for digital payments. Though steps are on even by our Chief Minister Manohar Lal Khattar and Municipal Commissioner V Umashankar, some steps need to be taken to make the citizens aware of the benefits of the online payment system.”*

# GURUGRAM Goes Digital

Residents can pay the property tax and utilities bill at the click of a button from the comfort of their homes in Gurugram, says **Om Prakash Sharma**, Chief Accounts Officer, Municipal Corporation of Gurugram in conversation with **Gautam Debroy** of **Elets News Network (ENN)**.

## **How is Municipal Corporation of Gurugram digitising the banks?**

Municipal Corporation of Gurugram has started 100 per cent cashless provisions for its residents. We have different modes of payment. We have agreement with different payment gateways to facilitate online payments for citizens.

We have also started door-to-door payment collection in collaboration with the ICICI bank. Residents can pay the property tax and utilities bill at the click of a button by sitting at homes. The online receipt has three copies. Of this one goes to the bank, one comes to us and the third one goes to the customer.

## **What initiatives do you have in the pipeline for near future to promote online services?**

We have created our own website. Our web news portal is also there. There is a separate column for grievances redressal. Contact number of officials are available online for the public to approach them with their problems.

Our Commissioner has given instructions that mobile numbers

should always be kept on and in case of missed calls it is the officer's duty to call back the customer.

## **What sort of challenges are coming in your way to implement Smart City projects?**

Although we are moving towards digital payments, sometimes residents of Old Gurugram face problem in online payments. In such cases, we help them. We have also started door-to-door payment collection system for them. We try to solve citizens' problems through our web news and grievance redressal system.

## **What initiatives are desired to popularise digital payment system in Gurugram?**

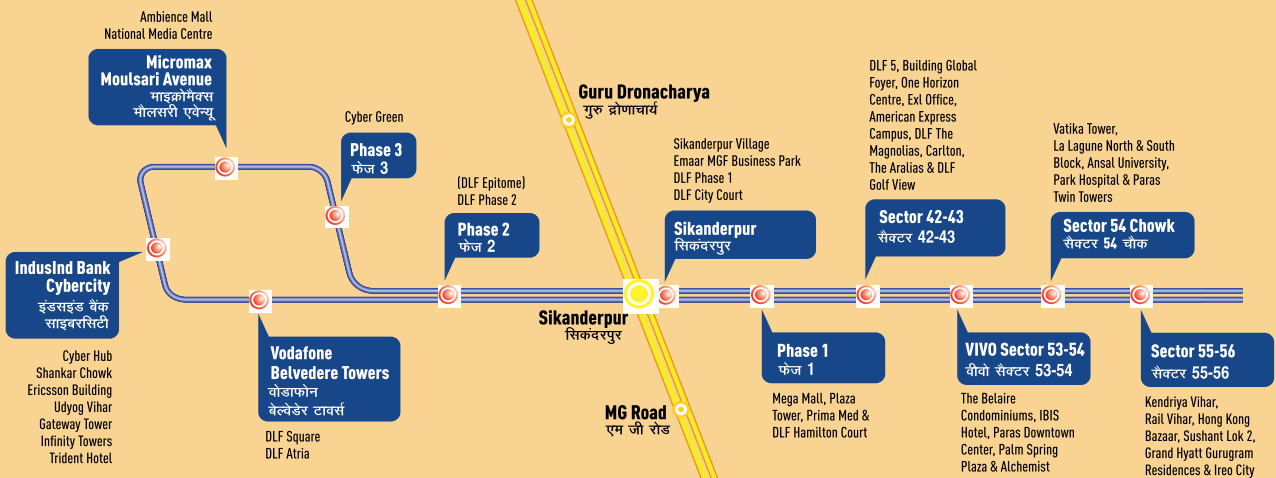
People need to be motivated for digital payments. Various initiatives are being taken by our Hon'ble Prime Minister Narendra Modi, Chief Minister Manohar Lal Khattar and Municipal Commissioner V Umashankar. Still, some steps need to be taken to make the citizens aware about the benefits of online payment system. [egov](http://egov.gov)

# Travel fast. Travel smart.



## Rapid Metro Route Map

- Rapid Metro
- Delhi Metro Yellow Line
- Rapid Metro Stations
- Delhi Metro Stations



Map not to scale

adopt #RapidLife



**Zodintluanga**  
Minister  
Urban Development and Poverty  
Alleviation Department  
Government of Mizoram

*“For Aizawl city we have taken steps towards improvement of water distribution system under AMRUT, drainage system has been improved to a great extent to prevent landslips.”*

## A Digitally Empowered **Mizoram** in the Making

The Mizoram Government through ICT Department has put in the hard work to ensure realisation of Prime Minister Narendra Modi’s vision of Digital India. We have set up infrastructure in the e-Governance domain and established State Wide Area Network, says **Zodintluanga**, Minister, Urban Development and Poverty Alleviation, Government of Mizoram in conversation with **Ritika Srivastava** of **Elets News Network (ENN)**. Excerpts:

### **What is your vision for the Urban Development of Mizoram?**

Provision for clean water, clean air, scientific collection and disposal of solid waste, sustainable land use, improvement of public transport system are a must to make Mizoram a true modern urban State. The challenges in urban development are enormous, especially in a city like Aizawl where the terrains pose a big problem in planning. A hill city like Aizawl needs to have proper walkways and pedestrian footpaths. If Aizawl city can be transformed into a walkable city, it can become one of the most comfortable and liveable cities in the country.

Therefore, there is a need to promote NMT and public transport system in the State. More footpaths need to be put in place along the length and breadth of the city wherever possible so that people can move with ease. Towards this end we now have Non-Motorised Transport Plan for Aizawl City which was prepared by Innovative Transport Solution (itrans) Pvt. Ltd., New Delhi. The task of implementing of the NMT Plan has

been shouldered by Aizawl Municipal Corporation.

Matters relating to water supply and management of solid waste need to be tackled systematically. The State of Mizoram is still very new to the whole concept of urban development and management. Water is a big challenge everywhere.

### **What challenges are posing hurdles in effecting development?**

There are issues that need to be properly addressed. In fact, for Aizawl city we have taken steps towards improvement of water distribution system under AMRUT, drainage system has been improved to a great extent to prevent landslips and landslide which are rather a common phenomenon in hill terrains especially during the rainy season.

An interesting milestone to mention is, although we are small State, our performance in the implementation of AMRUT Schemes. In fact, we are the best performer in the whole Northeast and among the top 10

States in the country. Apart from this, under the Asian Development Bank funded North East Region Capital Cities Development investment Programme (NERCCDIP), Solid Waste Resource Management Project is also underway which is expected to be completed in 2019. For a small State like Mizoram, we have taken up quite a big project.

### Are there any special initiatives or policies formulated for difficult terrains of the State?

To develop cities into modern cities, civic amenities like playgrounds, stadiums and community halls need to be provided. Besides the aforementioned components, impetus needs to be given in transport and waste management. My Department i.e., Urban Development & Poverty Alleviation Department is currently pursuing one project namely Supporting Sustainable Urban Transport in Aizawl City with Ministry of Finance. Technical Assistance has already been given by Asian Development Bank consultants CDM Smith. Under this project there is a plan to put in place cable cars as an alternate transport system in Aizawl city. In addition to this, there will also be a provision for procurement of state-of-the-art buses that aimed at addressing public transport problems in the capital city.

### What steps have been taken to address issues related to Solid Waste Management here?

Solid Waste Management is indeed a colossal task everywhere. However, activities in sanitation have been carried out since 1977. The first Cleanliness Week starting from 2nd October, 1977 was observed to mark Gandhi Jayanti. Mizoram has been observing Cleanliness Week since then, involving streets' cleaning and sweeping voluntarily by different



communities and localities. Good performance is rewarded with prizes and incentives. In Aizawl city and other towns as well, domestic waste is collected at regular intervals by the Government in partnership with local and village councils, which are elected bodies. We have also declared 2018 as Cleanliness Year.

### What measures are underway to realise Prime Minister's vision for Digital India Mizoram?

At the moment, the State government through ICT department has put in hard work to ensure success in fulfilling the Prime Minister's vision of Digital India. We have set up infrastructure in the e-Governance domain and State Wide Area Network, State Data Centre, Common Service Centre for delivery channel, and develop G2C and G2G services for common man's easy accessibility.

Apart from Bharat Net project, the State has taken steps to improve Internet connectivity for all Government departments in districts through wireless system under the State Government's flagship programme New Economic Development Policy (NEDP).

Furthermore, the department has done application development of Content Management System (CMS) for all government websites, Online Water Billing, Online Power Billing, Inventory Management System, Online Property Return System,

Online Leave Application. The State Government of Mizoram has extended its horizon by introducing 'IT Education Programme for 100 Schools' and 'Interactive Digital Classroom for Development of Science and Mathematics'. Under Skills Development programme, IT has been introduced at the high school level. We have also mandated IT proficiency for all recruitments under the State Government wherein Course on Computer Concept (CCC) is the minimum prescribed. So, in near future all State government employees will soon turn IT literate. It'll be a great boon for governance.

### What makes Mizoram an attractive tourist destination?

The Mizos are very warm hearted, hospitable and very trusting. You can still find unmanned shops in several places in rural areas. Mizos love singing. You can witness choral music at church gatherings, which is often something to marvel at for an outsider or a tourist. Our biggest cultural festival is the Chapchar Kût which will take place on 2nd March, 2018. Year after year, we have more tourists coming for the Chapchar Kut Festival. The main celebration will be held in Aizawl. Not far from Aizawl, we have Reiek Tlang hill where you can go trekking all the way to the summit. It's breathtaking. For adventure lovers, we have a much longer trekking route at Vaipuanpho, which is a three days and nights journey. [egov.gov](http://egov.gov)



# The Backwaters of Kerala Making Waves Globally

The tourism department has been actively promoting adventure tourism to entice the adventure enthusiasts from all corners of the world. Emphasising on activities, the Tourism Board has planned to develop water and adventure parks for various water-based activities, says **Kadakampally Surendran**, Minister for Co-Operation, Tourism and Devaswom, Government of Kerala, in conversation with **Arpit Gupta** of **Elets News Network (ENN)**.



### **Give us an overview of tourism growth in Kerala. What were the key initiatives undertaken by the tourism department last year?**

The Department of Tourism has been witnessing perennial growth trajectory over the last five years. We aim to double the foreign tourist arrivals and increase domestic tourist arrivals by 50 per cent by 2021. In order to achieve this goal, Kerala Tourism would need a year-on-year growth of 8.45 per cent and 14.87 per cent for domestic and international tourists respectively.

As per the latest tourist arrival statistics, Kerala has received tremendous response from the domestic tourists with an 11.03 per cent growth this year. As many as 10,18,986 new domestic tourists added during January to September 2017 as compared to the previous year (January to September 2016). Significantly, the domestic tourist arrivals have achieved beyond the target set out by the State Tourism Policy. In fact, the growth has almost doubled compared to the last year. Despite major changes in the tourism industry, including enhanced GST rates, the foreign tourist arrivals have also increased by 4.23 per cent during the same time period.

The tourism department has undertaken several initiatives to promote State tourism across the globe. One of the key initiatives undertaken by Kerala Tourism is Responsible Tourism Mission (RTM). Kerala Tourism has been focusing on implementing the master plan for RTM across the State. The world's first RTM would lead the State through local community and environment-friendliness with rural development and women empowerment.

Owing to the changing preference of the travellers for real travelling experiences through experiencing village life, the tourism department has been working towards promoting

homestays and rural tourism as well. Under the new tourism policy, the tourism department has proposed to establish 1,000 new classified homestays in the State at destinations like Malabar region. Kerala Tourism has also planned to implement "Barrier Free Kerala Tourism" this year, which shall result in creating accessible spaces to the differently abled and elderly tourists. Emphasising on cruise tourism and targeting high-spending tourists, Kerala Tourism has envisaged a 'River Cruise Tourism' project. With the aim to promote cruise tourism, the Government of Kerala has envisioned Rs 300 crore project for nine rivers in Kannur and Kasaragod.

### **Kerala is promoting itself in international markets. What are the most sought after destination the government is promoting globally?**

The focus has been on promoting the unexplored and pristine destinations such as Vaikom, Kozhikode, Wayanad, Bekal, Kannur, Malabar, Kasaragod and Malappuram with the objective to promote the State tourism in a responsible manner globally. We believe that the northern part of Kerala has a lot of untapped tourism potential. Hence, we have added destinations like Bekal, Kannur, Kozhikode and Malappuram to the promotion and marketing campaigns for the ongoing year. With the aim to increase the geographical spread of tourist arrivals to the State, Kerala Tourism has planned to promote its Malabar region aggressively through a Rs 325-crore project. Further, there are plans to develop theme parks, light and sound shows at Bekal and Kannur and musical fountain in various picturesque districts of Kerala.

### **Kerala Tourism has been following a robust development plan in order to position Kerala as the most preferred destination. How the Kerala Tourism is planning to**

### **establish itself as an adventure tourism hub?**

The tourism department has been actively promoting adventure tourism to entice the adventure enthusiasts from all corners of the world. Emphasising on activities, the Tourism Board has planned to develop water and adventure parks for various water-based activities. Kerala Tourism has been offering a wide range of action and water based activities, which lets tourists to have thrilling and refreshing experiences while exploring the natural beauty of the place. The State has in store an array of adventure packed destinations, including gushing rivers, hills, dense forests and vast stretch of the seacoast.

Under the development plans for promoting adventure tourism, the latest development is 'Adventure Rock Hill' at the Jatayu Earth Centre, which is now operational for public in groups. Located in Kollam, there are few more ventures pending to make the Nature Park fully operational. It has a separate adventure zone, which provides over 20 different games such as paintball, archery, laser tag, rifle shooting, rock climbing and rappelling for the tourists. Following a rigorous tourism development plan, we aim to rebrand the state as 'The Land of Adventure' to attract the adventure enthusiasts and the young travellers from across the world.

### **Please give a brief about Vasantholsavam 2018 (Spring Fest 2018), a visual bonanza, which is being organised at Kanakakunnu Palace.**

The Department of Tourism and Agriculture will organise Vasantholsavam 2018 between January 7 and 14, 2018, as part of the Kerala Government's Loka Kerala Sabha. During the festival, a flower show, a medical plants fair, agri-products fair, exhibition and sale of value-added

natural products and farming equipment, honey fair, food festival and aquashow would be organised.

The flower show, which will be organised on the aegis of the Kerala Science, Technology and Environment Council, will bring to the venues an array of more than 10,000 varieties of flowers, and herbs. Apart from decorative flowers and plants, the exhibition will also offer flower decoration sessions. Besides, the festival will also display the fast disappearing sacred groves of Kerala, bonsai trees, rare orchids, carnivorous plant species and more. A variety of competitions will also be a part of the festival. Contests on plant decoration, garden techniques, flower plants, anthuriums, orchids, and rose varieties have been lined up. The competitions will also include items like flower arrangement, vegetable carving, bouquet making, and a 'Pushparani' contest. The competitions will be separate for students, professionals and others.

**Kerala has come up with the new Tourism Policy, 2017. What are the salient features and how will it give a boost to public-private partnership.**

Kerala's new Tourism Policy, 2017 envisages creation of new customised products for attracting young travellers, professionals, students and artists to the State. The policy emphasises on the active participation of the differently-abled and transgenders while implementing the RTM across the State to promote tourism. The new policy aims to address the key issues of the tourism industry in cooperation with the local bodies such as waste management and renovation of roads.

The Department of Tourism has proposed to establish a Kerala Tourism Regulatory Authority (KTRA) to ensure quality service for tourists and curb unhealthy practices in the tourism sector. An investment cell would be formed to help potential investors,

especially NRIs. With the aim to drive growth of the overall tourism sector, the tourism board has also planned to revise the classification system for ayurveda centres, houseboats and other services with strict norms. In addition to that, a special rating would be introduced for hotels based on the quality of service provided. The priority has always been to promote 'Responsible Tourism' with active participation of the local bodies and citizens. The new policy would



mission has been implemented in Vaikom. Kerala Tourism has planned to implement the State in other parts of the State in phases.

Besides focusing on RT mission, Kerala Tourism has planned to develop several action and water-based activities such as paragliding, paddling and kayaking in various districts, including Alappuzha, Malabar region, Wayanad and others. With the promotion of adventure tourism in the State, the sole objective



continue to focus on the main objective of Kerala Tourism.

**What are your plans?**

The Tourism Department has been following a comprehensive development plans with the aim to position Kerala as one of the most sought-after destinations across the globe. Currently, the department has been channelising its energies towards executing the RTM across the State. To promote the State in a responsible manner, Kerala Tourism has been working collectively with various agencies, bodies, District Tourism Promotion Councils and forest department. The Government of Kerala has allotted Rs 4 crore to the Department of Tourism for fiscal 2017-18 to take Responsible Tourism initiative ahead. The first phase of the

is to woo international tourist to the State to increase the foreign tourist arrivals (FTAs).

Following the infrastructure-development plans, Kerala Tourism has been expediting the process of infrastructural development across the State. The objective is to accelerate the growth of the overall tourism sector. The Government of Kerala has planned to develop 10 eco-tourism circuits to connect various forests in order to promote green tourism. The Government of Kerala has also envisioned Rs 300-crore project for nine rivers in Kannur and Kasaragod to promote river tourism. Moreover, there are plans to start the Alappuzha-Kollam boat service through Kayamkulam Kayal, offering sightseers an opportunity to visit Kumarakodi. [kerala.gov.in](http://kerala.gov.in)



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## Smart Cities: Sustainable Future

### Partnering India's Transformation

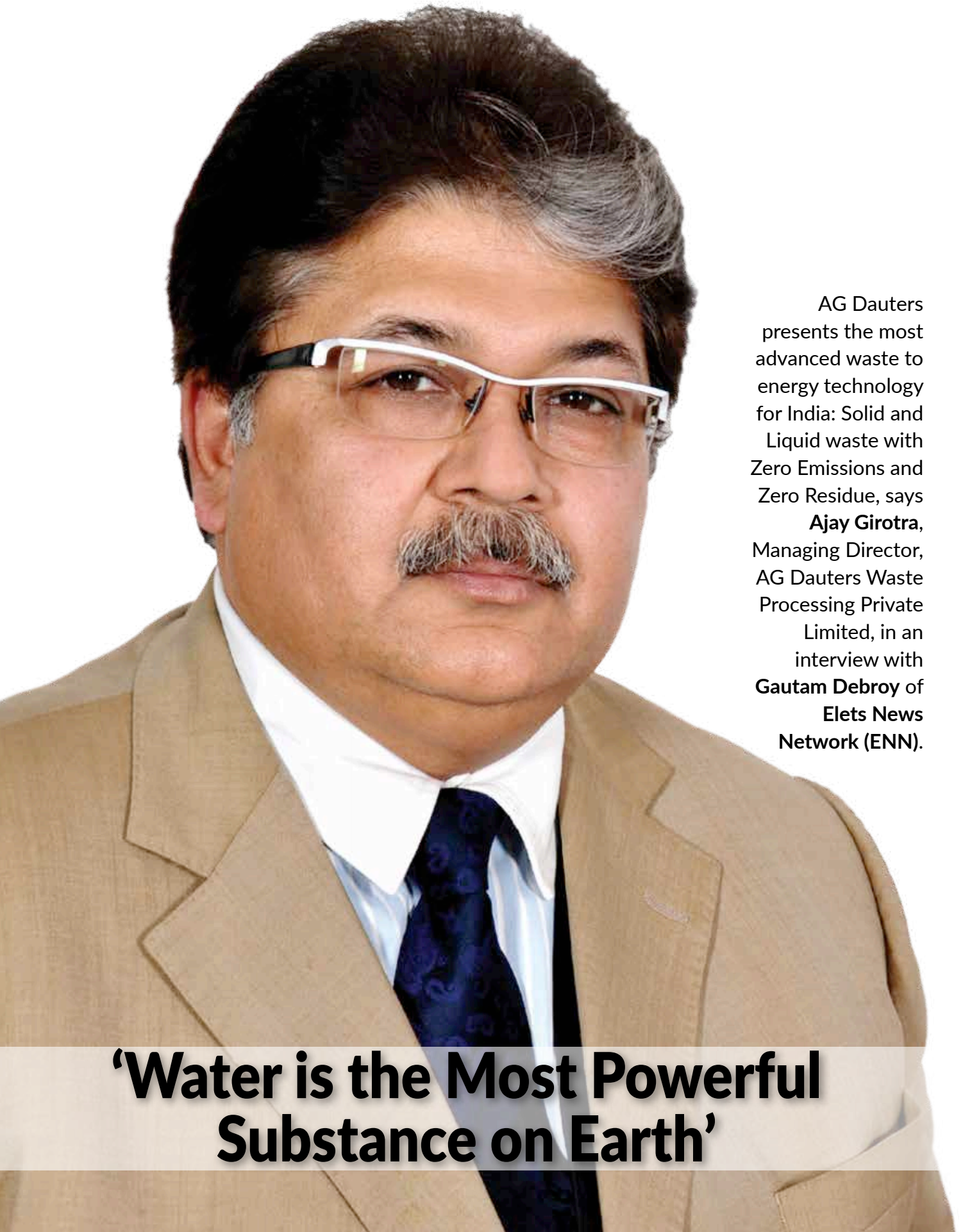
Cities are brimming with opportunities. They generate 80% of the global GDP, but they also face many challenges like congestion and pollution as urban growth continues unabated. Decades of experience and a broad-based portfolio make Siemens uniquely qualified to meet these challenges and supply the right solutions.

The basis of the sustainable and livable city of tomorrow is an intelligent and automated infrastructure. Through digitalization and automated systems, we can make better use of existing infrastructure, increase efficiency, lower operation costs, improve safety and resiliency, and reduce environmental impacts.

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AG Dauters presents the most advanced waste to energy technology for India: Solid and Liquid waste with Zero Emissions and Zero Residue, says **Ajay Girotra**, Managing Director, AG Dauters Waste Processing Private Limited, in an interview with **Gautam Debroy** of **Elets News Network (ENN)**.

**‘Water is the Most Powerful Substance on Earth’**

**How would you describe the overview of AG Dauters Waste Processing Technology?**

AG Dauters waste processing is the India arm for Langenburg Technologies USA. Langenburg has come out with a very breakthrough proprietary technology to convert any kind of waste into power, drinking water and fuel. So, when we say 'waste' we mean in any kind -- solid, liquid, effluent, slags, fly ash, bio-waste, hazardous, toxic, slurries or sea water, ocean water. Anything in the world which can be termed as waste, we convert it into three things: Power, Drinking Water and Fuel. The key USP of our technology is, it is zero emission – zero residue: nothing in the ground nothing in the air, no residues at all. We don't require any kind of a start up power. We create our own fuel. Land required is about 1/10th to 1/20th the conventional size of a RE or thermal plant. So, it has got a very small footprint. And, what we bring to India is at zero cost, meaning there's no government investment required, no kind of support . Only three outputs which we produce is what we sell to the government and that's our commercial model.

**How is this waste to energy technology different from other technologies available in the market?**

Our waste to energy technology is absolutely way ahead of what the existing technologies are. For instance, in case of solid waste, it is the incineration technology. Incineration has a few big problems namely:

1. It can only burn the organic waste. A separate landfill is required for the inorganic/ inert to be disposed off and it creates a huge amount of residue which again requires the landfills.
2. It requires absolutely dryness. So moisture is a big hassle.
3. The kilo calorific value. It has to be



Pollution in river Ganga

*“Our waste to energy technology is absolutely way ahead of what the existing technologies are.”*

more than 1,200 kilo calorific value to process that waste.

4. Large amount of land required for the landfills.

In our case, none of these four are required.

- a) We do not require any kind of segregation. We process inert, organic, inorganic, anything and everything we process it out.
- b) Moisture is absolutely friendly to our technology. Any level of moisture is fine with us.
- c) We do not require any kind of landfills because we do not have any residues left out.
- d) And kilo calorific value does not matter to us, as we are not burning. Our process is Plasma gasification

where each an every matter is broken down into its molecular form and in that molecular form at a very high temperature we are able to convert it into the syn gas.

In case of liquid waste, the problem is that solution available is only STPs which, in turn, just filter the waste and are energy guzzlers. Sewage treatment plant is not the solution for it. It is just simply filtering the waste.

**In which parts of India are you planning to set up the plant? Also tell us about its operational performance.**

The key thing about our plant is that it is absolutely integrated technology right from the segregation of water and the waste to the production of the three outputs. We require such low footprint that for example a 50 MW plant requires only 10 m x 10m of building.

So, we put up our plants at the pit sites where the waste is available.

Currently, same is the case with solid waste, the plants are put up at the pit sites because the space required is very less. We are currently in discussions with the governments in Maharashtra, Uttar Pradesh, Punjab, Jharkhand, Haryana, Madhya Pradesh, Telangana. We are in the process of signing up projects where we are converting solid



Our technology is the only one in the world which can convert sewage into power, drinking water and fuel. For example, in solid waste a 200 metric tons unsegregated waste generates about 1-2 MW of power. In our case, 200 metric tons of unsegregated solid waste generates 70 MW of power. We are almost 70 times.

In case of liquid waste from 01MLD which means 10 lakh litres of sewage, we are able to generate 10 MW of power and about 9,50,000 liters of drinking water and fuel. This is absolutely unheard of, and this is breakthrough technology which our company has created and that is what we are presenting to India now.

*“We require such low footprint that for example a 50 MW plant requires only 10 m x 10m of building. So, we put up our plants at the pit sites where the waste is available.”*

waste, affluent, sea water, sewage into the three outputs. And all our plants are completely computer controlled and connected to our central servers through our own satellite.

**Most of the waste to energy plants established earlier have either closed or are not performing as required. In this situation, your technology could be of great use. What government support you require so that it helps society in waste management as well as energy development?**

We need to understand why the plants, which were set up, exited, closed or not producing what they are

intended for. We need to understand what the problem is? And, that is burning of waste. Burning the waste does not generate so much energy that it can be commercially sold and make money from.

Plus, they generate huge emissions as well as residues. That's the reason they were not commercially sustainable. That's the reason they exited out. What the Government has to see is that the water, air, and the earth are getting heavily polluted day-by-day.

*“We would be generating 100 litres of mineral water per Indian per day. The entire consumption of diesel and jet fuel of this country can only be made from this sewage.”*

Everywhere the groundwater is heavily polluted due to leachate discharge from the east landfill sites. The water is not going to last for long, and the air we just saw what the smog in Delhi was, the amount of pollution which is getting caused now, this is not going to be getting reduced. It's going to increase year by year. The Government has to understand there is need to adapt newer technologies and what is the potential of the waste. Today, waste can replace any and every kind of fossil fuel.

**Waste management is something about how garbage waste can be**

**used as some valuable resource and as your tagline says “the most powerful thing in the world is water.” What would be your action plan to implement this technology on a larger scale?**

We need to understand how powerful the water is. For example, 14,000 million litres per day of sewage falls into the Ganga river everyday. What is the potential of this sewage? The potential is if we process this entire waste, we will be generating

city. That's the potential and we are able to easily scale up.

**How will your technology and plants help in strengthening the Swach Bharat Abhiyan?**

Swach Bharat Abhiyan is an absolute fantastic program introduced by the government. It's making people aware of what is the importance of cleanliness and making everybody do cleaning of their entire cities and town. But we find it, it is an half-hearted affair because it is



Fumes in Bellandur lake

50,000 MWh (MegaWatt per hours) of power. We would be generating 100 litres of mineral water per Indian per day. The entire consumption of diesel and jet fuel of this country can only be made from this sewage. Another example of power of water is the amount of sewage falling into Bellandur lake. You have heard of this lake in Bengaluru, which catches fire there. It can generate 5,000 MWh of power to lighten up the entire Bangalore city. It can give 30 Crore litres of drinking water to Bengaluru and Kolar areas, as well as supply diesel, jet fuels, or CNG for the entire

teaching people to collect the waste. But it is not teaching people how to process the waste. Cleaning the city and collecting the waste and throwing it in the landfill is not the solution. These landfills are causing so much of pollution the leachate which is going into the ground is contaminating the ground water. The sewage which is getting generated out there is going into the rivers. That has to get eliminated and once that gets eliminated and gets converted into energy that is what actually the Swach Bharat Abhiyan will be and India will be called the “the most smart country”. [e.gov](http://e.gov)



**Dr Anup Chandra Pandey**  
Infrastructure & Industrial Development  
Commissioner, Government of Uttar  
Pradesh



*“Our policies are industry-friendly. We have also identified a lot of land banks and tweaked our policies to ensure that industries come here.”*

## ‘Uttar Pradesh Aiming to be Investors’ Favourite Destination’

Uttar Pradesh Investors Summit 2018 is an endeavour to achieve goal of generating five lakh crore investment and 20 lakh employment in five years, says **Dr Anup Chandra Pandey**, Infrastructure & Industrial Development Commissioner, Government of Uttar Pradesh, in an interview with **Arpit Gupta** of **Elets News Network (ENN)**.



Infrastructure & Industrial Development Commissioner, Government of Uttar Pradesh

### What is the main objective of organising Uttar Pradesh Investors Summit 2018?

To be inaugurated by Hon'ble Prime Minister Narendra Modi, the Uttar Pradesh Investors Summit 2018 will be held in Lucknow on 21st and 22nd February. Being organised for the State's holistic development and explore investment opportunities for industries and generating employment, it will give boost to the Uttar Pradesh Government's aim to generate five lakh crore investment and employment for 20 lakh in five years.

Many important industrialists from all over the country and abroad are expected to participate in the Summit.

We are determined to make Uttar Pradesh a nationally and internationally preferred investment destination, thereby generating maximum direct and indirect employment and self-employment for both skilled and unskilled workforce. Uttar Pradesh, with its 22 crore population, offers a huge market which also provides a good lot of skilled hands. Establishing industries in the state will lead to job



creation at a large scale and provide opportunities to investors.

To attract investors, we have conducted six roadshows in industrial cities of the country including in Delhi, Hyderabad, Kolkata, Bangalore, Mumbai and Ahmedabad and interacted with the captains of the industries.

### **Why should one invest in Uttar Pradesh? What steps have been taken by the Government of Uttar Pradesh to promote 'Ease of Doing Business'?**

- 4<sup>th</sup> largest state occupying 7.3% of India's land area
- 3<sup>rd</sup> largest economy contributing 8.5% to the India's GDP
- Highest consumer base with 16.5% of Indian population
- Highest PPP infrastructure projects in India (15%)
- Strongest agriculture and food processing base in India
- Amongst top 5 manufacturing states in India
- 2<sup>nd</sup> highest no. of MSMEs (organised & unorganised) in India
- Most competitive sector specific policies and incentives

To set up industries in Uttar Pradesh and provide employment, the Uttar Pradesh Government is committed to improve investment climate. We have taken a number of initiatives to create a conducive environment for industries, including providing various facilities by the State government to establish business in Uttar Pradesh.

The government is also taking steps in consonance with Government of India's policy of 'Ease of Doing Business'. Under this, processes are being simplified and all

industrial services, clearances, approvals, permissions and licenses will be provided through a single, dedicated portal which is being developed and to be monitored by the Chief Minister's office.

We have finalised the single window concept to curb the human interface. Under Ease of Doing Business. We also have a regular grievance redressal system for the industries through "Udyog Bandhu". On lines of 'Make in India', a decision has been taken to create a 'Make in UP' department as well. A State Investment Promotion Board has been constituted to fast track decision making and clearance for industrial projects in the State. The Board has many prominent industrialists.

### **What is Nivesh Mitra and how it is helpful to entrepreneurs?**

Nivesh Mitra is a unique platform designed specifically to facilitate entrepreneurs for getting faster approvals/clearances online from various government departments. This is highly beneficial for entrepreneurs setting up new units in UP or planning for expansion of their units. Udyog Bandhu is the nodal agency and single point of contact for the investor facilitation and 'Nivesh Mitra' single window system of the State.

### **What are the investor-friendly facilities, incentives and policies the UP Government is offering to entrepreneurs?**

We have identified a lot of land banks and tweaked our policies to ensure that industries come here. Following various level of interaction, we've understood investors' requirements in Uttar Pradesh.

We have already come out with our Industrial Investment and Employment Promotion Policy 2017 as well as sector-wise policies have been promulgated which contain attractive provisions for industries' establishment. Many incentives have been rolled out

under this comprehensive policy. We have come up with 14 top-up policies in various sectors.


The Industrial Investment and Employment Promotion Policy has created an overall favourable environment for expansion of existing as well as opening new businesses in the State. To reduce pressure of population on agriculture and to increase the income of farmers, an investor-friendly Agro and Food Processing has also been implemented by the State government and on similar lines, a new Solar Energy Policy, UP Information Technology and Start-up Policy and UP Electronics Manufacturing Policy has also been implemented. Very soon, a handloom and textile, tourism, film and dairy policies will also be implemented.

### **In which sectors, the Government is focusing much upon and laying emphasis to attract investment?**

We have identified 11 sectors. The main areas we are focusing upon are Agro and Food Processing, Infrastructure, Electronics Manufacturing, Information & Technology and Startup, Dairy, Film, Handloom and Textile, Renewable Energy, MSMEs, Tourism, Civil Aviation etc.

The state government is paying special attention to development of industrial parks. Specific parks like Pharma, food parks, IT parks, leather parks, textile parks, plastic parks etc. are being developed.

### **How will the Uttar Pradesh Investors Summit 2018 help enhance jobs and employment opportunities for the youth?**

Employment will be the main focus, be it direct employment or indirect employment. We want Uttar Pradesh Investors Summit 2018 to be very dynamic, through which Uttar Pradesh will have more prosperity and more employment. 



**Vishal Kumar Dev**

Commissioner-cum-Secretary of Sports and Youth Services Department, Government of Odisha

*“With the rapid growth of Bhubaneswar as a major sports destination, the State government has recently announced setting up of ‘Kalinga International Sports City’ in the capital city of Bhubaneswar.”*

# Bhubaneswar Transforming as **World Class Sports City**

After hosting the Asian Athletics Championships in 90 days, Odisha has emerged as a sports powerhouse in the making. Bhubaneswar, making rapid progress in Smart City infrastructure, is becoming a major sports destination. The State government has also announced setting up of ‘Kalinga International Sports City’ in the capital city of Bhubaneswar, says **Vishal Kumar Dev**, Commissioner-cum-Secretary of Sports and Youth Services Department, Government of Odisha. He shares much more in an interview with **Biswajit Sahoo** of **Elets News Network (ENN)**.



**Odisha has successfully organised the 22nd Asian Athletics Championship 2017 in Bhubaneswar. This is only the 3rd time that such an international sport event organised in India. But Bhubaneswar has taken up a 90-day challenge to organise it. Please share what transpired**

**behind and how Sports Department acted together for this event?**

The successful hosting of the 22nd Asian Athletics Championships has signaled Odisha's emergence as a strong force in the 'Global Sports Arena'. When (Ranchi) Jharkhand which

was to host the event earlier, pulled out in the last minute, Athletics Federation of India (AFI) was in deep trouble and the country's pride was at stake. It was at this crucial juncture that Odisha took up the challenge to roll out the red carpet to host the Championship.

The 90-day challenge which Odisha took up and successfully executed led to the complete facelift of the Stadium converting it into a world-class sporting facility. The completion of two new world class synthetic tracks, state-of-the-art high mast floodlights, 3 lakh sq kms of grass turfing, renovation and refurbishing of the entire stadium as well as decking up the city for the event in a record time, is worth mentioning. Creating sports infrastructure in just 90 days and meeting the tough yardsticks of International Association of Athletics Federations (IAAF) was no mean achievement.

**Odisha has added another feather by organising Men's Hockey World League Final in Bhubaneswar last December. What are the other future events Odisha is going to organise in coming days?**

Odisha very successfully hosted the Men's Hockey World League Final in December 2017. After the Hero Men's Champions Trophy 2014, this was another major event in World Hockey successfully organized in Odisha. Bhubaneswar hosted the Top eight



hockey playing countries of the world in the concluding chapter of the Hockey World League (HWL) final. The 11 day hockey extravaganza which saw Australia as champion and local favourite India as the bronze medal winner catapulted Bhubaneswar as one of the lead sporting hubs of the nation.

The International Hockey Federation (FIH) also confirmed that Hockey Men's World Cup 2018 will be held in Bhubaneswar in December titled as 'Odisha Hockey Men's World Cup Bhubaneswar 2018'.

Bhubaneswar is also set to see top class Football action, as Jamshedpur FC will play Bengaluru FC as part of Indian Super League at Kalinga Stadium this February.

Odisha is also conducting "Tribal Sports Meet-2017" which commenced in December last year. This is a unique and first of its kind initiative in the

country to promote sporting talent among tribal youth. The meet covers the entire state with sports competitions held in eight disciplines with over ₹1.13Cr prize money.

**The Chief Minister had announced that Bhubaneswar will be developed as a sports city with best of the infra facilities. Major stadiums in different cities will be also built. What are the plans?**

With the rapid growth of Bhubaneswar as a major sports destination, the State government has recently announced setting up of 'Kalinga International Sports City' in the capital city of Bhubaneswar which is also being developed as Smart City of future. There are also plans to build four satellite stadiums in Cuttack, Sambalpur, Berhampur and Rourkela with world class infrastructure to create opportunity for international sports events. Besides, Integrated Sports Complexes will be established in other major cities of the State.

**The Sports department wants to develop two sports museum in Bhubaneswar and Rourkela. What are its objectives?**

A sports museum for the 22nd Asian Athletics Championship - 2017 will be





established at Kalinga Stadium, Bhubaneswar with the objective to showcase Odisha's achievement in successful organisation of the Championship and also focus on promotion of sports within the State. The museum will act as an educational hub for all the stakeholders.

A separate sports museum for Hockey will also be set up at Rourkela for showcasing the history, glorious legacy and growth of Hockey in the State in general and Sundergarh in particular.

#### **What is the objective to establish Odisha Sports Development Fund and how it is being used?**

The objective of creating Odisha Sports Development Fund (OSDF) is to supplement and complement the mandated activities of the Sports & Youth Services Department by way of providing additional financial resources in case of inadequate or absence of budgetary provision for the desired activity. The expenses met under OSDF are for activities which are important to be undertaken for the larger interest of sports in the state but are not covered under the ambit of existing schemes/ programmes.

#### **Kalinga Lancers and Hockey are Odisha's priorities. What are your plans for them?**

*“The objective of creating Odisha Sports Development Fund (OSDF) is to supplement and complement the mandated activities of the Sports and Youth Services Department by way of providing additional financial resources in case of inadequate or absence of budgetary provision for the desired activity.”*

Odisha has been the nursery of Indian hockey and State Government is steadily working for strengthening Hockey. Steps are being taken to improve sports infrastructure in hockey-centric areas, particularly in regions of Sundergarh and Rourkela where children are naturally gifted.

The facilities at Kalinga Hockey Stadium are also being upgraded as per International Hockey Federation (FIH) standards as well as in focused areas. The State government also supports the conduct of Biju Patnaik Rural Hockey Championship which happens to be the largest rural hockey championship in the country.

#### **How are you planning to promote other sports other than Hockey?**

The Government has identified six sporting disciplines as priority disciplines. These are Athletics, Archery, Weightlifting, Football, hockey and Badminton.

We plan to set up high performance academics in these disciplines offering top class coaches and infrastructure. The badminton academy has already become functional in association with Sports Authority of India. For the athletics academy, we have signed an MoA with IAAF and Athletics Federation of India (AFI). We plan to start work on the athletics and archery academics during the current financial year itself. This is the first occasion when the International Association of Athletics Federations (IAAF) has partnered with any state government in the country for developing the academy for better training of athletes. [egov](http://egov.gov)



### SS Rajpoot

In-Charge, Smart Cities Mission, Madhya Pradesh, and Director, National Institute of Governance and Urban Management (NIGUM)

*“Development of riverfronts, conservation of heritage building and their restoration, promoting sports tourism by development of world class, state-of-the-art sports stadiums and complexes, development of pilgrimage sites are few of the Smart City initiatives being taken up to promote tourism in the State.”*

# Madhya Pradesh Building Eco-Friendly Smart Cities

Madhya Pradesh is embarking on a new journey as it is trying to develop mini Smart Cities on its own. The State is trying to develop these cities in an eco-friendly manner adding a new chapter to the Smart Cities, says **S S Rajpoot**, In-Charge, Smart Cities Mission, Madhya Pradesh, and Director, National Institute of Governance and Urban Management (NIGUM), Bhopal in conversation with **Divakar Mukherjee** of **Elets News Network (ENN)**.

### What are the initiatives undertaken by your department for Smart Cities in MP?

The Urban Administration and Development Department (UADD), Government of Madhya Pradesh, has a visionary outlook towards the development of Smart Cities in the State. The State believes that cities must be developed as Smart Cities as per the existing characters, potential and uniqueness of each city. Thus, nurturing the existing qualities and strengths of each city, a vision has been defined for each of them. Based on the respective visions, Smart City proposals have been submitted and they have passed the national level challenge. The implementation of these projects is underway. Seven Smart Cities from Madhya Pradesh viz. Indore, Bhopal, Jabalpur, Ujjain, Gwalior, Sagar and Satna are implementing various modules / projects envisaged under Smart City Proposals duly approved by the Government of India.

Learning from the Smart Cities Mission of India, the Government of Madhya Pradesh has initiated to develop 12 mini Smart Cities having budgetary provision of Rs 300 crores spread over financial year 2017-18 and 2018-19.

This is being undertaken under Chief Minister's Infrastructure Development Scheme (CMIS).

Over and above, the Government has established a State Level Project Management Consultants (PMC) for Smart Cities to provide strategic guidance and technical and capacity assistance.

### What common challenges are you facing in implementing Smart City projects?

The common challenges being faced by Smart Cities in Madhya Pradesh include land related issues, functioning and capacity related issues of Special Purpose Vehicle, ICT procurement related issues, etc.

A State Level High Powered Steering Committee (HPSC) addresses and resolves the land related issues. Ongoing hiring of experienced sector experts for implementation assistance would take care of capacity related issues and smooth functioning of SPV in due course of time.

**How do you ensure improvement in basic facilities like transport, municipal waste, electricity, piped water sanitation and**

**sewage for majority of urban population?**

The mission guidelines promote convergence of various infrastructural programmes of the Government of India and Government of Madhya Pradesh for provision of infrastructure like public transport, water supply, sewerage network etc. The benefit of clubbing such programmes is that it adds on various technological and IT components to enhance the service quality and monitoring of the infrastructure created.

We also assure that the projects which have revenue generation potential are explored to be implemented on Public-Private Partnership model to reduce capital investments and market risks.

**What are your plans to make Smart Cities of Madhya Pradesh eco-friendly and citizen-friendly?**

Green Energy, Green transportation and Green spaces are some of the initiatives in achieving eco-friendly Smart Cities. Some of the salient examples includes riverfront development in Indore, Dumna Nature Reserve in Jabalpur, public bicycle Sharing in Bhopal, etc.

Also, differently abled universal design guidelines are being followed in all our ongoing projects ensuring greater convenience and recreation for all sections of the society. In our all projects technology is the key-enabler. Ongoing e-Nagarpalika programme having components of e/m governance is taking 23 services to urban citizens to all 378 Urban Local Bodies. Apps like Indore 311, Bhopal Plus, Mayors Express, Smart Map, Hello Ujjain, etc. will considerably ease the burden on citizens and save time.

**How is the Public Private Partnership (PPP) model being approached in the Smart cities initiatives of MP?**

Smart Cities of Madhya Pradesh have



proposed 29 per cent funds coming in from PPP and other private sources like land monetisation, VCF, etc. Various PPP models are being implemented in the State which runs across all the 378 ULBs including seven Smart Cities. Examples include smart LED based streetlighting (DBFOT model), Hub and Spoke Model of Public Transport System, Pharmaceuticals Benefit Scheme, intelligent poles, etc.


**Madhya Pradesh is a culturally vibrant state, how will Smart City initiatives encourage tourism in the State?**

Tourism influx is the result of rich culture and heritage. The State being gifted with many naturally aesthetic spaces, has a huge potential in tourism. Smart City initiatives tend to further develop the tourist sites by developing and fostering growth in these natural, cultural and heritage sites. Development of riverfronts, conservation of heritage building and their restoration, promoting sports tourism by development of world class, state-of-the-art sports stadiums and complexes, development of pilgrimage sites are few of the Smart City initiatives being taken up to promote tourism in the State.

For instance, Bhawartal Park Development and Wright Town Sports Stadium in Jabalpur; Khan Riverfront

Development, restoration of Rajwada area, Chattris and Safara Street Development in Indore; Sadar Manzil restoration in Bhopal; Mahakaal Area Development in Ujjain, and Maharaj Bada Area development, restoration of Baolis in Gwalior are just few of the examples for enhancing the State's tourism through Smart City initiatives.

**Why has the PPP model not found success in waste management projects? What strategies can make the model viable for the days to come?**

There are various reasons for failure of PPP model in waste management in the country like mixed waste fed in the plants, low tipping fee, and lower purchase value of power by DISCOMs, etc. Madhya Pradesh has successfully overcome all these challenges by providing enabling policy framework and robust PPP structuring and thus, implemented waste management projects through PPP. To cite a few examples, the waste-to-energy plant of Jabalpur, wherein concession agreement has been signed between JMC and Essel Infra Project Ltd. worth Rs 178 Crores. Similarly, Indore and Bhopal have also achieved a high success rate in managing its solid waste under PPP mode, which helped us in securing the second rank in Swacch Bharat Rankings, 2017. 

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# “Smartness Redefined For Efficiency” . . .



**M Thennarasan**  
Commissioner  
Surat Municipal Corporation

*“Surat city is one of the about 100 cities to be developed as smart city. The city has developed and various initiatives have been undertaken with all inclusive approach.”*

## ‘Surat to Realise **Smart City Dream** with all **Inclusive Approach**’

Municipal Corporation of Surat has been implementing various projects to enhance the quality of life of the citizens, creating accessible and quality infrastructure, and mobility by leveraging advanced technology with major focus on development of economy of the State, says **M Thennarasan**, Commissioner of Surat Municipal Corporation in an interview with **Hemangini Rajput** of **Elets News Network (ENN)**.

### **What Smart City Plan have you formulated for Surat?**

As far as Smart City project is concerned, by 25 June 2018 we will try to implement at least 10 Smart City projects. Currently, there are 31 projects in progress and 10 projects near completion.

In upcoming next 4-5 months, we would be completing smart city housing works, Integrated Transport Management System (ITMS), traffic control systems, 24X7 water supply projects, smart road along with other lined up projects.

### **In the wake of Swacchta drive, what initiatives have you undertaken to implement the same?**

Our city is clean. And, it needs continuous efforts and upgradation to keep the city clean which we have been doing from last several years.

In this aspect of cleanliness, we would be building public toilets in various regions of the city. In addition, conversion of waste into compost, energy projects and vermicompost plants are also taken up. Further to this, we have come up with nearly 20 Organic Waste Converter (OWC) plants where-in waste to be segregated and converted into compost. We have also placed smart dustbins with

sensor based mechanisms. Door to door services to pick waste has been deployed in the city along with GPS monitoring system.

All in all, automatic systems have been deployed with real time monitoring through central systems.

### **What is this Comprehensive Mobility Plans 2046 all about? Have you conducted some workshop regarding it?**

We have organised CMP - Comprehensive Mobility Plans 2046. Development is taking place at a very fast rate in the city. Looking at this rate, we need to formulate a comprehensive plan for next 30 years. In this regard, we are working on creating the Comprehensive Mobility Plans. To take it forward, consultation process is going on and shortly we will start implementing the same.

For next 30 years, we have planning to invest Rs 37,000 crore in terms of developing infrastructure, Metro services, etc in the city. We are working in a holistic way on all the components of mobility which have been incorporated in a structured way. Also, we are considering safety and shortest possible road in the light of major time consumption. [elets.gov](http://elets.gov)



## **SMART SOLUTIONS FOR SMART CITIES**

MANUFACTURING A WIDE RANGE OF ELECTRIC VEHICLES DESIGNED TO BE SMART



**FOR LAST MILE  
CONNECTIVITY**



**FOR SCHOOLS  
AND INSTITUTIONS**



**FOR CLOSE-  
CIRCUIT MOBILITY**



**FOR WASTE  
MANAGEMENT**



**FOR PASSENGER  
TAXIS**



**FOR MATERIAL  
MOVEMENT**



**Sunil Chavan**

Additional Municipal Commissioner, Thane Municipal Corporation (TMC) and Chief Executive Officer, Thane Smart City Limited

# Thane's Transformation into a Smart City

## What are the initiatives taken up by TMC to realise the vision of Smart City?

Smart City mission of TMC focuses on the most pressing needs and the greatest opportunities to improve lives of its citizens. The basic aim of the mission is to tap a range of approaches - digital and information technologies, urban planning best practices, PPP model and policy overhaul - to make a difference, where we always put people first.

The corporation has undertaken many initiatives like development of new suburban station, multi-modal transit hub at Thane Railway Station, parking management and pedestrian improvements, 70 acre cluster redevelopment, LED streetlighting on Energy Services Company (ESCO) model, city-wide CCTV and public Wi-Fi, intelligent transport system, waterfront and lakefront development, etc, to fulfil its vision of Smart City, with a total estimated cost of Rs 5,463.24 crore out of which Area Based Development component is Rs 5,293.44 crores and Pan

city initiatives is Rs 169.80 crores.

## Please throw some light on the waterfront and lakefront development initiatives and its objectives?

Thane City is having an area of 128 sq.km. and is situated between Sanjay Gandhi National Park hills on west side and creek on east side. Out of 128 sq.km. area, 62 sq.km is green zone or no developed zone (forest and Coastal Regulation Zone). The length of the creek is around 32 km, spreading from Diva, Mumbra on Ghodbuder road. If this waterfront is developed in a planned way, this will not only enhance the beauty of the area but will also improve environmental quality by way of protecting mangroves.

TMC has started waterfront development which comprises seven stretches namely Saket-Balkum, Kalwa-Shashtrinagar, Parsik Retibander, Kopri, Kolshet, Nagala Bander, Kavesar-Waghbhil having the total approximate length of 10.10 km at a cost of Rs 224 crores.

The objective of Smart Cities Mission of Thane is to promote the city that will provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of smart solutions, says **Sunil Chavan**, Additional Municipal Commissioner, Thane Municipal Corporation (TMC) and Chief Executive Officer, Thane Smart City Limited, in conversation with **Rakesh Roy of Elets News Network (ENN)**.

The waterfront project is considered as a makeover project for neglected and polluted creek area which has always been under the threat of encroachment.

The objective of the project is to improve the overall quality of life of the residents and achieve larger policy objectives such as public health, youth development, livelihood opportunities, social and cultural exchange, and community building. The scope of works of the project include creation of recreational facilities viz mangroves trails, promenades, gardens, public spaces, cycle track and improve the creek's ecosystem which will promote water tourism in the area.

In an objective to improve water quality, pathway, plantation and jogging park, TMC is developing two lakefronts namely Kamal Lakefront and Hariyali Lakefront with a cost of Rs 2 crore each.

### **As urbanisation and industrialisation have kept a rapid pace in Thane region since the last few years, what are the steps taken by TMC to keep pace with the issue of connectivity and to improve public transport system?**

To keep pace with the growing populace in Thane, TMC is planning to construct a New Suburban Station between Mulund and Thane on Central Railway Suburban Corridor on the 14.73 acre of the Mental Hospital land. The project, at a cost of Rs 289 crore, will have an island platform and one home platform, including parking, bus terminus etc, that will connect with the Eastern Express Highway and existing Thane station. The objective of this new suburban station is to reduce the passenger load on existing Thane station. This new station will be helpful to commuters from Wagle estate Owala Majiwada and Ghodbunder Sector. This will reduce the load of existing Thane and Mulund station.

To ease the public transport in the

existing Thane railway station, our department is implementing Multimodal Transit Hub at Thane Station. This proposal is of implementation of Station Area Traffic Improvement Scheme (SATIS) in the railway owned land outside of Thane Rly Station (East ) with dedicated elevated route of 3 km for public transport. The objective of this project is the development of intra-city and inter-city Mass Public Transport System for Thane City with integration of multimodal transport facility at Thane Railway Station with a view to ensure efficient Mass Public Transport.

### **How is TMC leveraging ICT for implementation of the policies?**

Thane Municipal Corporation is taking various ICT-based measures to implement Digital India initiative to maximise asset efficiencies and resource management to ensure high-quality living to citizens. Enterprise Resource Planning (ERP), DIGI Thane, Integrated Command and Control Centre, Smart Parking System, Smart Metering are few of them.

TMC is going to launch 'DIGI Thane' app which will enable a plethora of services like personalised info-services, citizen engagement and social networking, identity-cum-smart card for all payments, services accessible to the residents through app notifications, emails, SMSes or website alerts, etc.

Smart Parking is another feature to reduce the traffic congestion, on-street parking in the city that integrate with the Command and Control Centre. The mobile and software based parking application will help vehicle owners/ drivers to look the parking availability and collection of parking charges.

Thane Municipal Corporation is committed for the improvement and rejuvenation of the existing water supply in Thane city by implementing 100 per cent smart metering for the entire Thane

city for converting immediate supply to 24x7 pressurised water supply to each and every house hold in the coming years.

### **Safety and Security is of paramount importance to any Smart City, can you apprise us of the steps taken by the Corporation in this regard?**

TMC is installing LED streetlighting on ESCO Model to provide better and efficient streetlight facility to the citizens of Thane. It will reduce the energy consumption and greenhouse gas emissions through energy efficient retrofits. A Power Control Panel with Remote Management system will be installed to track the functioning of the LED lights.

We are working on plans to install city-wide CCTV and public Wi-Fi through Public Private Partnership. For the seamless Wi-Fi Connectivity across the Thane city with free Internet for citizens, free Wi-Fi connectivity of 812 kbps will be provided to citizens of Thane all across the city. CCTV Surveillance of 400 cameras have been installed across 10 wards of the city.

### **What are the other initiatives for the Sustainable Development of the city?**

With the assistance of private players, TMC has proposed to install 10 MW Grid Connected Solar PV Rooftop plants powering 25 municipal buildings and locations. The project will produce more electricity than TMC's consumption and relay the additional electricity to the grid through net metering which will benefit the TMC financially and also in achieving in carbon neutrality status.

The corporation is working on a project to install 267 KW cumulative Grid Connected Solar PV System on Rooftops 56 Municipal Schools in Thane. [egov.gov](http://egov.gov)

# IT-Enabled Uttar Pradesh Bringing the Real Change

Uttar Pradesh's constant focus on developing infrastructure, human capital development and introduction & implementation of effective policy measures to create a conducive business environment for the growth of IT & Electronics industry and Start-up ecosystem-an exploration by **Arpit Gupta** of **Elets News Network (ENN)**.

In compliance with the Digital India vision of the Central Government, the Uttar Pradesh Government has recorded quantum leaps in governance and service delivery with the introduction of single window for all the citizen-centric government services under e-District.

Over 60,000 CSCs are delivering G2C/ B2C services to citizens. Ushering in digital transparency in procurement process, the path-breaking initiative of e-tendering has been implemented across all Government departments.

The State with largest number of engineering graduates empowered in the field of IT, Electronics & Communication has approximately 36 universities, 3,104 colleges, 1,500 ITIs, 197 B-Schools and 320 engineering colleges and is home to many premier institutions such as IIT, IIM, IIIT, and BHU.

The current policy initiative reflects the determination of the State government in making Uttar Pradesh an Electronics & IT Manufacturing Hub.

According to Sanjiv Saran, Additional Chief Secretary, Department of Information Technology & Electronics, Government of Uttar Pradesh, with this Electronics Manufacturing Policy, the State government targets to establish a conducive business environment for the Electronics Manufacturing industry and its



**SANJIV SARAN**

allied business partners within the State. "The policy also has a target to provide special thrust to Micro, Small and Medium Enterprise (MSME) businesses," he said, adding: "Thrust will be laid to establish the Electronics Manufacturing Clusters to set up business units within the State."

## Progressive Initiatives of the Department

**CM Helpline:** CM Helpline is an effort to reach out to citizens proactively to address their concerns, issues and grievances in the shortest time possible. Further, the helpline will ensure transparency for the services provided by

the different government departments to the citizens of the state.

**E-tendering:** The process of procurement has been made entirely transparent through implementation of e-tendering across all departments. This reform ushers in fairness, accountability and healthy competition for government and private players.

**IT City:** A state of the art IT City has been built over 100 acre of land at Lucknow. The project entails an envisaged investment worth INR 1,500 crores and aims to provide employment to 75,000 people. It is based on the Walk to Work Model. 60% of land is earmarked for core area activities and 40 % land has been designated for non-core activities.

**IT Parks:** IT Parks are being established at Agra, Meerut, Gorakhpur, Kanpur, Lucknow, Varanasi, Bareilly etc. for encouraging employment opportunities in Tier-II and Tier-III cities. They contribute significantly towards boosting the IT exports of the State. Separate guidelines will be released to promote IT Parks in Uttar Pradesh.

**Incubators:** With the goal of nurturing innovation and entrepreneurship, the State government has collaborated with premier institutes like IIT-Kanpur, IIT-BHU, IIM-Lucknow (Noida) etc. to

establish Incubators. The country's biggest Incubator is envisaged to be established in Uttar Pradesh.

**Citizen Service Delivery:** Provision of e-Services is being made through internet and Common Service Delivery outlets such as Jan Seva Kendra, Lokvani, e-Suvidha etc.

**MMPs:** MMPs (Mission Mode Projects) like e-Districts, CCTNS (Crime and Criminal Tracking Network and Systems) and projects of Department of Panchayati Raj, Commercial Taxes, Food & Civil Supplies etc. have been implemented successfully.

**Bharat Net:** State Government is playing a proactive role in improving the communication and connectivity across the state by leveraging Bharat Net in addition to National Knowledge Network (NKN) framework. Existing UPSWAN connectivity would be extended to Gram Panchayats through Bharat Net.

**SDC2.0:** ISO 27001 certified UPSDC (State Data Center) has been established as a central data repository to which state departments are linked for 24x7 public domain information usage. A centralized green data centre (SDC 2.0) is planned, which would be cloud ready and based on the "Pay as per Use" Model.

**E-office:** E-Office is being implemented across the state departments for improving the operational efficiency, reducing turnaround time, enhancing transparency and accountability of State Departments.

**Center for e-Governance:** Centre for e-Governance (CeG)/State e-Governance Mission Team (SeMT) is the nodal body for implementation of IT/e-Governance initiatives in the state. CeG/SeMT in collaboration with different departments shall take up new initiatives in line with the vision of the Government of Uttar Pradesh.

**India BPO Promotion Scheme:** The government promotes establishment of BPO units under India BPO Promotion Scheme. The state government shall extend additional capital support and incentives under this scheme to BPOs in UP.

**M-governance:** Government shall promote m-Governance across government services through building mobile based applications and citizen services. Various mobile applications such as m-Sehat, m-Swasthya, UPOne, UP-BUS etc. have been developed and implemented by the state departments.

**Wi-Fi:** The state government shall ensure that specified Public Places, Educational Institutes, Tourist Places, Business Hubs etc. be made Wi-Fi enabled in a phased manner across the State.

**Cybersecurity:** With the rising occurrences of cyber-attacks and cybercrimes, it has become imperative to address the challenge of cybersecurity. The state government plans to impart training in this arena and formulate a devoted cybersecurity cell. Also, a dedicated cybersecurity policy shall be framed to strengthen the state's efforts.

**Digital Payments:** Government of India promotes digital payment options, which is an integral part of the Government's strategy to transform India into a cashless economy. Uttar Pradesh plans to undertake tremendous reforms, including IT readiness, payment infrastructure and capacity building to achieve state's digital payment target of INR 312 crore transactions.

According to Shri Akhilesh Kumar Mishra, Special Secretary (IT & Electronics), Managing Director (U.P. Electronics Corporation Ltd) & Managing Director (Shreetron India Ltd.), the Uttar Pradesh Start-up Policy 2017 gives thrust to "START IN UP", to nurture startup culture using INFUSE




AKHILESH MISHRA

model (Incubators – Fund of Funds – Startup Entrepreneurs).

"Various incentives shall be provided by the Government to Incubators, Startups and Investors funding UP based startups. The Government of Uttar Pradesh shall establish an INR 1,000 Crore UP Start-up Fund for providing access to finance to start-ups in Uttar Pradesh," he said.

State Government is promoting establishment of Incubators with a vision of having an Incubator in every district. The State aims to develop country's largest Incubator in Lucknow.

The government envisages creation of world class infrastructure in the form of Center of Excellence (CoE). CoE shall possess maturity and experience in incubation, exemplary standards of R&D and promote best practices for nurturing entrepreneurship. The CoE shall promote focus areas like Big Data, Cloud Computing, Internet of Things (IoT), Machine Learning, Artificial Intelligence, Cyber Security, Clean-tech, Edu-tech, Agri-tech, Health-tech and other areas of social or national importance.

Under Bharat Net, all villages across Uttar Pradesh are set to be connected through optical fibre connectivity by 2018. 



**Dr Gaurav Dahiya**  
Mission Director  
National Health Mission, Gujarat

*“Data base of health check up is prepared with the help of National Informatics Centre. NIC develop software of School Health Programme. Data entry of health checks up through e-gram network and outsourcing in urban area.”*

## School Health **Check-up Programme** in **Gujarat**

Developing the human capital of nations especially the intellectual, social, mental, and physical abilities of children and adolescents is fundamental to the improvement of the quality of life of the citizens.

Developing human capital is also critical for nations to enjoy political stability and economic growth. Nations that have invested in health and education tend to experience corresponding economic development.

Accordingly, in 1909, Sir Sayajirao Gaikwad, King of Baroda, started School Health Programme in Baroda region. It was the first school health programme in the country. In 1946, the Bhole Committee reported that School Health Services were practically non-existent in India. Where they existed, they were in an underdeveloped stage. In 1953, the Secondary Education Committee emphasised on the need for medical examination of students and school feeding programme.

To ensure good health for our school children the Department of Health & Family Welfare conducts School Health Programme every year. This is the single, largest, health programme operating in the state of Gujarat.

The Government of India launched the 'Special School Health Check-up Programme' in 1996 in coordination of Department of Health & Family Welfare and Department of Education for school going children of Primary Schools with the following objectives:

- Detection of health-related problems that are commonly occurring amongst primary school children.

- Screening of children for appropriate referral.
- Building of health awareness in the community through primary school children.
- Follow-up arrangements for detailed check-up and treatment of referral cases at Government's Health Facilities.

It was a six-day programme throughout the country and the Multi-Purpose Health Workers undertook primary screening. Referral services were provided at the Primary Health Centers. The programme, however, was discontinued after some time.

The Department of Health in collaboration with Education Department started innovative School Health Programme since 1997.

The steering committee takes important policy decisions regarding School Health Programme and decides the date as well as the time duration of the programme and before start up meetings of CDHOs, CDMOs, RDDs and programme officers are called and detailed discussions held for effective implementation of the School Health Programme.

Individual Medical Officers prepare micro plans at the PHC level which include date, time and place of examination, number of schools and number of school children to be examined. District health authorities

collect and compile micro plans and send the same to the state authorities for compilation and analysis.

At the State-level, Health Education Bureau compiles and analyses all information and prepares a state-level master plan, which includes the requirement of:

- Manpower
- Drugs
- IEC Materials
- Stationary
- Contingencies

Medical officers with their teams examine all schoolgoing and I.C.D.S. beneficiaries in the primary schools and Anganwadis. Children with minor ailments are treated on the spot in the school. Children requiring examination by specialists are sent to the related referral centers where different medical experts like ophthalmic surgeon, physician, pediatrician, dentist, skin specialist and E.N.T. surgeons examine and treat them. Those children, who require spectacles, are provided the same free of cost.

Children suffering from heart, kidney, ear problems and cancer diseases are examined by super-specialty hospitals. Operative treatments including renal transplant, liver transplant, cardiac surgeries, Bone Marrow transplant are given free of cost. Transportation is also provided by the State Government. This is single largest State Health Programme.

The State government had included secondary school students under the programme in 2007-08.

In 2017-18, School Health Programme was launched by Dr Gaurav Dahiya, Mission Director, National Health Mission, Gujarat. One-day workshop was organised under the Chairmanship of Mission Director for the orientation and

*“To ensure good health for our school children the Department of Health & Family Welfare conducts School Health Programme every year. This is the single, largest, health programme operating in the state of Gujarat.”*

motivation of doctors who are visiting school for screening children and also identified the problems faced at grassroots level and resolved it. Because of that School Health Programme achieved a milestone by screening 1,54,09,243 (One Crore fifty four lakh nine thousand two hundred forty three) from that 17,31,625 (Seventeen Lakh thirty one thousand six hundred twenty five) students were treated on the spot. From this, many students had been given super specialty treatment like Kidney transplant, Cochlear implant, Bone marrow transplant, club foot surgery and cleft lip/palate surgery as well.

#### **SHP Week:**

**Day 1:** activities related to sanitization (personal and environmental) and medicinal tree plantation in collaboration with Education department and Water supply department

**Day 2:** Primary health check up by

health care professionals like FHWs and MPHWS


**Day 3:** Activities related to nutrition and healthy diet, healthy child and healthy pregnant women competition in schools and Anganwadi centers, jointly celebrated by Health department and WCD, Dada dadi meeting.

**Day 4:** Medical examination, on the spot treatment, proper referral by Medical officers, Parents' meeting.

**Day 5:** Cultural programme, prize distribution and felicitation ceremony.

School Health programme was initiated in 1997 in Gujarat state and was running through state government health department.

Children up to 18 years of age have been included in beneficiary group. In 2014, it has been merged with new initiative of central government health department i.e. Rashtriya Bal Swasthya Karyakram and named as “School Health- Rashtriya Bal Swasthya Karyakram” in which newborn to 6 years anganwadi children have been included and health screening at delivery points for birth defects has been given priority.

Data base of health check up is prepared with the help of National Informatics Centre. NIC develop software of School Health Programme. Data entry of health checks up through e-gram network and out sourcing in urban area. All information about School Health Programme is now online and access from <http://shp.guj.nic.in>, Evaluation of School Health Programme was carried out by an independent agency, preventive and social medicine departments of all medical colleges of Gujarat every year, which gives input to improve the programme. 

*(Views expressed in this article are of Dr Gaurav Dahiya, Mission Director, National Health Mission, Gujarat )*



**Gaurava Mishra**  
Chief Operating Officer, Raipur  
Smart City Limited

# Raipur: A Smart City in the Making



“Citizen Engagement is at the base for all of our projects, every individual has an important role to play in the development of the city,” says RSCL Managing Director Rajat Bansal.

RSCL has also initiated a lot of citizen engagement campaigns including:

a) **Think Raipur**, an initiative aimed to encourage and invite ideas from people across the country to create India's first people-powered smart city,

b) **City Hygiene Awards**, an event to honour citizens who helped in making the city clean, and

c) **Toilet My Right**, where the top hotels/ restaurants, marriage halls and dharmashalas in the city were roped in to allow non-customers and outsiders use restrooms when needed. Some of the citizen focused projects (completed, ongoing, upcoming) which RSCL, in coordination with Raipur

Keeping in line with Prime Minister Narendra Modi's flagship Smart Cities project, the Raipur Smart City Limited (RSCL) has been working towards making the city Smart in the impending times. RSCL has very wisely addressed the most vital aspect while making a Smart City – its citizens. Engaging the citizens who live and work in Raipur was considered an integral part while planning and implementing the various ongoing and upcoming projects. The concept of Mor Raipur (My Raipur) was initiated to give citizens a sense of belongingness towards the city.

Municipal Corporation (RMC) has undertaken in the last one year:

**Smart Road:** With a motive to develop and strengthen the carriage way with uniform lane widths, development of pedestrian friendly pathways and cycle lanes wherever feasible, encouragement to non-motorised pathways, construction of utilities ducts/conduits for water, power and OFC, on-street parking, beautification and landscaping i/c greenery and carbon sinking,

provision of smart street furniture, smart street poles with LED lights etc. The concept of Smart Road is changing the face of Raipur Smart City. Intelligent Traffic Management System (ITMS), City Surveillance System, and Control Centre: It is one of the major steps towards making the city develop into Smart City under a fast track mode of the first phase of the Smart Cities Mission. The initiative encompasses real time monitoring of the various facets of management of Raipur Smart City i.e.



citizen safety, security, traffic and city utilities, integrated command and control centre, provide and manage touch points from all concerned stakeholders during the lifecycle of various incidents resulting in continuous improvement analysis of city operations.

**Underground Bin Solution:** Underground bins would be installed in such a way that no person has to walk for more than 100 metres to dispose off the waste. The sensors fitted in the underground dustbins will indicate the remaining capacity of the bin and indicate when it is full and needs to be emptied.

**Smart Payment System:** It includes the implementation of Open Loop based Smart Card project, City Mobile App, Mobile Wallet and portal with an aim to offer citizens a common platform of payment facility which would enable them to pay for any services within the city. The system is envisaged to bring about an enormous ease to citizens by

**Anand Samaj Library Renovation:** The 108 years old heritage building of the Anand Samaj library was renovated and given a modern touch through various facilities. The seating capacity was increased and more books were added in the reading section while preserving the old books in new almirahs. To accumulate more readers, additional rooms were made along with a new parking space in the premises. Installation of Wi-Fi, initiation of e-library, CCTV cameras and air-conditioners in the library along with toilets and drinking water facilities were added in addition to the existing facilities.

**Ghadi Chowk and Azad Chowk Beautification:** Nagar Ghadi will be decked up with plantation and landscaping over an acre with sprinklers, thematic lighting, clock tower work, water body and fountain work, Mor Raipur curtain wall, structural design of folk culture

**Public Bike Sharing:** The prime reason behind this initiative is providing a low-cost, environment-friendly mobility option to city residents through bicycle sharing for short-distance trips in different areas of the city. This will result in reducing traffic congestion, noise and air pollution. Cycles are available in a closely spaced network of automated stations. Users can check out cycles at one station and return them to any other station in the network.

**Bioremediation Telibandha Lake:** Located on the GE Road, Telibandha Lake is one of the most attractive spot of Raipur. The project is purely focused upon the reinstating the natural ecosystem and making the water quality adequate to support life, with a clear and straightforward objective to remove all harmful aquatic weeds, increase the depth of the water body, significant reduction of nutrient elements which are harmful for aqua life to balance the ecology, and plantation of trees to reverse coastal erosion, natural air purification and Co2 absorption and restoring the soil ecology of the banks of the lake.

**Renovation of Jawahar Market:** Located in the heart of the city, the construction work of a multi-utility building is in full swing at Jawahar Market area.




way of paying electronically using a smart card for all perceivable services including city transport, municipal services, entertainment and amusement activities, parking, bill payments, utility payments etc.

**Smart Parking:** The plan is broadly based on the use of advanced technologies to help motorists locate, reserve, and pay for parking. The project includes Smart Parking technology solutions, to provide information on the availability of parking slots in real time, monitoring of entry and exit, card based and other payment options, mobile app based parking guidance system.

whereas Azad Chowk will be decorated with plantation, pillar decoration and flood lighting.

**Healthy Heart Track:** Built in the premises of Sapre School, the Healthy Heart Track is used by the citizens of all age groups for a convenient running experience every day. The track is least detrimental to knees unlike the harsh and unforgiving surface of concrete.

**Water ATMs:** Water ATMs were installed at 10 different locations in Raipur to curb both water crisis and to provide pure drinking water to the public at an affordable price.

In brief, this is just the inception towards a brighter tomorrow. The Smart City initiatives in Raipur is well planned ensuring it lives up to the citizens' expectations. This requires concerted efforts between various stakeholders – various government departments, city leadership, government workforce and citizens being the key constituents. The actions of today will decide the shape that the Raipur Smart City takes tomorrow. 

*(The writer is Gaurava Mishra, Chief Operating Officer, Raipur Smart City Limited. Views expressed are personal.)*



**Jan Luykx**  
Ambassador of Belgium

## India's Digital & Urban Transformation through **Belgian Collaboration**

“Belgium has signed several Memoranda of Understanding with India in important fields such as Renewable Energy and ICT. They open avenues of bilateral cooperation and enable Belgian organisations and companies to provide their solutions in these and other areas in India.” tells **Jan Luykx**, Ambassador of Belgium to India, in a special interview with **Souvik Goswami** of **Elets News Network (ENN)**.



### What is the mandate of Embassy of Belgium in New Delhi, India?

The mandate of the Embassy of Belgium in New Delhi is to represent Belgium in India. I represent His Majesty the King of the Belgians to the Republic of India. The Embassy's role is to promote bilateral relations with India in all fields and to further Belgian interests in the country through enhanced economic, social and cultural cooperation with Indian partners.

**India and Belgium have shared over 70 years of friendship wherein a lot of collaborations between the two countries have taken place. What are the recent projects undertaken by the Belgium Government or companies in India?**

Belgium companies and organizations are actively interested in participating in the

flagship programmes of the Government of India, as they can offer real solutions for them, such as smart technologies, green technologies, clean energy, and solar power. One organization for example, VITO, is involved i.a. in projects related to wastewater treatment. DEME is a company involved in the sector of offshore windenergy. Similarly, we have several small players in India who are providing specific technologies such as for example Tiger Power which deploys solar energy installations in isolated locations that are not on the grid.

*“As an Embassy, one of our main goals is to help our companies finding their way in India and participating in various projects.”*

### What is your opinion on various projects implemented by the current Government of India?

The objectives of each of these programmes have been laid out very clearly. Their aim is to bring the development of India onto the next level. 'Digital India', for instance, aims to digitally develop India and create more access to digital solutions for a greater number of people. 'Clean Ganga', aims to clean the Ganga water basin, to protect the environment i.a. by cleaning the wastewater of the cities so the water can be sustainably used. Belgium and India along with all other countries are involved in implementing the Sustainable Development Goals (SDGs). A lot of Indian Government projects fit perfectly into the SDG's.

### What expectations does the Belgium Government have from Indian Government in terms

### of ensuring progress for both countries?

Belgium has signed several Memoranda of Understanding with India in important fields such as Renewable Energy and ICT. They open avenues of bilateral cooperation and enable Belgian organizations and companies to provide their solutions in these and other areas in India.


### How significant is it for Belgium and India to maintain 'people to people' connection?

It is very important. In fact, people to people connections are often more important than government to government, as motivation to do things together mostly starts on the level where people personally know each other. Whenever big events happen in India, we try to facilitate Belgian participation. We want our representatives to attend. Furthermore, one should not forget that thousands of Belgians – both tourists and business people - have already been visiting India for years.

### What is your vision on the Indo-Belgium Friendship?

Our friendship is already very good and is getting better and better. In this interconnected world, cooperation between countries, societies and people will keep on increasing. This applies to people of both Belgium and India. I look forward to ever increasing and intensive interaction and cooperation between the two countries.

### What message do you have for eGov magazine?

The Government of India is doing a lot of work for the development of the country. At the same time, it is an important task to spread the information inside and outside India. Keep up with the good work! 

# 2018 YEAR of **INNOVATIONS** for **DIGITAL INDIA**

The country's proactive approach to embrace innovative technologies for economic transformation and development, as reflected in policies, programmes and practices of the Narendra Modi Government, has laid a solid foundation for Indian flagship programmes' success, writes Priyanka Sharma of Elets News Network (ENN).

As part of its growth story and taking the country on development route, India has created the largest digital identity platform in Aadhaar, the world's largest rural broadband network, the world's largest direct benefit transfer system and the world's largest citizen engagement platform in MyGov.

Today, we have built a very robust platform from which we can leapfrog into the next phase of new technology adoption. The entrepreneurs' fraternity is already working and delivering products and solutions in emerging technologies.

## 2017: The Year That Proved Crucial for Digitisation

According to Ministry of Electronics and Information Technology (MeitY), there were over 50 crore Internet users and more than 40 crore smartphone users last year.

Manufacturing of electronics goods has risen by 27 per cent. The Government's focus on digital transactions paid dividend, as digital transactions registered a 300 per cent growth last year.

According to MeitY, 99 per cent of the country's population has Aadhaar. Also, last year over 197 crore documents were digitally stored via Digi Locker.

## 2018-The Vision

According to an American research company, IT spending in the Indian Government sector is projected to reach \$8.5 billion in 2018, up 8.9 per cent from 2017.

In 2017, spending on devices (20.8 per

enhancing the growth of the economy," says Arjun Chatterjee, CEO, Runtime Solutions while speaking to Elets.

Software spending is projected to grow 15.1 per cent in 2018 to reach \$1.2 billion. IT services spending is on pace to grow 13.8 per cent in 2018 to reach \$2.3 billion.

**Government Sector IT Spending Forecast, India, (in Millions of US Dollars)**

|                     | 2017<br>Spending | 2017<br>Growth (%) | 2018<br>Spending | 2018<br>Growth (%) |
|---------------------|------------------|--------------------|------------------|--------------------|
| Data Center Systems | 504              | 5.4                | 521              | 3.3                |
| Devices             | 1,026            | 20.8               | 1,122            | 9.4                |
| Internal Services   | 1,558            | 6.1                | 1,661            | 6.6                |
| IT Services         | 1,986            | 15.3               | 2,261            | 13.8               |
| Software            | 1,004            | 15.6               | 1,156            | 15.1               |
| Telecom Services    | 1,762            | 7.0                | 1,818            | 3.1                |
| Overall             | 7,840            | 11.4               | 8,537            | 8.9                |

Source: Gartner 2017

cent), software (15.6 per cent) and IT services (15.3 per cent) totalled \$4.57 billion, accounting to 58 per cent of total technology spending in the Government sector.

"Digitisation has a larger contribution to GDP than standalone technologies. There is a World Bank report saying that a 10 per cent increase in broadband penetration in India can lead to a 1.4 per cent increase in GDP, making Internet important for

It also predicts Narendra Modi Government's initiatives like Make in India, Start-up India, Skill India, and the corresponding policy frameworks to support these initiatives, such as the new electronics policy, software product policy, data security and protection policy, will have a positive effect on Government IT spending in the near future. Gartner forecasted that the Digital India programme will be one of the most

significant government project in the coming years.

With high-speed data connectivity finally becoming a reality in India, analysts are anticipating a transformation of sorts for India's digital media and entertainment startup sector. Demonetisation has moved a huge segment of society towards digitisation. There are talks of India being on the verge of launching Aadhaar compliant devices with biometric authentication built into phones and tablets.

By 2018, 200 million individuals and 8 million Small and Medium Enterprises (SMEs) will connect and perform transactions online.

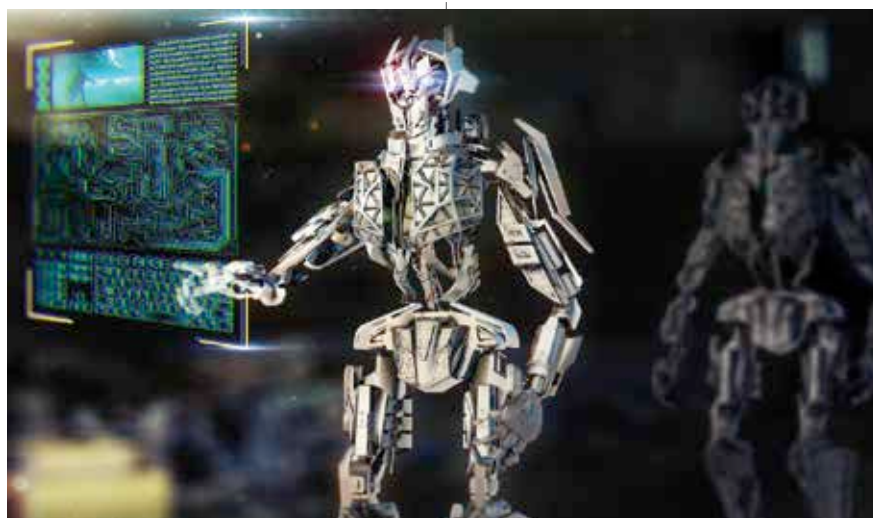
Users will make purchase decisions based on the information gathered online.

Earlier, access to a digital platform was considered a major burden by many. But now being able to go through day-to-day transactions with apps like Paytm and e-banking easily, has created a convenient and unavoidable scenario for people to switch to the digital world.

### Embracing emerging technologies

Emerging technology solutions like Artificial Intelligence (AI), Internet of Things (IoT), the Blockchain, cyber security and related areas are being adopted like never before in large number of government-led initiatives.

"Artificial intelligence (AI) is evolving at a fast pace and is impacting every industry. Going forward, organisations will not only have to invest significantly in AI backed processes and tools, but Original Equipment Manufacturer (OEM) and other vendors will have to design AI-enhanced systems, solutions and applications that address their clients' business challenges. Enterprises will be looking for technology with intelligent capabilities that increase productivity and improve customer experience," says Vivek Naidu, Vice



*“Security should operate at digital speeds by automating responses as well as applying intelligence and self-learning so that networks can make effective and autonomous decisions.”*

President, Information Management, Kodak Alaris India.

Pradhan Mantri Jan Dhan Yojana has been formulated to provide basic banking amenities to everyone, by providing accounts, debit cards and accidental insurance coverage worth Rs 1 lakh.

Every time an Airtel, or a Vodafone or an RJio, acquires a new customer, it needs to

do a Know Your Customer (KYC). If done with traditional approach, this could take a few days but with the Aadhaar-based eKYC, one just has to use a small fingerprint scanner that talks to the Aadhaar database via a mobile connection.

KPMG and Google estimate the online education market can grow from around \$250 million presently to nearly \$2 billion by 2021. For this, higher education will rise from \$33 million to \$184 million and reskilling/certification from \$93 million to \$463 million.

According to Makarand Joshi –Area Vice President and Country Head, India Subcontinent, Citrix, 2018 will be the year in which enterprises will work towards harnessing opportunities created by integration of new technologies. “We see a huge surge in the adoption and usage of digital workspace technologies, which will create ripples in the earlier established organisational structures.”

### Telemedicine

Now anybody can order medicines through Umang App, which provides 161 other services from 33 Government departments. And, as telemedicine takes off, and

millions of Indians are able to take care of their health needs, a healthier population will be a more productive one.

And as merchants start accepting more digital payments and SMEs start selling on platforms like Amazon and Flipkart—and GST is accelerating this formalisation—they will generate realms of data on their cash flows. A growing tribe of fintech firms—and established banks—are also looking at using the same techniques—are fine-tuning flow-based lending models.

India can no longer wait for the fruits of better governance technologies to reach them in a piecemeal manner.

Over the past decade we have learned that when industry, technology partners and governments decide to operate in a lock step manner, they can drive significant transformations in a timebound manner, as demonstrated by the rapid establishment of national platforms like Aadhaar, United Payment Interface (UPI) and Goods and Services Tax Network (GSTN) which can serve a billion citizens easily while meeting a variety of demands from multiple stakeholders.

DigiLocker is, on the face of it, just a smaller Dropbox account owned by the government. But its impact can be quite far-reaching. Since, in this case, the government delivers digitally-signed certificates into one's account—marksheets, land records, etc, over a period of time—there is much less of a chance of the documents being forged, making it that much easier for banks to give loans, employers to hire people and so on.

## SECURITY

There is an opportunity for enterprising cybercriminals enabled by advances in automation and artificial intelligence to use the right tools to severely compromise our digital economy. Security solutions need to be built around integrated security technologies,



actionable threat intelligence, and dynamically configurable security fabrics. Security should operate at digital speeds by automating responses as well as applying intelligence and self-learning so that networks can make effective and autonomous decisions. This will not only expand visibility and centralise control, but also enable strategic segmentation in order to drive security deep into the network infrastructure to quickly identify, isolate, and remediate compromised devices and thwart attacks, even across different network ecosystems, from endpoint devices and local network resources to the cloud. In addition, basic security hygiene needs to become part of fundamental security protocols. It is something often overlooked, but crucial to limit the bad consequences we want to avoid.

## Future is Cloud Tech

Cloud and cloud enabled Software as a Service (SaaS) apps are here to stay. Cloud opens a completely new facet for technology adoption and operational efficiency. Capabilities around analytics, AI, Robotics that have been integrated into cloud based offerings are proving hard to emulate using traditional on-premise deployments due to cost, complexity, and skill considerations.

Businesses, therefore, will have to evaluate the capabilities of the cloud offerings alongside on-premise offerings


and accordingly implement an environment spread across cloud platforms that best meets their capability and productivity goals.

Applied cloud strategy, evolving workload, need for business agility, freedom of usage and usage based costs, will help businesses better understand the relevance of a multi-cloud approach, further accelerating the pace of technology transformation we are experiencing today.

## Location of Things to drive IoT innovation

As a subcategory of IoT, the “location of things,” covers devices that sense and communicate their geographic position. Capturing this data allows users to consider the added context of a device's location when assessing activity and usage patterns.

This technology can be used to track assets, people and even interact with mobile devices like smartwatches or badges to provide more personalised experiences.

As it relates to data analysis, location-based figures can be viewed as an input versus an output of results. If the data is available, analysts can incorporate this information to better understand what is happening, where it is happening, and what they should expect to happen. 



## **DLF WINS THE 2017 GREENBUILD LEADERSHIP AWARD**

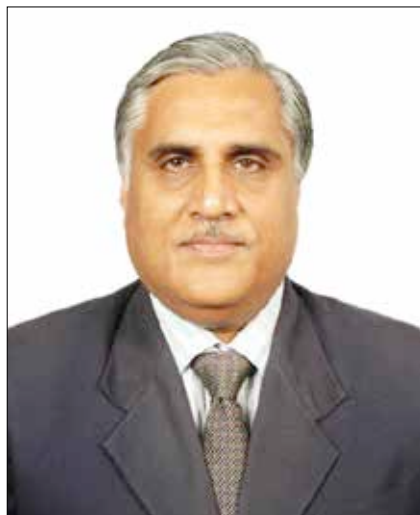


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**Rajiv Banga**  
Managing Director and CEO  
IL&FS Rail Ltd

# IL&FS Rail— Fast Forwarding Life in Gurugram

We believe that sustainable transport systems like this really touch the lives of public on a daily basis in dealing with the mobility challenges like traffic congestion, air pollution, road rage, etc., says **Rajiv Banga**, Managing Director and CEO, IL&FS Rail Ltd in an interview with **Elets News Network (ENN)**.

## Give us an overview of IL&FS Rail Ltd.(IRL)

Rapid Metro has been in Gurgaon for some time now and we have seen a positive response from all. We have done the Metro project in two phases - the first phase is of 5.1 kms which became operational in Nov 2013. And, the second phase which comprised executing the 6.6 km network extension on Golf Course Road from the Sikanderpur interchange of the Delhi Metro went live on 31st March 2017.

By operating a public transport utility service for over 4 years in Gurgaon, we have successfully established ourselves as a smart, efficient, comfortable system ensuring safety, security and a high order of operating efficiencies as well.

We believe that sustainable transport systems like the metro really touch the lives of people on a daily basis while dealing with the mobility challenges like traffic congestion, air pollution, road rage, etc.

Therefore, public transport systems like this are an effective medium of green

mobility. In this regard, we have managed to establish ourselves as a reliable and efficient system.

## What are the roles of different partners and how difficult it has been to coordinate and implement this project ?

As a private entity, we have a concession agreement with the Government of Haryana. So the State Government thru' its nodal office like HUDA are some of the key stakeholders. The private funding has been put together by the IL&FS group entities. Then, the lenders are another set of stakeholders because debt is always taken as a project finance from a consortium of banks.

Moreover, private projects cannot be executed by the company in isolation - it is equally important to stay fully integrated with the eco-system. Many of these responsibilities are needed to be carried out by the State Government, Municipal Corporation, law and order authorities, etc.

Importantly, any project especially in the metro sector has to be approved by the Commissioner of Metro Railway

Safety and before that specifications are approved by RDSO which is an essential part in the execution and implementation of the project.

Further, while working on infrastructure projects like this in an urban area, the key challenge is getting access to all the land as well as securing Right of Way for appropriate parcels of land and dealing with the relocation of underground utilities. In order to complete this process, interaction is necessary with a wide array of people in the catchment, the institutional entities etc.

## What sort of advanced technology has been integrated in the project and how it has been helping people and the system?

As a technical specification, we have opted for standard gauge metro network which works on 750 Volt DC. Interestingly, the third rail runs on the ground parallel to the track itself. The standard gauge, 750 Volt DC system is a proven European configuration

In areas like NCR with a humid and dusty environment, this traction system tends to be more reliable and efficient.



Also, in our new system, we have moved to LED based system, both in the rolling stock and at stations which is more efficient. Both these systems are very energy efficient & in fact regenerative braking further adds to energy conservation.

Moving to the commuter perspective, ours is a unique example of two independent metro systems working on a common travel card viz. Delhi Metro (DMRC) and Rapid Metro. The Delhi Metro card is seamlessly used on the Rapid Metro system wherein a commuter can enter in one system and exit into the other system without any hassle, thus offering a seamless experience. Despite being two independent metro networks, the common metro card has done very, very well in enabling ease of travel for the commuters

Secondly, our depot is an elevated depot which uses the land much more optimally. Our first depot is in about 7 acres and second one is in 10 acres, which is substantially lower than depot area for other metro systems..

From the safety perspective, we have features like CCTV, surveillance on the platform, provision for real time communication between the commuter & train operator, as necessary. The train operator has a two way communication with the Operational Control Centre and in the event of any emergency it can respond through the Emergency Response Team on the ground. In terms of new initiatives, we have adopted the open access system. Additionally, we are planning to put up a solar plant at our depot that would be available soon, in the next 3-4 months.

### Tell us about other initiatives undertaken.

Such projects need to be integrated with the ecosystem and that responsibility largely rests in the ambit of the Municipal Corporation or the State Government.

The first and last mile connectivity is very important to feed into and evacuate from the mass transit system. On a pilot basis, from our terminus in the South Extension, we have e-rickshaws running from day one itself to cater to about 2-3 kms catchment from the station. Also, we have put AC shuttles to cater to catchments of 6-7 kms.

Further, we have partnered with Ola for their Express Ola share route from some of our stations. For an enhanced travel experience, we have put in all these pilots, which have helped us make the metro a preferred solution for a lot of people who live in the vicinity.

For any metro in its initial years, non-fare revenue is very important as the fare fixation is based on norms of social infrastructure and viability of these projects pose a major challenge. Therefore, non-fare becomes a very important source of revenue.

In this regard, Rapid Metro has pioneered with concepts like station naming rights for partners and other forms of advertisements at our stations. We have also innovated with the concept of train wraps as a medium for outdoor advertising.

In India, these initiatives have been piloted and pioneered by us and now various other metros have replicated that. We have also introduced various forms of engagement with commuters like Birthday on Wheels, Joy Express etc.

### What are your future plans for Gurugram and across India?

We have complete capability to handle projects from conceptualisation, project development, integrating technologies-in terms of specifications, project management, coordination, inspection, testing and getting a project commissioned, followed by operation and maintenance. We have an end-to-end capability to oversee & manage interfaces for all these activities.

In the last 4 years, we have developed a very good capability for managing all the operations as well as maintenance and with a proven track record thus far, we are looking forward to implementing more such projects as service providers for Operations & Maintenance. Also, the metro policy announced in August last year gives an impetus to PPP projects.

Having built a very good O&M capability with our benchmark indicators being amongst the best in the country, we wish to extend our services to other metros by participating in O&M service bids for whoever comes up with such bids. There are a few corporations which are coming up with outsourcing their O&M services in full/part and we are looking at extending our footprint in operation and maintenance. Our focus has always been on providing integrated and customer-centric services.

As far as Gurugram is concerned, we are in dialogue with the Government of Haryana for extending the network to the Old Gurgaon side. Various alignments have been discussed which meet the needs of all the stakeholders. [egov.gov](https://www.egov.gov)

# NSDL Taking e-Governance to Citizens' Doorstep

We are working very closely with the Governments and are the only company to issue PAN Cards and Aadhaar Cards on behalf of the Government of India. For Aadhaar Cards, we do handle the entire registration process as Registrar for Unique Identification Authority of India (UIDAI), says **Gagan Rai**, Chief Executive Officer and Managing Director, NSDL eGovernance Infrastructure Limited in conversation with **Harshal Desai** of **Elets News Network (ENN)**.

## How significant are the e-governance projects for citizens of the country?

E-governance is all about providing services by the Government to the citizens in an electronic manner. It brings down the cost and increases the efficiency. It further increases the transparency within the Government system. The data can be used for policy formation in the future. So, there are several advantages of providing the citizens the facilities through e-governance.

## How has been the journey of NSDL e-Governance Infrastructure Limited?

The company started in 1996 as CSD – Central Securities Depository, and we continued with our operations for about 8 – 9 years. After we had established CSD, we thought about other activities which could be undertaken. CSD was basically a Database Management company with transitional efficiency, and we realised that Tax Information Network was one of the projects that could be undertaken in order to make the most of our expertise and ability. As a CSD, the company developed its expertise in managing large and critical databases with transitional efficiency driven by Information and Communication technologies (ICT).

Second, such project was Central Recordkeeping Agency (CRA) for National Pension System (NPS). Today, we are a 10-year-old company in this particular domain. Details of people registered with NPS are stored with us. Further, we are working very closely with the Governments and are the only company to issue PAN Cards and Aadhaar Cards on behalf of the Government of India. For Aadhaar Cards, we do handle the entire registration process as Registrar for Unique Identification Authority of India (UIDAI).



**Gagan Rai**  
Chief Executive Officer and  
Managing Director, NSDL  
eGovernance Infrastructure Limited

As NSDL e-Gov had demonstrated its nationwide reach and expertise in implementing a turnkey project, it encouraged the Central Board of Direct Taxes (CBDT) to appoint NSDL e-Gov to set up Tax Information Network (TIN) in 2003.

After setup of TIN, in 2004, NSDL e-Gov was identified by the Pension Regulator (PFRDA) to undertake the key responsibility of the Central Recordkeeping Agency (CRA) for the newly introduced National Pension System (NPS). The complete subscriber database for NPS is managed by us.

### Which other projects you are working on currently?

We are working on number of other projects. NSDL e-Gov has now been shortlisted as the GSP (GST Suvidha Provider) by GSTN (GST Network) for implementing GST across the country. We are also e-sign service provider. E-sign service is an online electronic signature service that can facilitate an Aadhaar holder to digitally sign a document. NSDL e-Gov is empanelled by Controller of Certifying Authorities (CCA) to provide e-sign Services to Application Service Providers (ASPs).

If somebody wants to file a GST Return, it can simply be done by using the facility of the e-sign. Besides, the person can also go to one of our facilitation centres and can file the return. We have about 10,000 facilitation centres. Further, we also have offline facility to file GST Return.

Besides these projects, we also have National Judicial Reference System (NJRS) where we have collated all the income tax judgements and appeals for the income tax department and created a very powerful search engine. These search results work as

references for Income Tax Officers across the country. The system is also envisaged to assist in operational matters such as tracking status of appeals, setting reminders, etc. and assist in speedy appeal disposal, which will help the Income Tax Department in increasing their tax revenue.

### How do you ensure the security of the data stored within your systems?

We have our own servers. We have a complete team of data security experts. Further, we do have a disaster recovery site. The data replication takes place at both the sites – the main site and the recovery site. The data is always transmitted in encrypted form. It is not possible for third party to read the data.

### What are your views on Cloud-based technologies?

Cloud-based technologies are the future. We believe in it and make the most of Cloud computing in our system. We do have our own cloud where we store partial data of ours.

### Please brief us on your project management capabilities?

We call ourselves MSP – Manage Service Provider. We provide end-to-end solutions to governments. We assist our clients from conceptualisation to implementation – be it hardware, software or applications development, or any other infrastructure requirement. We are also running 24X7 call centres. We have developed expertise in developing greenfield projects. We have also worked on some other projects i.e., record keeping of National Pension System which was already initiated by the Government and was present in physical form – we digitised it later.


### Which are the most exciting initiatives among all you have undertaken so far?

Aadhaar authentication and e-KYC Services, e-sign which is an online electronic signature service that can facilitate an Aadhaar holder to digitally sign a document and GST Suvidha Provider are some of the services which have been very exciting for us.

### Please brief us on your Vidya Lakshmi and Vidhyasaarathi projects?

Vidya Lakshmi is a first of its kind portal for students seeking education Loan. This portal has been developed under the guidance of Department of Financial Services (Ministry of Finance), Department of Higher Education (Ministry of Human Resource Development) and Indian Banks Association (IBA). The portal has been developed and being maintained by NSDL e-Governance Infrastructure Limited. Students can view, apply and track the education loan applications to banks anytime, anywhere by accessing the portal. The portal also provides linkages to National Scholarship Portal. While, Vidhyasaarathi project is to bring together all the stakeholders on a single online platform so that students can avail various educational finance schemes.

### What are challenges which might hamper the growth of digitisation in the country?

We are going at a good speed. There are, however, several challenges. We have huge population. There are so many departments. When you talk about numbers – everything in crores, nothing is in thousands or hundreds. Second challenge is the complex nature of government departments and to streamline and digitise the data – especially the data which is already available in physical forms. 



# INVESTORS SUMMIT 2018

21-22 February  
Lucknow

The Government of Uttar Pradesh is all set to host the Uttar Pradesh Investors Summit 2018 from 21 - 22 February in Lucknow.

The Summit will serve as a global platform, bringing together various Heads of States and Governments, Ministers, Corporate Leaders, Senior Policymakers, Heads of International Institutions and Academic luminaries from around the world to further the cause of economic development in Uttar Pradesh and promote cooperation.

## SPECIAL SOUVENIR LAUNCH



**eGov, India's first and Asia & Middle East's premier magazine on e-Governance and innovations, is published by Elets Technomedia Pvt Ltd., which is set to bring a Special Souvenir to showcase investment opportunities and potential in various sectors of Uttar Pradesh.**

**It will be launched at Uttar Pradesh Investors Summit 2018 on 21 - 22 February in Lucknow**

### Special Souvenir to touch upon issues like:

- What is Uttar Pradesh Investors Summit 2018?
- Why should one invest in Uttar Pradesh?
- What are the focus sectors of Uttar Pradesh?
- What are the incentives available to entrepreneurs?
- How the policies are helpful to entrepreneurs?
- How does the State Government facilitate land acquisition?
- How does one set up an industry in Uttar Pradesh?
- What kind of facilitation is offered to Non-resident Uttar Pradesh Vasi?
- Which is the nodal agency for Single Window Facilitation?

### Special Souvenir to feature:

Policymakers and Industry captains from following sectors:



AGRO AND  
FOOD PROCESSING



DAIRY



TEXTILE



TOURISM



MSME



FILM



ELECTRONICS  
MANUFACTURING



IT/ITeS



RENEWABLE  
ENERGY



CIVIL AVIATION



**Durga Prasad Y**  
Chief Executive Officer  
IL&FS Technologies Limited

**IL&FS** | IT Services  
IL&FS Technologies Limited

*“We have done the complete integration and the management of the Phase II of the Gurugram’s Rapid Metro. This a complex system integration project involving various facets of communication and IT infrastructure. We are also managing the operations and the maintenance.”*

# IL&FS Technologies Making **Indian Cities** **Digital** and **Smart**

Following the Smart Cities Mission, Indian cities are rapidly advancing towards getting smarter and IL&FS Technologies Ltd is helping them reach there by integrating global technologies in Indian environment, says **Durga Prasad Y**, Chief Executive Officer, IL&FS Technologies Limited, in conversation with **Priyanka Sharma** of **Elets News Network (ENN)**.



## **Give us an overview of IL&FS technologies Limited.**

IL&FS Technologies Limited is predominantly into providing IT solutions for efficient citizen service delivery and smart governance. Our expertise lies in developing a unified, data-driven infrastructure that transforms service models and experiences for citizens and government agencies. ITL has implemented renowned projects such as Bhamashah for Government of Rajasthan, CM Dashboard for one of

the State governments, enabling various central universities of India with Wi-Fi and also won the Naya Raipur Smart Infrastructure project. Headquartered in Gurgaon, the company has delivered successful IT solutions in India, South East Asia and SAARC nations.

## **Give us a brief about the Naya Raipur project you have bagged recently.**

Naya Raipur is a Greenfield city and the first integrated Smart City. The project

encompasses the full spectrum of citizen lifecycle management. When a citizen decides to live there, to buy a piece of land, pay fees, get building plans approved, pay utility bills, all these things will be managed by a single interface enabled via a unified command and control centre. It's one-of-its-kind project where utilities, security, traffic management and e-governance are all integrated into a single command centre. Another unique feature of the project is the disabled friendly portal. It's a great feature which the other governments are keenly looking into. The programme is going to be live in the next 2-3 months.

### **What role does IL&FS technologies play in the Bhamashah project of the Government of Rajasthan?**

The vision of the project revolves around women empowerment. ITL has implemented advanced technology solutions such as data analytics that capture the family tree with women as its head, accumulates information about the schemes they are entitled to, the schemes which they are availing, how much they have drawn, etc. The solution integrates with Aadhaar as well as beneficiary bank account to ensure that the right amount reaches the right beneficiary, at the right time.

### **What projects have you undertaken in Gurugram?**

We have done the complete integration and the management of the Phase II of the Gurugram's Rapid Metro. This a complex system integration project involving various facets of communication and IT infrastructure. We are also managing the operations and the maintenance.

### **What do you think about the rising growth of Internet of Things?**

It is going to evolve over a period of time. When Smart Cities go live, they are going to be the epicentre of the decision making and the phenomena is going to emerge. IoT will lead these cities to e-governance 3.0 which is the global spoken framework, which will lead to more transparency, more openness, more inclusion of the citizens in the Government's decision making, through social media and analytics.

*“We will provide wi fi to the central universities which will ensure access to information both indoor and outside the campus. We have already got contract's for five universities, including one of the largest universities in India - BHU.”*

### **What do you think of Prime Minister Narendra Modi's Digital India dream? Do you think we are on the right track?**

We are on the right track. Look at programmes like Direct Benefit Transfer, Bhamashah, Smart Cities, GST, etc. When the fibre optic reaches the villages and their automation takes place, villagers will be able to access the information on their mobiles easily. And, that will be citizen inclusion in true sense.

### **What analytics projects you are involved in?**

There is a huge demand for low income houses. At some segment of income

level, we have CIBIL score, credit and debit cards through which a person's credit worthiness can be accessed.


For low income groups, these things are generally not available, but now we are analysing them socially. We look at their patterns, their living style, social life, etc. We help the banking and the financial institutions for providing loans to these low income groups by analysing the data.

We are also into the retail banking of two wheelers to enhance their credit worthiness. We are also in talks with various State Governments for taxation analytics. We analyse the VAT regime and then see how the data can be used to plug the data leakages in GST regime.

### **You have recently signed campus wi-fi agreement with the National Informatics Centre. Please brief us about that.**

We will provide wi fi to the central universities which will ensure access to information both indoor and outside the campus. We have already got contract's for five universities, including one of the largest universities in India - BHU.

### **What is your vision for this year?**

Vertical that will grow at a faster pace is Smart Infrastructure for Smart Cities. We see a good growth in this sector for the next 2-3 years. Second phenomena, which is going to happen is how land is governed in India. Telangana is going to completely reform their land management system. They will start the survey from ground level and put in place a unified system for revenue as well as registration as a single-stop-solution for the citizens. More and more States will follow this system. ITL is well poised to address both opportunities through its ready to deploy framework and solutions. 

# #SmartCityFaridabad

Host Partner



Programme Chair  
**Parth Gupta**  
Chief Executive Officer  
Faridabad Smart City Limited



Organiser



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As Faridabad has been shortlisted under the Government of India's Smart Cities Mission, the Government of Haryana is taking initiatives to embrace smart solutions to the existing city-wide infrastructure to make the city more efficient and livable.

Their smart city plan includes intelligent systems for transport, water, recycling, and waste management. To bring all key stakeholders on one platform, Elets Technomedia Pvt Ltd is organising Smart City Summit Faridabad on 23<sup>rd</sup> February, 2018 in association with Faridabad Municipal Corporation.

## Key Discussion Points

Smart & Green Buildings

Uninterrupted Power Supply

Smart Water Meters

Effective Drainage System

Traffic Management

IT & e-Governance

## Participation of Stakeholders From

- Ministry of Housing & Urban Affairs, Government of India
- Ministry of Housing & Urban Poverty Alleviation, Government of India
- Ministry of Road, Transport & Highways, Government of India
- Ministry of Electronics & Information Technology, Government of India
- Department of Telecommunications, Government of India
- Municipal Corporations from across India
- Transport Departments from various State Governments
- Housing & Energy Departments from State Governments
- Security Establishments
- International Agencies & Foreign Countries
- PSUs
- Banks
- Industry

& many more...

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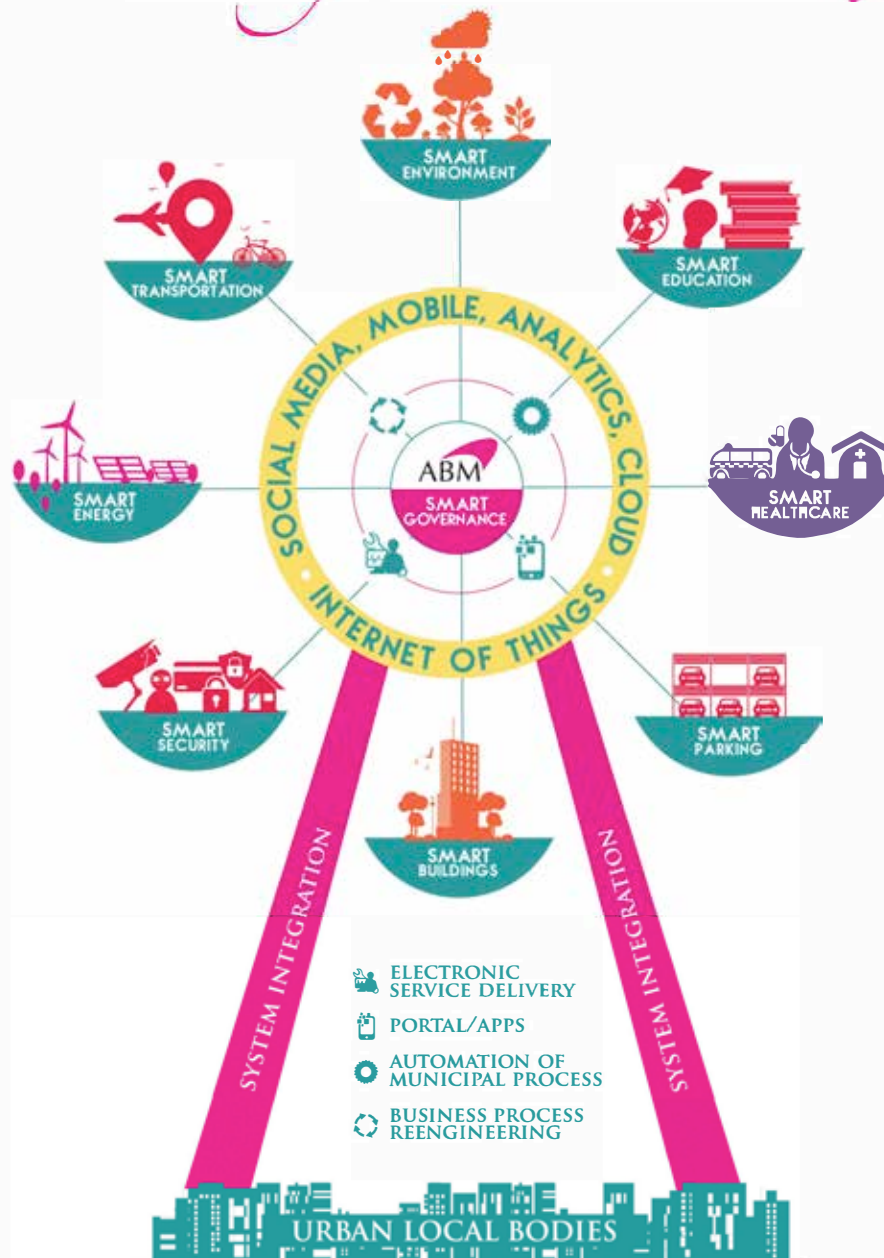


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# ABM - making the cities Smarter



ABM is leader in e-municipality segment in India with several successfully sustained projects. 750+ Urban Local Bodies which include many from the initial 100 Smart Cities are our esteemed customers. ABM's various e-municipality solutions deliver millions of Citizen Services every year. Several states have selected ABM for a state-wide rollout of e-municipality projects as we competed with reputed MNCs and Indian IT firms. ABM's e-municipality projects are quoted as exemplary case studies in various prestigious journals & international research reports and have bagged awards from credible international organisations, central/state governments, Industry associations and reputed media publications. **ABM is the perfect fit for making the cities smarter.**

- Emerging India Finalist: CNBC TV 18
- Founder- MD listed in "50 inspiring Entrepreneurs of India" : Economic Times
- 25 most powerful SAP solution provider: CIO STORY, US
- Top 10 Emerging IT companies in India: NASSCOM

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