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Manoj Ladwa is the Chief Executive of India Inc.

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ALL ROADS TO GADKARI: INDIA'S TRILLION DOLLAR MAN

Foreign investors can't help but be charmed by India's people, especially its aspirational and highly educated youth, are comforted that English is the language of business, and are enticed by the growing purchasing power of its domestic market. But almost universally, when it comes to the inevitable China comparisons, India's ramshackle infrastructure lets it down.

When China decides to build a road, build a bridge, or build a port, it gets done. Or at least that has been the impression. That perception is strengthened by its dash from an 'also ran' to the world's second largest economy in three decades – a feat never achieved before. The Chinese state is like a proverbial Emperor, its wish is a command. In India, on the other hand, people complain about constraints on the acquisition of land, an archaic and horrendously slow legal system, and the so-called "democratic drag" as barriers to growth.

Narendra Modi became Prime Minister two years ago, and promised change that would push India's flagging economy into 8 per cent-plus growth trajectory. India grew 7.6 per cent in 2015-16, the fastest rate clocked by any large economy in the world – not bad at all, especially for an economy that was barely crawling along at under 5 per cent two-three years ago. The macro numbers were also encouraging, with inflation broadly under control, employment rising, and foreign direct investment in the previous 12 months touching \$63 billion, making India the world's largest recipient of foreign investment flows ahead of even India's giant northern neighbour.

But these numbers should not lead to complacency. China's GDP, at \$10.5 trillion, is five times as large as the \$2.2-trillion Indian economy. The gap is huge, but India would argue with some reason that it has begun closing that

gap. Two years on, the wheel appears to be gaining momentum. Modi's quest for delivery from his ministers has been ably supported by India's infrastructure minister Nitin Gadkari, who our guest columnist Ashok Malik describes as "India's Infrastructure Czar". He straddles a number of key ministries such as Roads, Highways, Surface Transports, Ports and Shipping. We have, therefore, chosen to profile the work of Gadkari in this issue of the 'India Investment Journal' – for fast tracking various road and other much needed infrastructure projects. Much of this spurt in infrastructure development has, of course, been boosted by public sector spending (the private sector is cash strapped, interest rates still being high). But credit also has to go Gadkari's leadership. His jolly demeanour belies a man with a methodical mind and a reputation for getting work done. He travels the world, strumming statistic after statistic on how Indian infrastructure is a trillion-dollar opportunity.

We agree that the opportunity is huge. We also agree with the World Bank that though much more can and needs to be done, compared to even two years ago, doing business in India is getting easier.

'India Investment Journal' is an invaluable companion for foreign investors seeking to make sense of this 'India Opportunity'. It seeks to present practical views that people can use in making their minds up about India and how to do business in India. We are delighted that Indian energy minister Piyush Goyal, another of Modi's smart colleagues, stopped over in London and spoke exclusively to us.

And, now that Modi is reaching the business end of his term in office, he will depend critically on Gadkari to deliver the crucial infrastructure that will generate the millions of jobs the people mandated this government to generate.

EDITOR'S NOTE



Aditi Khanna is the Senior Editor of India Inc.

We are by now familiar with some of the headline ambitions of the Narendra Modi led government – driving India towards a \$10 trillion economy mark by 2032; 175 GW of renewable energy capacity covering solar, wind, hydro and biomass by 2022; and cutting carbon emissions from India by at least 35 per cent by 2030.

The crucial factor in ensuring these targets remain within reach is the country's massive infrastructure challenge. And the man charged with this task is the minister of road transport, highways, shipping and ports Nitin Gadkari. Under his watch, the government has unveiled investment plans of around \$150 billion in the highways and shipping sector by 2019. He has also announced that the target for laying out new roads in India will be hiked to 150,000 km per year from 2016, up from 96,000 km a year.

This edition of the 'India Investment Journal' gets into the mind of the man who has arguably taken on one of the toughest jobs in the Indian government. Our central interview challenges him to spell out his vision and also any hurdles in the way of his mission to bring India's infrastructure up to global standards.

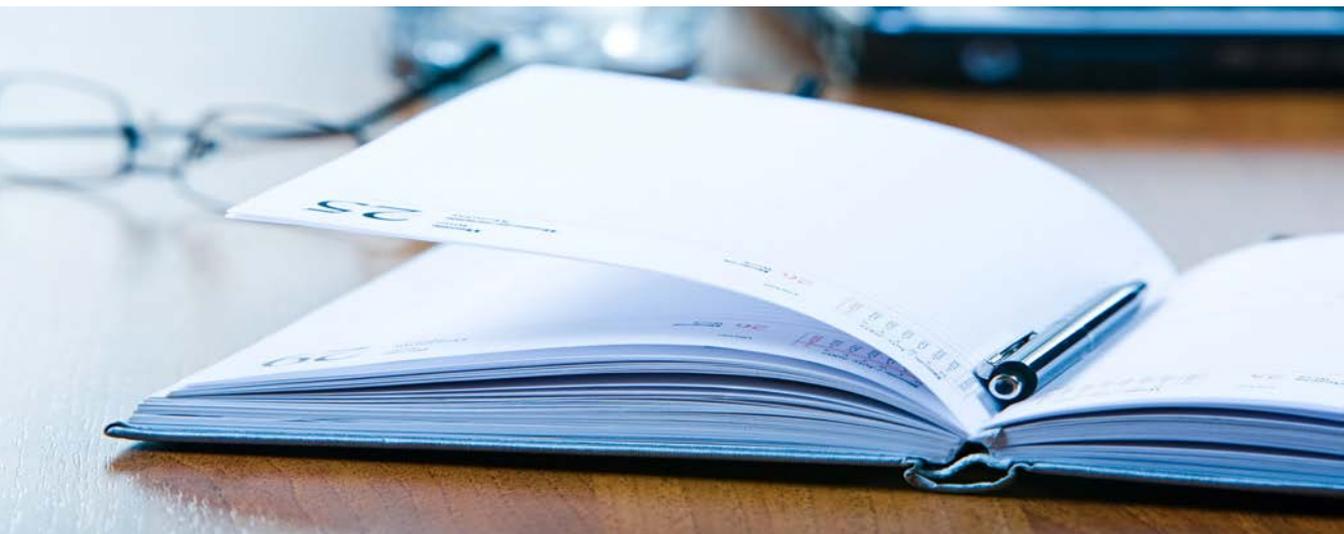
Senior columnist Ashok Malik goes behind the scenes to try and analyse how this "infrastructure czar" is making things happen on the ground.

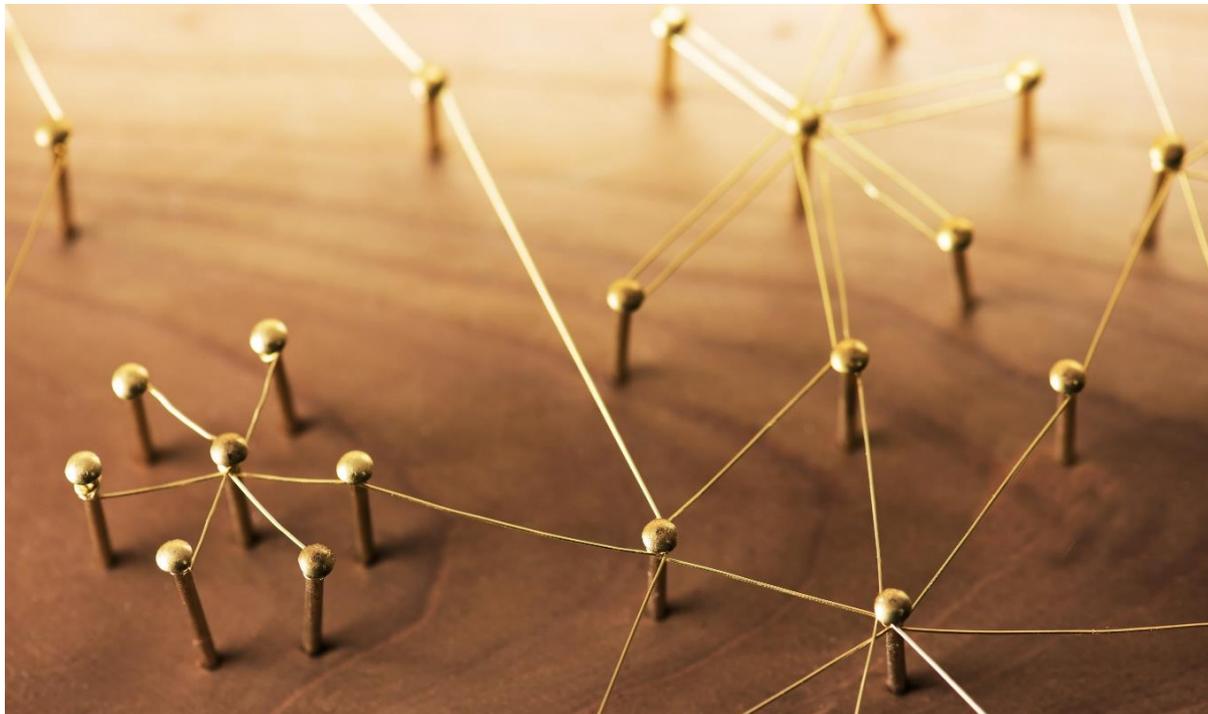
Under our regular sub-heads, we take an in-depth look at the explosion of ecommerce in the country with interviews and analysis of how this sector is set for growth in the coming years.

We also take stock of the Clean India mission with a broader remit of corporate social responsibility (CSR) with giants like Coca-Cola and the Adani Group. In our Solar India focus, we catch up with SunEdison's India chief to get his dos and don'ts for foreign players eyeing the attractive Indian solar market.

The Wealth section in this edition revolves around the Real Estate Bill, recently passed in India. India Inc. columnist Deepak Varghese offers a detailed view of what the changes mean for developers and buyers. A series of interviews present the developer view on this important and long overdue change in property legislation in India.

As always, we hope you find this volume packed with something for everyone interested in the India global story.





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ON THE ROAD FROM MAKE TO MOVE IN INDIA

One of the biggest enablers for the Make in India program is how efficiently freight can 'Move in India', Indian minister for roads, ports and shipping Nitin Gadkari tells 'India Investment Journal' in this exclusive interview

Nitin Gadkari is among one of the Narendra Modi led government's biggest assets and has undoubtedly shaken things up as the minister for road transport, highways and shipping. He takes some valuable time out of his incessant schedule for 'India Investment Journal' to take stock of where things stand in terms of his enormous infrastructure challenge.

How do you see your vision on ports and roads translating into milestones for the Make in India and Smart Cities programme?

One of the biggest enablers for the 'Make in India' program is how efficiently freight can 'Move in India'. In both our ministries, the primary objective has been to reduce the logistics cost. As far as the smart city program is concerned, we are planning to contribute to it by building smart cities in our 12 major ports.

How do you see your ministry's innovative approach and financing models producing results on the ground?

When our government came into power, the road sector was in a bad shape. Most of the PPP (public-

private-partnership) projects were languishing and the private sector willingness to invest in the segment was low.

We had to innovate to bring in private sector investment. The Hybrid Annuity Model is one step in that direction. The model so far has received very good response from the market. We are trying to introduce new models like TOT (toll-operate-transfer) to attract more private sector investment.

What are some steps taken to overcome the challenge of NPAs (non-performing assets)?

We have taken several steps to de-risk the road projects. We are closely working with the banks to infuse liquidity in the sector and complete most of the ongoing projects. We have also taken certain policy decisions that have improved the viability of languishing projects, including extending the concession period for delays not attributable to the concessionaire.

Please elaborate on the progress of the government's approach to attract international funds.

The government is keen on improving the equity base of the private sector in the infrastructure space. Infrastructure offers the best investment opportunity for patient capital. The government has been creating new instruments to offer various opportunities for investors. Infrastructure is one of the sectors where FDI is allowed 100 per cent.

How do you see the role of SPVs in tying in local regional development needs to wider central projects such as Clean Ganga?

PPP has been a very successful model in bringing in private sector efficiency in government run infrastructure programs. The cost, time and quality efficiency brought by PPP has helped the government in effectively using tax-payer money for developing infrastructure. SPV (special purpose vehicle) is an instrument for the PPP model and the government plans to use it wherever it is the right model to adopt for implementation.

What are some of your highlight plans on infrastructure in the coming months? Are there still some bottlenecks to their fruition?

We are driving the ambitious Sagarmala program through our shipping ministry. The program will help us use our waterways effectively to lower the logistics cost for both domestic and EXIM trade. The advantage of Sagarmala is to bridge the infrastructure deficit with minimal investment.

What are some personal targets you have set yourself in terms of infrastructure building?

We have set ambitious targets in both our ministries. We are trying to build over 10,000km of roads this financial year. We are planning to build five new ports in a span of five years. There are several challenges in achieving the same and I am confident that we as a team would be able to overcome them and achieve the targets we have set for ourselves.

What are the top three things that you feel would make your task at hand easier?

Quick decision making, quality of project preparation and acceptance of new technology and innovation are the top three levers to build infrastructure on a large scale. I am hopeful the initiatives we are taking in this direction will bear fruit and increase the pace of infrastructure development.

What are some of your most fulfilling achievements as head of this department so far?

The attention neglected inland waterways and coastal shipping is getting now has been very satisfying. These are the most cost-effective and eco-friendly modes of transport. Their promotion is very essential as India grows into a large economy.



Quick decision making, quality of project preparation and acceptance of new technology and innovation are the top three levers to build infrastructure on a large scale.



GETTING UP-TO-SPEED WITH THE INFRASTRUCTURE CZAR OF INDIA

by Ashok Malik



Ashok Malik is a Senior Columnist

One of the success stories of the Narendra Modi government in India has been in its promotion of physical connectivity. Two ministers have been central to this endeavour: Railway Minister Suresh Prabhu and Nitin Gadkari. Gadkari is simultaneously minister for road transport and highways, and for shipping and ports.

In the normal course these would be separate ministries, under different ministers. In combining them, Prime Minister Modi showed boldness and sought to leverage the related advantages and links of surface and maritime transport. In executing this mission with decided effectiveness, Gadkari has not only given India a new transport and cargo paradigm, he has also emerged as the infrastructure czar of this government.

Gadkari is a former BJP president and was once gently mentioned, in the period

Nitin Gadkari is arguably one of the most target-oriented ministers in the Narendra Modi Cabinet and his achievements speak for themselves. Turning around a country's creaking infrastructure was not an enviable task to take on and he has simply let his actions do all the talking.

before the Modi juggernaut swept aside all opposition, as a possible prime ministerial candidate. That speculation was due to his political goodwill and his relations with the RSS top brass, based as it happens in his native city of Nagpur. Today, almost two years into the BJP government's term, Gadkari's executive role is being praised not for political connections but for performance.

As minister he has:

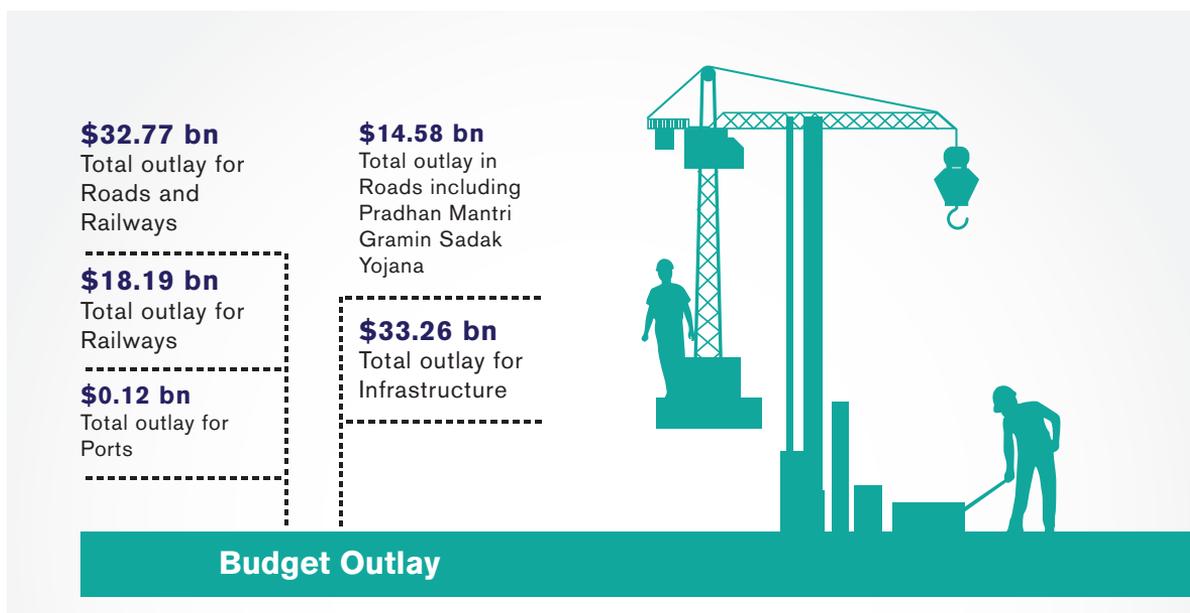
Revitalised the National Highways programme, with a record 6,029 km of highway constructed in 2015-16. The current year (2016-17) promises to be even better

Sought to revamp laws and rules relating to road safety and traffic accidents, drunken and risky driving, issuing drivers' licences and registering cars at India's notoriously corrupt and inefficient network of road transport authorities

Inaugurated the ambitious Sagarmala project, an initiative to modernise, rebuild or completely build some 150 ports or port-linked facilities along India's 7,500 km coastline. This is the most daring such project in Indian history and when completed in 10 years could save Rs 35,000 crore in logistics costs. It has the potential to create 10 million jobs, direct and indirect

Introduced new legislation and plans for an inland waterways programme that will make India's rivers, including the iconic Ganga, ready for large passenger and cargo vessels and restore to the rivers their original role of water highways of commerce. The inspiration is what Europe has achieved with the Danube and, more recently, what China has managed with river-based transport

2016-17 Budget on Infrastructure



This set of achievements has made Gadkari one of the stand-out performers of the Modi government. It is all the more remarkable because his only previous executive experience was as minister in the Maharashtra state government in the 1990s, where admittedly he carved a reputation for himself by pushing ahead with some well-regarded highway and urban roads projects.

In New Delhi since May 2014 he has been

a pioneer among Modi government ministers in learning to negotiate with and get the better of India's astoundingly obdurate bureaucracy. All this has given Gadkari the image of a doer, somebody who is actually translating words into action. The public spending thrust his policies are expected to give in 2016-17 could help kick-start internal demand and be just the trigger the Indian economy needs.

Key announcements

Roads



Approval to **10,000 km** of National Highways

50,000 km of State Highways will be upgraded to National Highways

Source: Union Budget 2016-17

Ports



Develop **Greenfield ports** on Eastern & Western coasts

Sagarmala Project rolled out

Airports



Develop **10 non-functional airstrips**

Revive **160 airports & airstrips** with State Government

Cost of some of the major projects

\$35
bn

Bharat Mala

Aims to construct 25,000 km of roads along India's borders, coastal areas, ports, religious and tourist places as well as over 100 district headquarters

\$2.85
bn

Pradhan Mantri Gram Sadak Yojna (PMGSY)

Aims to provide all-weather road connectivity to unconnected villages of India.

\$90
bn

Delhi-Mumbai Industrial Corridor

Aims to create futuristic industrial cities in India by leveraging the "High Speed - High Capacity" connectivity backbone provided by Western Dedicated Freight Corridor (DFC).

\$15
bn

High speed Mumbai-Ahmedabad rail link

It will be India's first high speed rail corridor connecting the cities of Mumbai, Maharashtra and Ahmedabad, Gujarat in India.

\$180
bn

Sagar Mala

Aims to modernise India's Ports to augment port-led development and coastlines can be developed to contribute in India's growth.

\$75
bn

Inland waterways

Aims to build and maintain necessary infrastructure to support freight transportation via inland waterways which is currently under-utilised in India.

\$30
bn

Pradhan Mantri Awas Yojna (PMAY)

Aims to build more than 20 million houses across the length and breadth of India to provide affordable houses to its citizens.

\$15
bn

Smart Cities Mission

Aims to develop 100 cities all over India as smart cities, equipped with basic infrastructure which will offer a good quality of life through smart solutions.

\$8
bn

AMRUT

Aims to transform 500 cities and towns into efficient urban living spaces, with special focus on a healthy and green environment.

Source: Union Budget 2016-17

INDIA'S INFRASTRUCTURE ON A SLOW, YET STEADY ROAD

by Arnab Mitra

The “directional framework” released by government think tank Niti Aayog last year focused on five major areas:

- Railways
- Roads
- Ports
- Inland waterways
- Housing

Considerable progress has already been made in the roads and railways sectors, the ports sector has been showing signs of gathering steam and the inland waterways sector has just received a legislative boost.

But worryingly for the government, data released recently by the Centre for Monitoring Indian Economy shows that more than \$160 billion of infrastructure projects are stalled at the end of March 2016 for a variety of reasons, up from \$145 billion a year ago.

But despite this, corporate and investor sentiment, a very important marker of an impending recovery, is much better than it was two years ago, when the Narendra Modi government assumed office. “... today, the situation is much better. Since this (BJP-led NDA) government came to power in 2014, the process of clearing and approving projects has become much faster,” S.B. Nayar, chairman & managing director, India Infrastructure Finance Company Ltd (IIFCL), told India Inc.

“The government has made it amply clear that it means business. There has been a massive improvement in the ease of doing business but there is scope for more. Land acquisition remains an issue. And states sometimes need to coordinate and cooperate better with the central government and the implementing agencies for better overall results,” he added.

Roads sector shows the way

Over the last two years, the Modi government's efforts to revive the economy by kick starting the infrastructure sector yielded mixed results.

It has been most successful in the roads and highways sector. Nitin Gadkari, minister of surface transport & shipping, has lived up to his go-getter reputation by reviving the pace of highway building from 2 km per day when he took over as minister two years ago to almost 20 km a day now. He has set a target of building 40 km of roads a day in the current financial year.

He has set a target of awarding 25,000 km of highway contracts and building 16,000 km of highways during 2016-17. Each of these two targets is 2.5 times the rate achieved last year.

When Gadkari took over, 374 projects worth \$45 billion were stuck. “Most of these projects were stuck with the central or the state governments,” Gadkari has said in the past. That is now down to only 19 stalled projects in the roads sector.

The National Highway Authority of India has set its sights on building 50,000 km of roads at an investment of \$250 billion over the next five to six years. These include the \$35-billion Bharat Mala, which will connect Gujarat in the West to Mizoram in the North East with a road along the Himalayan foothills, build roads between the Char Dham (four holy Hindu pilgrimages), connect 100 district headquarters and build roads between India's ports and the hinterland.

The road building programme under Atal Bihari Vajpayee's NDA I had led to the boom during 2005-2011. The government is hoping that the current phase of road building will lead to another economic boom that will take India into a higher growth trajectory.

Railways chugging along

Railway minister Suresh Prabhu has unveiled a \$133.5-billion programme to develop the railways sector over the next five years. This year, he plans to spend \$18 billion on upgrading railway infrastructure. Since taking over, Prabhu has opened up the railways to 100 per cent foreign direct investment under the automatic route. Several high profile

projects, including the \$90-billion Delhi-Mumbai Industrial Corridor, which envisages building 24 industrial regions, five power projects, two logistics hubs, eight smart cities, two airports and two mass rapid transit systems with Japanese support.

Then, there is also the \$15-billion high speed Mumbai-Ahmedabad rail link, various ongoing and new metro rail projects in Delhi, Mumbai, Kolkata, Bengaluru, Chennai, Jaipur, Hyderabad and Kochi, dedicated freight routes connecting important industrial centres with other such centres as well as ports, railway electrification and signalling systems and plans to upgrade and redevelop 400 railway stations across India.

Already, companies such as Alstom, GE, Bombardier, Hitachi and Google have won multi-billion contracts for various ongoing projects. But much bigger opportunities lie ahead for these companies as well their rivals and/or collaborators in India, South Korea, Europe, the US and China.

A garland of ports

The government's ambitious \$180 billion Sagarmala project to transform and upgrade existing ports and build new ones along India's vast

eastern and western coasts as well as build new industrial clusters around these ports on the lines of the Chinese development model is yet another flagship infrastructure project that could change the face of the Indian economy.

At present, long distances between ports and industrial clusters and the poor connectivity between them adds to costs of Indian industry. By building

India needs \$1 trillion in investments over the next five years to upgrade its creaking infrastructure to global standards but a combination of unfavourable market conditions... have conspired to make the task even more difficult than it otherwise would have been.

high speed road and rail networks connecting these centres and also by building large industrial clusters close to ports, the government will facilitate lower cost manufacturing in India.

The port infrastructure across the east and west coast is expected to cost about \$60 billion while the industrial parks, logistics hubs and connectivity infrastructure will cost another \$120 billion.

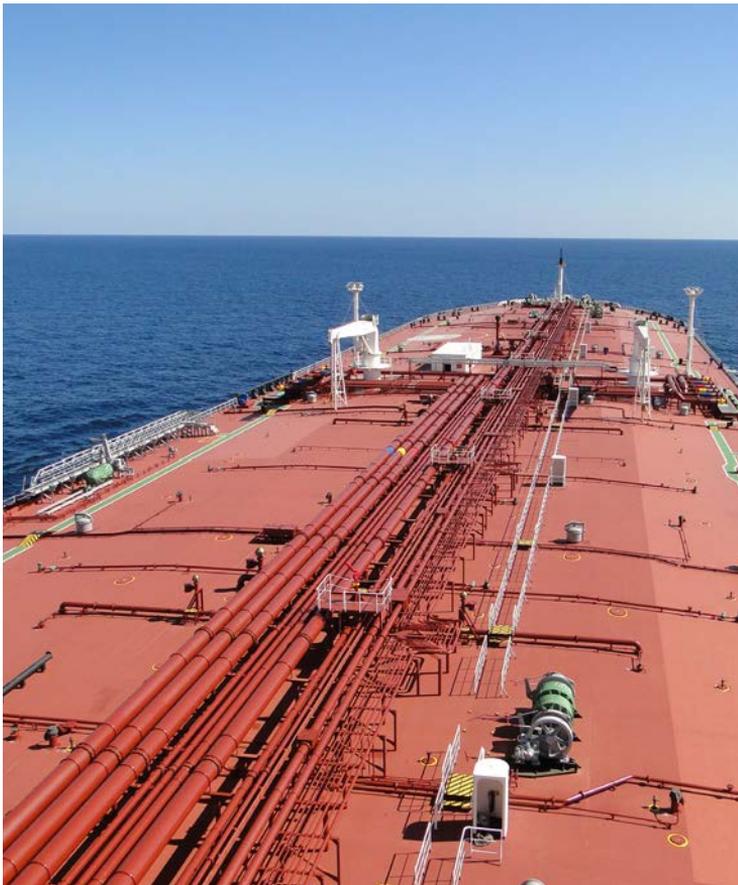
Rivers as the new roads

Parliament has just passed a bill to enable the government to convert India's rivers into a transport backbone criss-crossing the country. This will decongest India's overstretched railway and road network, help save fuel, cut costs and generate massive employment. In addition, inland water transport is considered more environment-friendly than road and rail transport.

Inland water transport is considered a more cost-effective form

of transport than either roads or rail for bulk cargo like coal and cement as well as for cargo that is of extra-large dimensions.

The government plans to spend \$75 billion over the next 5-6 years to develop 101 rivers in 24 states into inland waterways. Besides commercial transportation, this initiative will also provide a fillip



to passenger transport and tourism.

“Make in India will not succeed unless we can reduce logistics costs and one way of doing that is to have a viable inland waterway system as it is the cheapest form of transport,” said Gadkari.

A RITES study says the cost of transporting cargo on rivers is less than 1.5 cents per tonne kilometre against 2.1 cents for rail transport and 3.9 cents for carriage on roads.

India has 14,500 km of navigable rivers but this potential is largely unutilised as only 1 per cent of India's total cargo is transported on rivers.

Housing for all

Prime Minister Narendra Modi has unveiled an ambitious plan to provide housing for every Indian by 2022. The \$30-billion project envisages rehabilitating slum dwellers, building 10 million low cost housing units for the poor and providing subsidies on the interest on loans taken by the home buyers.

This is in addition to two other urban renewal schemes – the \$15-billion Smart Cities initiative and the \$8-billion Atal Mission for Rejuvenation and Urban Transformation (AMRUT).

The construction sector is India's largest employment generator after agriculture. It also generates 12 jobs per \$16,000 of investment, making it the largest generator of jobs per unit of money.

These three schemes, if properly implemented, could transform the urban sector in India, create millions of new jobs and kick start an economic recovery.

The power sector, too, has turned around and the residual problems in the transmission sector are being sorted out under the UDAY scheme.

Financing growth

India's banking sector is reeling under the weight of non-performing assets and so, is not in a position to lend large amounts to infrastructure companies. According to reports, total NPAs and stressed assets could be as high as 10 per cent of all outstanding loans.

Many large infrastructure companies are also sitting on highly leveraged balance sheets and so,

are not in a position to launch large projects.

But Reserve Bank of India Governor Raghuram Rajan's diktat to banks to clean up their books by March 2017 could bring them back to health in another four quarters even if it leads to much blood letting in the short term.

Then, the UDAY scheme to reform power transmission by nursing debt-laden state electricity boards back to health will also help reduce NPAs by up to 1 per cent.

Meanwhile, India continues to receive record foreign direct investment. In 2015, it received \$63 billion in investments from foreign companies, overtaking China to emerge as the largest recipient of FDI in the world.

Then, the RBI has eased norms for Indian companies wanting to raise funds abroad. In this context, London has emerged as the lead centre for Indian companies raising rupee-denominated bonds, which transfer the foreign exchange risk from the borrower to the lender.

Land still a roadblock

Large infrastructure projects need large tracts of land. The inability of the government to steer the land acquisition bill through Parliament – in the face of stiff opposition from the Congress and some other political parties in the Rajya Sabha, where the ruling National Democratic Alliance lacks a majority – is holding up several important projects.

In order to find a way around this problem, the central government has asked the states to amend the laws locally to make it easier to acquire land for development projects. But progress has been slow and this remains a drag on India's growth ambitions.

Despite this, the groundwork has been done for an all-round uptick in the infrastructure sector.

Analysts said it is just a matter of time before the trickle of investments turns into a torrent. “It is true that real investments are still not coming in, but that will happen over time,” says IIFCL's Nayyar.

Arnab Mitra, Consulting Editor, India Inc.



INDIA HAS CAPACITY TO ABSORB HIGH LEVELS OF INVESTMENT

S.B. Nayar, chairman and managing director of India's state-owned infrastructure financier India Infrastructure Finance Company Limited (IIFCL), has a bird's eye view of what is arguably India's most exciting and also, ironically, most difficult sector – infrastructure. In an interview with Consulting Editor Arnab Mitra, he speaks of how investor sentiment has improved tremendously over the last two years and how the sector is now poised for a quantum leap.

Please give us an overview of the Indian infrastructure sector. Do you see any real improvement in investor sentiment in this sector? What is the main difference from, say, a year ago?

The investor sentiment towards this sector has witnessed a positive change. The process of clearing and approving projects has become much faster. The bidding process has also been changed – projects are put out for bids only after getting all clearances; so, the risk of these projects getting stalled mid-way due to regulatory issues has almost been eliminated. The real investments are now expected to pick up.

India needs more than \$1 trillion investments in infrastructure over the next few years. Where will this money come from? Which sectors will benefit? What role will IIFCL play in this transformation?

Fifty per cent of this humungous sum – or \$500 billion – will have to come from the private sector. Seventy per cent of this amount – or \$350 billion – will have to be raised as debt. This would be double what we have done in the past five years. Due to sectoral/group exposure and capital constraints, banks cannot fund this huge requirement. We need to develop a vibrant debt/bond market in India to efficiently channelise our savings towards nation building; as our financial institutions are still relatively small compared to their global peers and we need large institutions for this. We have to scale up and create one or two mother institutions to take the lead in appraising and advancing money for infrastructure creation. I think power and ports sectors have tremendous headroom for growth. People are sometimes surprised when I mention the power sector in this context. But looking at the statistics – India's per

capita power consumption is expected to double in five years. As power consumption rises, our existing installed capacity will not be enough to meet the demand. So, we will have to expand this sector. Our sea ports are doing well and I believe demand will continue to grow as trade – both domestic and international – continues to expand. Airports are also another sector that I expect to do well. At IIFCL, we are scaling up our operations to meet the challenges ahead. We have become lead lenders and can sanction loans based on our own appraisal. We would like to take a leadership position in this field. For the first time in India, bonds that are partially credit-enhanced by IIFCL have been successfully placed. IIFCL has also popularised mezzanine funding in key sectors to mitigate equity shortage. The government has also actively involved IIFCL in many policy initiatives and it has been a part of many committees/working groups set up by the government.

Except for roads and to some extent railways, India's infrastructure sector is limping. What factors are holding it back? What are the main bottlenecks? What is needed to get it back on its feet again? When do you expect the sector to pick up pace again?

Earlier, the infrastructure sector witnessed a number of issues. India has only a handful of large companies that can implement such projects. Further, you can't build infrastructure with high costs of debt. It is also difficult to get long-term finance in India. Then, the banking sector is grappling with a non-performing asset problem. These issues make financial closure difficult.

A billion-dollar project still needs a consortium of 15-20 banks. In this context, the 5:25 scheme (which allows banks to advance long-term loans with repayment periods of 20-25 years, with periodic refinancing, say, every five years) will aid long-term lending and help companies in this space. The roads sector is doing very well. Railways is picking up. The power sector, too, is chugging along. The problem of coal shortages has been resolved and enough coal is available for generating power. The only problem is with distribution. State-owned distribution companies are not buying power because they do not have the money. There has been a case of a state not renewing its power purchase agreement. Decisions like this worry investors and lenders.

The government has announced the UDAY scheme to address the issue of nursing state-owned distribution companies back to health. This should boost the power sector. I expect the renewable energy sector in particular to do well as it has a quick turnaround time. You can set up and start generating power in one year.

The government has announced the UDAY scheme to address the issue of nursing state-owned distribution companies back to health. This should boost the power sector. I expect the renewable energy sector in particular to do well as it has a quick turnaround time. You can set up and start generating power in one year.

Why should large investors – sovereign and private – invest in Indian infrastructure?

Large investors are interested in India because in present times no other country can give better returns. And India has the capacity to absorb such high levels of investment.

We must realise that Indian infrastructure will have to be built by Indians. Also, not every foreign investor would like to take the execution risks that come with large infrastructure projects. We can sell completed projects to these investors – like foreign pension funds and others – who will be satisfied with lower but relatively risk-free returns. The money from such sales can then be used to finance fresh projects. This will allow us to recycle funds efficiently and build the requisite infrastructure.

What is IIFCL's role vis-à-vis the National Investment & Infrastructure Fund (NIIF)? How will NIIF transform India's infrastructure sector?

We are in it for a short period. Our mandate is to bring investment proposals for NIIF's consideration. NIIF is expected to be operational this year. It will leverage and provide a platform to the overseas investors to participate in the Indian infrastructure space. Since the fund will be managed by professional investment managers, the investors may bank upon their evaluation of the projects.

What is the way forward for the infrastructure sector in India?

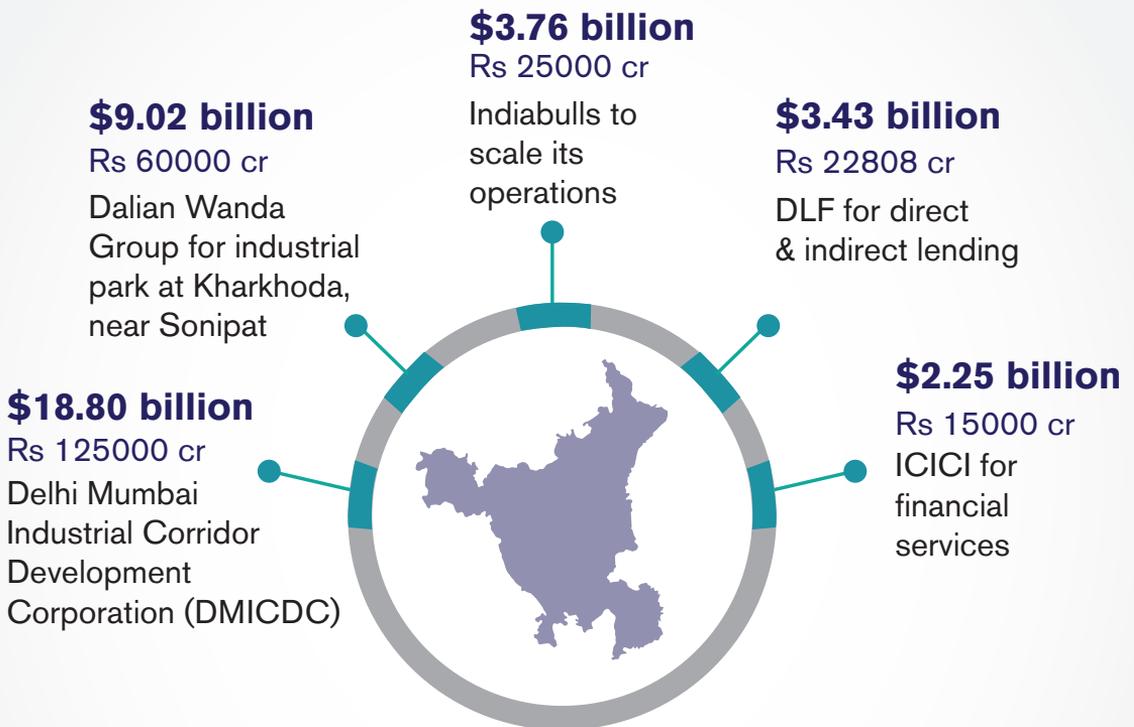
I think the government has made it amply clear by its actions that it means business. The government has clearly stated that infrastructure development is top priority in order to improve the economic growth of the nation. It has resolved several issues plaguing the sector. A high level Project Management Group has been set up which has already managed to bring several stalled projects back on track. Land acquisition, however, remains an issue.

There has been massive improvement in the ease of doing business in the country but there is scope for more. And finally, states, which play a major role in the development of infrastructure, sometimes, need to coordinate and cooperate better with the central government and the implementing agencies for better overall results.

HAPPENING HARYANA

Happening Haryana

Key MoUs signed include



Key Highlights of Happening Haryana

- ➔ 357 MoUs signed with total Investments of \$87.78 billion (Rs.584000 crore)
- ➔ Out of the total MoUs, 30% were in MSME sector & 40% in manufacturing sector
- ➔ 10% of MoUs involved MNCs

Source: www.happeningharyana.org

Haryana made an all-out play for global investment with its first Happening Haryana summit in March 2016. The success of the event led to plans for a second summit in 2018. But, meanwhile, the state hopes to translate the hundreds of MoUs signed into action on the ground. During the summit, Haryana Chief Minister Manohar Lal Khattar and other government ministers pledged proactive support to ensure extensive infrastructural, industrial and socio-economic development in the state.

Finance minister Arun Jaitley pointed out that as Delhi was near saturation point, Haryana stands to benefit from the spill-over if it is ready.

Jaitley said: "Those who don't reform, those states are going to be at a disadvantageous position and those who are in a position to offer a more favourable business and political environment to the investors, certainly those states are going to benefit. Reform or perish couldn't be more true than it is today."

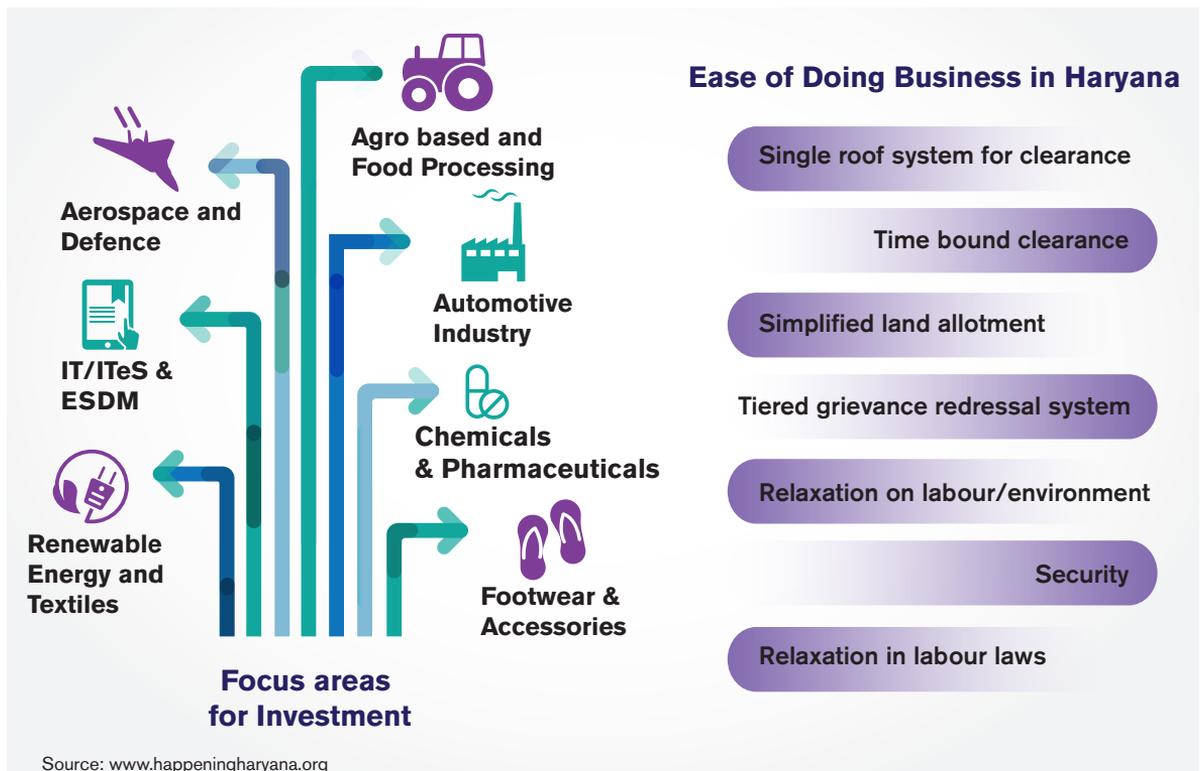
Just weeks before the state hosted its flagship summit in March, Haryana received investment commitments from eight Chinese companies, with the Dalian Wanda group looking at investing \$10 billion in an industrial park at Kharkhoda in Sonipat, which falls under the National Capital Region around 20 km from Delhi. Promoted by Wang Jianlin, one of China's richest men, the group claims to be the

largest real estate developer in China with ownership of the largest number of 6,000 cinema screens across the world. The group will invest \$10 billion to develop a comprehensive industrial park known as "Wanda Industrial New City".

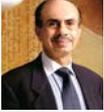
The final agreement will be signed after the terms and conditions are agreed upon by both sides. The first phase of the city will come up over an area of approximately 13 sq km. Wanda will be responsible for investing in the project's initial infrastructure and in addition, it would attract other international and Chinese industrial, tourism and residential companies to operate in the park. Most recently, the state government also announced that individuals would be allowed to install grid-connected rooftop solar power plants, with the power generated from them to be sold to either the government or a third party.

The principal secretary in the state's Renewable Energy Department, Ankur Gupta, said: "Haryana government has allowed all individuals to install grid connected rooftop solar power plants of capacity ranging from 1kWp to 1 MWp under net-metering regulations in the state and has also allowed sale of power either to the government or third party from such plants." Under the Haryana Solar Power Policy 2016, a total capacity of 1,600 MW rooftop solar power plants would be added by the year 2021-22.

Why Invest in Haryana



Quotes of key Industry Leaders



We have seven real estate projects in the state. We are looking forward to setting up more in the near future. We are very optimistic about our real estate investments.

**Mr Adi Godrej, Chairman,
Godrej Group**



Our research centre in Gurgaon has 1,100 scientists. We thank the state government for facilitating this sector through the EPP 2015. We are planning to set up a training centre in Gurgaon

**Mr Dilip Shanghvi, Managing Director,
Sun Pharmaceutical**



Haryana is surging ahead in its bid to attract investments in manufacturing. Haryana has played a critical role in making Maruti Suzuki's market capitalisation bigger than Suzuki, its Japanese parent. For Suzuki, Haryana and India have become important to Japan than Japan itself. Workers in Haryana are intelligent, hardworking, have a unique sense of ownership and partnership in the mission. This, aligned with a progressive and supportive government like this, is an unbeatable combination."

**Mr RC Bhargava, Chairman,
Maruti Suzuki**



We have been an active participant in Haryana's development over the past 70 years, and are convinced that the state is entering an unprecedented era of development. We will invest more than Rs 20,000 crore in the next 5-10 years.

**Mr Rajiv Singh, Vice-chairman,
DLF Ltd**



We have been deepening our roots in Haryana through diversification into renewable energy, healthcare, realty, etc. We're very excited about this next phase of growth.

**Mr Pawan Munjal, Chairman and Managing Director,
Hero Motocorp**





Hitachi's Make in India ATMs

Japanese technology giant, Hitachi has plans to expand its ATM operations in India.

Hitachi-Omron Terminal Solutions has announced setting up of Hitachi Terminal Solutions India Private Limited as an ATM manufacturing company in India. The new company has been set up with a capital of \$15 million (Rs 100 crore) and is set a target to produce 1,500 units of ATMs per month at the end of calendar year 2016.

Tetsuji Shimojo, representative director and president, Hitachi-Omron Terminal Solutions, said: "Hitachi-Omron Terminal Solutions entered the cash recycling ATM market in India at an early stage and has been providing ATMs that are suited to India's environment, considering the quality, condition and usage of the banknotes, and solutions corresponding to needs of operational efficiency of financial institutions and the deposits of users."



Otis forays into Make in India

US-based Otis Elevator Company's Indian arm is expanding its manufacturing in India to escalators and customised elevators.

Sebi Joseph, president of Otis Elevator Company (India) Ltd, said: "India is the second largest market for elevators in India, at 48,000 installations every year. It is also slowly migrating towards high-speed elevators."

Second to China (500,000 installations a year) in volume terms, the Indian market in value terms would also be among the top 10 markets for elevators and escalators in the world.

The company already builds elevators in India in Bengaluru and has doubled its capacity in 2015 by spending \$14.6 million in the expansion.



Kia Motors' India entry

South Korea's second-largest automobile manufacturer and a subsidiary of Korean auto giant Hyundai, Kia Motors, is all set for an India entry.

The report says that Kia has already started preliminary work on identifying land for its factory in India and is looking at possible models and suppliers. It has also completed report on the feasibility study of the Indian market.

The Korean auto-giant has been eyeing the Indian market for many years. The slowdown here over the past few years and its own expansion projects in many other markets, including top-seller China, resulted in a delay in investments.

While the maker is making moves to get into the Indian market soon, it will still take them 2-3 years to start selling cars in India.



AIIB to fund Modi schemes

China-sponsored Asian Infrastructure Investment Bank (AIIB) is in line to invest in Indian projects.

Indian Prime Minister Narendra Modi has asked senior officials to approach the bank after a meeting with AIIB president Jin Liqun early this year. The funds will be used for some of the PM's projects in agriculture, rural housing and railways.

Recently, India was elected to the board of directors of the AIIB. India is a founding member and second-largest shareholder of the AIIB, which has its headquarters in Beijing with a capital of \$100 billion.

According to a note circulated by the Department of Economic Affairs, Modi has asked the officials to seek AIIB loans for the Pradhan Mantri Krishi Sinchayee Yojana (Prime Minister's Agricultural Irrigation Scheme) or PMKSY, rural housing programme and railway projects. The finance ministry has asked the ministries of agriculture, rural development, water resources and railways to prepare proposals for loans from the new bank.

Indian Railways seeks WB funds

Indian Railways has approached the World Bank to examine the possibility of setting up a Railways Infrastructure Development Fund, Railway Minister Suresh Prabhu said.

The World Bank and the Indian Railways will work together to create a Railway Development Fund that will partly finance the \$142 billion investment plans for the core infrastructure sector.

Prabhu said: "Our idea is to get part of this plan funded by multilateral bodies and the World Bank, that has global experience and access to technology, is a good partner."

He also said the government has now allowed 100 per cent foreign direct investment (FDI) in rail sectors such as construction, operation and maintenance of suburb corridors, and coach manufacturing and maintenance facilities. The IFC could help Indian Railways to monetise its huge assets, he added.

World Bank was likely to work with global pension funds, among others, to raise money for the new fund.

India plans new investment grid

The Indian government is considering the creation of a new National Investment Grid to map out the diverse business opportunities across the country.

The proposed grid will have details of upcoming projects as well as those that are underway besides land available with the Centre, states, their agencies and public sector undertakings. It is aimed at boosting private sector investments across the length and breadth of India.

The Department of Industrial Policy & Promotion (DIPP), which is discussing the idea with states as part of the Invest India programme, hopes such a grid will highlight projects and make it easier for investors to access and explore their potential.

Invest India has been functioning as a joint venture of DIPP, state governments and the Federation of Indian Chambers of Commerce & Industry (FICCI), with a mandate to be the first reference point for the global investment community.

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E STANDS FOR ECOMMERCE IN INDIA TODAY

by India Inc. Staff

Just look at the array of goods and services Indians buy online – from proposals for arranged marriages to home delivered restaurant meals to clothes, shoes, jewellery, mobile phones, laptops and even property. And that's just an illustrative list; an exhaustive one would take hours to compile.

Little wonder that industry body Assocham estimates that the ecommerce market in India will grow 67 per cent to \$38 billion this year from an estimated \$23 billion in 2015. Almost all studies and reports on the Indian ecommerce market are equally upbeat. In a report released this February, Morgan Stanley Research says: "We now increase our 2020 estimate (of India's ecommerce market) from \$102 billion to \$119 billion. This takes our estimate of the total Indian internet market size from \$137 billion to \$159 billion."

This means the Indian ecommerce sector will grow at 68 per cent per year over the next four years, making India the fastest growing market in the world in this segment.

New winners, some losers

If the 1990s was marked by the emergence of Indian software majors, with companies such as Infosys, TCS and Wipro emerging from nowhere to become household names and magnets for ambitious young job seekers and the first decade of the 21st century by private telecom majors, the second decade belongs clearly to the early birds of the ecommerce game.

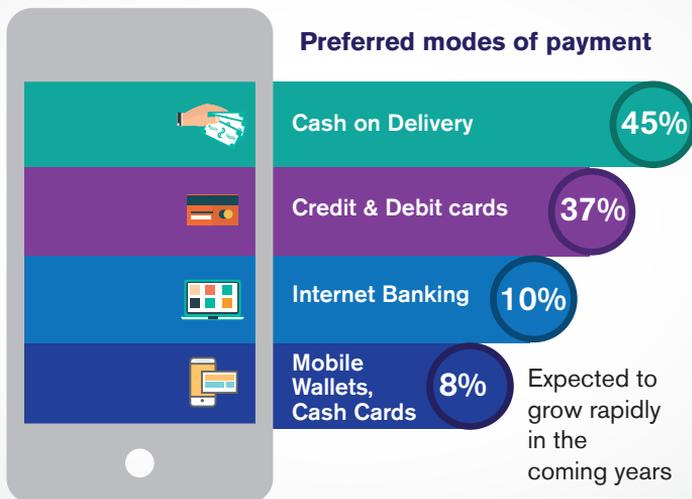
The success of Indian ecommerce entrepreneurs is a direct result of a happy marriage between the country's prowess in information technology and the advances of the domestic telecom sector.

The proliferation of cheap smartphones has resulted in an explosion in demand for these devices, which facilitate easy access to the internet. The Morgan Stanley report cited above noted that India is adding three internet users every second, many of them experiencing the Net for the first time via their mobile phones, skipping the stage of doing so through laptops and desktops. As a result, India already has the world's second largest base of internet users after China.

"We expect internet penetration to increase from 32 per cent in 2015 to 59 per cent in 2020, translating to a near doubling of its internet user base," the report said. That means India will have more than 600 million internet users within four years. Morgan Stanley estimates that of this number, 320 million, or more than half, will be using ecommerce to shop for their needs compared to 50 million now.

This has led to the emergence of several Indian unicorns (start-ups valued at a billion dollars) such as Flipkart, Snapdeal and Paytm, among others. Flush with billions of dollars in investments from deep pocketed (mainly) foreign investors such as Softbank, Alibaba, Tiger Global, Temasek and several others, Indian ecommerce companies have focused on growth by engaging in an all-out discount war – even at the cost of

Understanding the Indian Ecommerce Industry



Source: Morgan Stanley Report & Assocham Report

profits. This has allowed the likes of Flipkart and Snapdeal to ramp up gross merchandise value (GMV; roughly equivalent to gross sales) even as the deep discounts offered to acquire new customers have led to burgeoning losses for the entire sector.

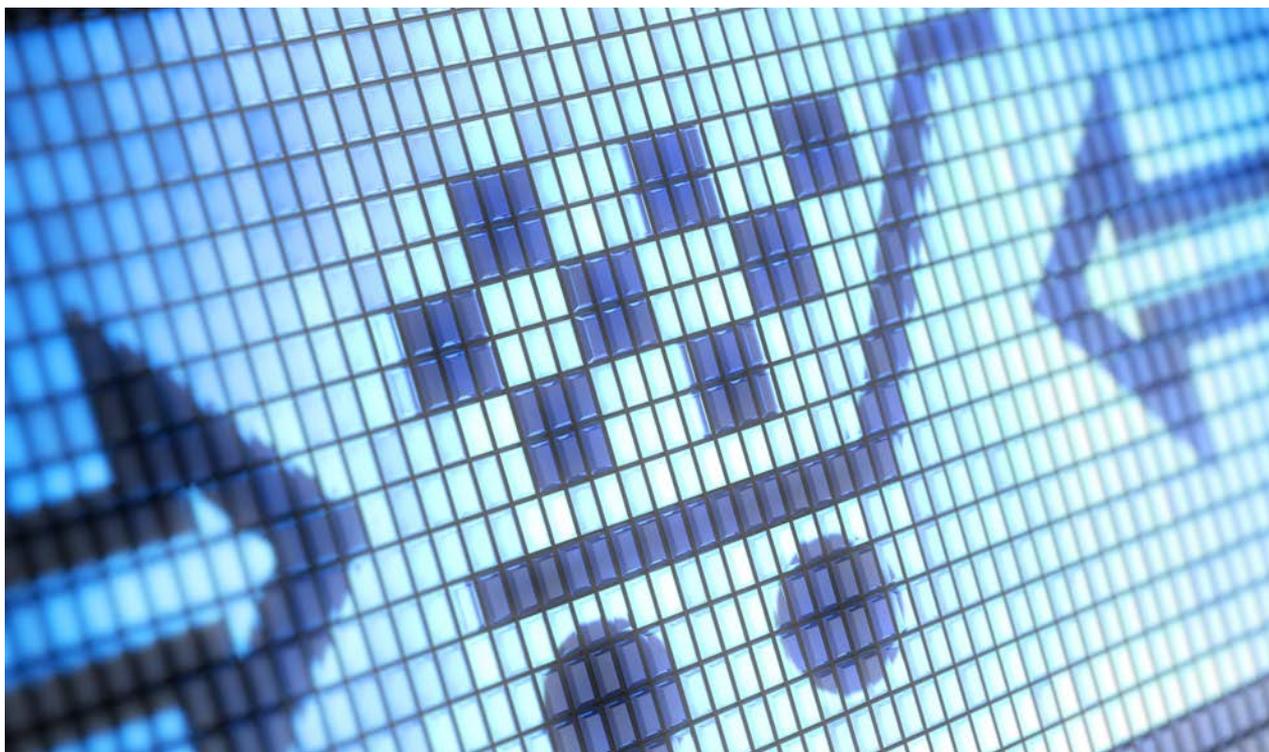
This has led to serious doubts about the viability of the business model. Billionaire investor Rakesh Jhunjhunwala, often called India's Warren Buffet, has openly questioned the sky high valuations because of the inability of the sector to generate profits.

Several large investors, who have pumped in billions and seen the value of their investments soar on paper, have also come to the same conclusion. In February, Morgan Stanley Institutional Trust Fund marked down the value of its investment in Flipkart by 27 per cent as part of a broader mark down of its global portfolio of technology and internet companies. Fidelity and Valic Co have also marked

Game changer

The sector may or may not be heading for a shakeout but it cannot be denied that the rise of the ecommerce sector has completely transformed the way many people shop for a variety of goods. To a lesser extent, it has also changed the way people pay for their purchases. And for many small and niche manufacturers and service providers, it has provided low cost access to a market far wider and bigger than anything they could have imagined even five years ago.

An ASSOCHAM survey last year found that 45 per cent of online shoppers preferred the cash on delivery payment method, while 37 preferred credit and debit cards, 10 per cent paid via internet banking while only 7 per cent used mobile wallets, cash cards and other such modes of payments. Though mobile wallets still only account for a small fraction of the



down their investment in the company by 27 per cent and 13 per cent, respectively.

This and other such markdowns in other Indian unicorns and even smaller companies have led to a drying up of the seemingly endless stream of cash investors seemed ready to pour into start-ups in India till recently.

"There's a marked slowdown in the flow of fresh funds into this sector. Investors are now beginning to ask serious questions about profitability and want a line of sight on returns before writing out cheques," said a partner at a fund that has made investments of more than \$100 million in Indian start-ups.

Indian ecommerce market, it is growing rapidly and over the next few years is expected to dramatically alter how Indians pay for purchases, which hasn't changed much since metal currencies replaced the barter system many millennia ago.

Employment generator

Over the last half a decade, the ecommerce sector has been among the biggest job creators in the country. As companies like Flipkart, Snapdeal, Uber, Ola, Amazon and a host of others created elaborate

Future of Indian Ecommerce Industry

Indian Ecommerce Industry to grow from
\$102 billion to \$119 billion by 2020

Indian Internet market size to grow from
\$137 billion to \$159 billion

Users of ecommerce to shop will grow from
50 million to 320 million by 2020

Source: Morgan Stanley Report & ASSOCHAM Report

Internet penetration to increase from
32% in 2015 to 59% in 2020



Market share of Top Players

45% Flipkart

7% Paytm

26% Snapdeal

10% Others

12% Amazon

(based on GMV)



100% FDI in online retail of goods & services under market place model.

backend operations, the sector became a magnet for job seekers. The boom in this sector also created tremendous opportunities at the front end – and provided a massive boost to logistics and delivery companies and opened up opportunities for qualified as well as semi-skilled workers to find gainful employment.

Challenges

After growing at a breakneck speed for almost a decade, the sector is facing headwinds for the first time. Many companies that are yet to earn profits still depend on investor dollars to balance their books. With investors now showing caution, many companies are facing cash flow problems.

This has led to large retrenchments at several start-ups and considerable heartburn and HR anxiety in the industry.

The sector will have to take a hard look at its business model and tweak it to ensure profitability in the foreseeable future without which it will no longer be able to attract fresh investors.

It will also have to rework its HR practices and reset expectations among employees, many of whom have unrealistic expectations of million-dollar paydays after a few years of toil.

The way forward

A PwC report from 2014 says: “The Indian government’s ambitious Digital India project and the modernisation of India Post will also affect the ecommerce sector. The Digital India project aims

India has emerged as the fastest growing ecommerce market in the world by all estimates. This decade of the 21st century is well on its course to be dubbed the ecommerce decade and the government’s Digital India programme will be the guiding light..

to offer a one-stop shop for government services that will have the mobile phone as the backbone of its delivery mechanism. The programme will give a strong boost to the ecommerce market as bringing the internet and broadband to remote corners of the country will give rise to an increase in trade and efficient warehousing and will also present a potentially huge market for goods to be sold.”

It adds: “For India Post, the government is keen to develop its distribution channel and other ecommerce related services as a major revenue model going ahead, especially when India Post transacted business worth 280 crore INR in the cash-on-delivery segment for firms such as Flipkart, Snapdeal and Amazon. Both these projects will have significant impact on increasing the reach of ecommerce players to generally non-serviceable areas, thereby boosting growth.”

As smartphone penetration increases, the ecommerce sector will continue to grow. Yes, some companies may experience some short-term pain but the boom in the sector as a whole is expected to continue unabated well into the foreseeable future.

Credits: Getty Images

GETTING MORE SOCIAL WITH THE MEDIA

@PiyushGoyal is among India's most active ministers on the social media circuit. The minister for power, coal, new and renewable energy says he wants to have an app for just about everything his ministry can be held accountable for. We explore what drives this media buzz.

He has often been described as one of the most energetic ministers in the Narendra Modi Cabinet for his uncanny ability to meet renewable energy targets before time. Piyush Goyal recently announced that the government's target to electrify every village in India by 2018 will be met a year in advance.

But what stands out is not just the achievement but also the communication of it to the wider public through his very active use of social media.

The Garv Grameen Viduyutikaran mobile app lets anyone and everyone track the progress in the field of rural electrification in India through a real-time dashboard. A 'Milestones' tab displays the percentage achieved against the number of days left, while a progress bar shows the number of villages electrified on a weekly basis.

"I believe transparency is the best way to bring down corruption and it's the best way to share with the people whatever work is going on so that they can monitor your performance and hold you accountable for it," he says, explaining why he believes in having as many apps as possible for the

general public.

"If a person is unhappy with an aspect of a project, he or she can just log on to the app to my office and give me feedback on work happening even on a small lane outside his home somewhere in the country. This ensures real time feedback and response."

And, he should know. As the former head of the BJP's Information Communication Campaign Committee, Goyal spearheaded the entire social media outreach for the Indian General Elections in 2014. The Modi election campaign has since gone down in history for its effective use of social media.

"I believe open government is the way to go," says Goyal, who is widely seen as a future prime ministerial candidate for the ruling BJP.

But meanwhile he is busy setting and beating his own targets: 100 GW solar power, 60 GW wind energy, 10 GW small hydro power, and 5 GW biomass-based power projects to be operational in India by March 2022.

"I sometimes seem to pluck figures out of my head but I am determined to make it happen," he says.



A TECH PROVIDER'S JOURNEY WITH DIGITAL INDIA

Lyn Duncan, chief executive and co-founder of cloudBuy plc, takes a journey down memory lane to trace the explosion in the Indian ecommerce sector and what it has meant for their model aimed at helping small and medium enterprises (SMEs).

Lyn Duncan is the chief executive and co-founder of cloudBuy plc and has been involved in all key projects for the company including all cloudBuy's health and social care ecommerce marketplaces and the CII marketplace in India. Lyn has special responsibility for India on the cloudBuy management team and is a frequent visitor.

How has cloudBuy grown in India since its launch?

We opened our first Indian office in Jodhpur almost four years ago in 2012, originally to act as a back office for design and development but also to test the appetite of Indian SMEs for e-commerce. We found that India wasn't ready for ecommerce at that time and focused our efforts on recruiting talented designers and developers to work remotely with the UK cloudBuy team.

Everything changed with the B2C e-commerce revolution in India and 18 months ago and we relocated a senior member of the cloudBuy executive team, Nilesh Gopali, from London to Mumbai to run an expanded Indian operation focused on selling into the new economy. Nilesh is a senior technologist who has led major initiatives in the UK and his

enthusiasm for relocation after living in the UK for 16 years was testament to the change in the way India is developing and doing business.

Nilesh was recently appointed as Mentor for the Mayor of London's new International Business Programme. This initiative aims to help London businesses break into new international markets and grow their operations overseas, as cloudBuy is doing in India.

During this time both elements of our business in India have grown, we have recruited a larger team in Jodhpur and have been very pleased with the quality of personnel that we have attracted. Whilst Rajasthan is not normally associated with IT, we have found that there are many high quality graduates in the region and are delighted with our team.

Based on the growing opportunity, we also established cloudBuy teams in Mumbai and Delhi focused on selling our solutions to Indian organisations. In total we now have over 25 people working for cloudBuy in India making it our largest operation outside of the UK.

What have been some India-specific growth areas for the firm?

There are three key areas of growth in India for cloudBuy – online marketplaces, procurement solutions and supply side e-commerce. Marketplaces are a major opportunity for us and our early win with CII, the Confederation of Indian Industry, to provide their Gateway to Global Supply Chains is particularly important.

The new government legislation issued on the 29th March 2016 makes clear their stance on marketplaces. It comes after months of uncertainty together with the related issues around stock holding, discounting and tax. The heart of the matter is who the end customer is dealing with when they buy from a marketplace – the marketplace owner or the end seller and up to now it has been very confusing.

The note issued on the 29th March made things clear: marketplaces are technology providers, not online department stores and they need to behave in this manner, not like massive discount houses who can control pricing, supply chain and ultimately entire markets. cloudBuy is exactly what the government is describing as it is a pure play technology provider that connects buyers and sellers, but does not in any way seek to influence the transaction.

This clarification provides a large opportunity for cloudBuy to sell its marketplace technology to many different organisations, and with the ability to get a white labelled marketplace up and running in weeks the cloudBuy team are confident that there is a big opportunity for the solution.

On the procurement side of the business, the team is seeing real interest from India's large businesses. The cloudBuy Procurement Portal can provide an organisation's employees a true internet buying experience, reducing paperwork and time, while providing full transparency across all buying activities.

India is ready to make the move from paper to electronic transactions and as the cloudBuy procurement solution can be accessed from all devices, it is as applicable for teams working in rural environments, as for those in metropolitan areas with access to PCs.

The team has been in discussion with a number of India's best known brands and are very positive about the opportunity for the cloudBuy procurement suite. Ecommerce is a massive growth area for Indian businesses and the cloudBuy e-commerce solutions range from self-service websites for SMEs through to distribution websites for larger companies with multiple outlets. All of the cloudBuy solutions meet the PCI DSS security standard, which is the highest level of security used by the global payments industry. This means that businesses using our solutions for e-commerce don't have to worry about how to make sure that their own servers or hosting provider are secure.

cloudBuy is also working with a number of India's major banks to integrate to their systems to take online payments. Today it is possible for an Indian SME to get up and running taking card payments through their cloudBuy website in a matter of hours.

How is big data developing in the Indian market?

India's large corporates are hungry for data, as the shift from paper to electronic trading continues apace, the ability to analyse data has also increased exponentially. The government can also see the power of accessing data in this manner to look at everything from procurement savings through to smart city initiatives.

cloudBuy has powerful analytics capabilities which can be deployed to identify and monitor everything from procurement savings through to service uptake across groups of citizens.

As India continues on the journey of digitisation, big data will continue to grow and offer analysis of all aspects of business and individual behaviour.

Where do you see opportunities for cloudBuy within the Digital India connectivity campaign?

We are completely supportive of the Digital India campaign and, with the Confederation of Indian Industry (CII), have been attending workshops and seminars across rural India to explore how the technology could immediately benefit businesses in these communities.

India's SMEs want technology. Their biggest challenge is still around broadband connectivity. cloudBuy can overcome some of these challenges as the technology was initially built to support UK SMEs at a time when most only had access to the internet via slow dial up modems. The system is also device responsive, allowing SMEs to use their mobile phones to populate content on their websites and respond to customer orders. We are currently developing a wizard which will allow any SME to build a website quickly and efficiently from their phone – from taking a photograph of their product through to fulfilling the order.

We believe that this level of capability is exactly what is needed to support the Digital India campaign and this has been borne out in meetings with Indian SMEs in areas as diverse as Assam through to Chennai.

What are the specific cloudBuy models/plans that plug into this drive?

Particularly through our relationship with CII, we are focused on supporting the Digital India campaign. CII are very much at the heart of the agenda and the ability to provide cloudBuy's technology to much larger numbers of Indian SMEs is a key driver for both parties.



A VC'S GUIDE TO INDIAN ECOMMERCE SUCCESS

by Shubhankar Bhattacharya

If there is one sector that is impossible to keep away from the news, it must be ecommerce.

For all the euphoria around the ubiquity of ecommerce today, not all of the news is particularly positive.

Take the case of the Rocket Internet backed Jabong, reportedly unable to find buyers at a price of \$100 million, a price that is a tenth of the \$1 billion it solicited in 2015. While another Rocket Internet company, FabFurnish, did eventually find a buyer in the Future Group, it was at a price of around \$3 million (Rs 20 crores), a sum that is widely believed to be a small fraction of the total amount invested in to the firm since its inception in 2011.

When we choose to look at the market leaders in India, it would seem that the picture becomes even scarier. Amazon, Flipkart & Snapdeal are locked in a bitter battle to the end, one where they might well have to also deal with Alibaba, sooner rather than later.

Does that mean then that all is gloom & doom for ecommerce?

Certainly not.

In fact, over the last decade, no other sector has created as many large companies, directly or indirectly, and redefined consumer behaviour the way ecommerce has. In the magnitude of its impact on the rising urban middle class of India, ecommerce is probably second only to the rise of the IT industry at

the turn of the 21st century.

No other sector has taken so many different forms to tap into a large market, and a large market is the starting prerequisite for us at Kae Capital, just as it is with most VCs around the world.

However, with so many heavily-funded competitors and business models around, the odds of success in ecommerce are also not particularly encouraging.

What then, do we feel are the keys to success in ecommerce:

Differentiation

The first generation of successful ecommerce businesses were horizontal platforms across categories such as Amazon & Flipkart (Even though neither of them started as such).

We then saw firms taking up specialised vertical niches in categories that were underpenetrated by the horizontal businesses, such as furniture (Pepperfry & UrbanLadder), groceries (Big Basket & Grofers), eyewear (LensKart), jewellery (CaratLane & Bluestone) and baby products (First Cry & BabyOye) etc.

Other companies have found interesting angles to facilitate the buyer's purchase decision: By focusing on second-hand products (Quikr & OLX), through social validation (Limeroad & Roposo) or even by emphasising on speed of delivery (Grofers).

And it would seem like there is room for many more models with their own USP.

A few months ago, one of my colleagues walked in with a rather fancy set of earphones and asked me to guess the price. My guess was Rs 2,000 (\$30), almost 10 times the Rs 225 (\$3) he paid for it.

When I asked him about how he got it for so cheap, he told me he had bought it on Wish – a cross-border shopping app hailed by many as the newest disruptor to e-commerce. The catch? He had to wait a month for the delivery.

There is always room for e-commerce companies to find their own defensible niche, and Wish's example shows that a USP can also be built on a trade-off.

Profitable Moats

Ah, Profitability! Perhaps every VC's favourite word this season. But no, I do not mean profitability in the context of Unit Economics (Perhaps every VC's favourite two-word phrase this season).

What I am referring to is an e-commerce business' ability to create ancillary revenue streams that are highly defensible and highly profitable and Amazon is undoubtedly the best example of this.

In addition to its e-commerce platform, Amazon also offers Amazon Web Services (AWS), an enterprise cloud infrastructure service. In the final quarter of 2015, AWS scored revenues of \$2.4 billion and an operating profit of \$687 million. AWS delivers an operating margin of nearly 30 per cent.

I suspect that Amazon's other non-e-commerce businesses, such as Twitch & the Kindle ecosystem, will deliver similar financial gains in due time.

These ancillary businesses have been able to become (or promise to become) so profitable because of the scale and growth that Amazon's e-commerce business has achieved.

Scale is beautiful for e-commerce. Even in 2016.

Execution & Flexibility

The Department of Industrial Policy & Promotion (DIPP) recently mandated that e-commerce marketplaces would not be able to sell more than 25 per cent of their aggregate numbers through a single vendor or other group companies. Many believe that this regulation will cripple Amazon & Flipkart in the short-term, since a much more significant proportion of their sales can be attributed to vendors that they are affiliated to.

However, this isn't the first time either Flipkart or

Amazon have faced similar regulatory hurdles.

In early 2014, the Enforcement Directorate (ED) was considering levying a penalty of Rs 1,400 crore (\$212 million) on Flipkart for allegedly violating the prevailing foreign direct investment (FDI) norms.

Later that same year, the Karnataka government prohibited Amazon from selling certain products from its warehouse over its interpretation of the type Amazon is, and the taxation laws that should apply to it.

The new norms on e-commerce marketplaces might well be a blessing in disguise and might help on-board the

long-tail of merchants, the merchants who have thus far stayed away due to fears of predatory pricing killing their margins.

But even if that isn't the case, history suggests that e-commerce demands entrepreneurs who

are prepared to deal with legal ambiguities and the ramifications that come as a result of such ambiguities, and can ride them through.

Ambition

Most e-commerce entrepreneurs pitching to me justify their case by using arguments such as "The market is large enough" and "There is room for one more player".

I can identify with them, I have used these lines myself while pitching to VCs.

What time has revealed though is that in e-commerce, like most other internet-enabled businesses, there is room for only one, maybe two, dominant market leaders in each category.

As an entrepreneur, the only way you can get e-commerce's massive market potential to yield for you is if you enter with the objective of becoming that dominant market leader. This is not to say that most entrepreneurs do not want to succeed. However, becoming a market leader in e-commerce requires someone who is especially driven, maybe even maniacal when it comes to beating fierce competition in order to succeed.

E-commerce makes for an exciting sector, one where the stakes are always very high. Even though it is categorised by dominant leaders, it is also a space where a new entrant can always disrupt existing players using a better model or superior technology.

In so many ways, e-commerce seems like a dangerous gamble. Perhaps that is also why it is a game so hard to resist.



Shubhankar Bhattacharya is a Venture Partner at Kae Capital, an early stage VC fund. Prior to joining Kae, he was co-founder and CEO of Yaqsh.com, an online store for diamonds and diamond jewellery.



TECH SOLUTIONS MAKE INDIAN CITIES SMARTER

by India Inc. Staff

Technically speaking, the Narendra Modi government's UJALA scheme – aimed at bringing down electricity demand by replacing inefficient incandescent and CFL bulbs with LED lamps – isn't part of the Smart Cities initiative. But it's a smart solution to a problem plaguing urban India.

It has been estimated that once fully implemented, the UJALA scheme will save 100 billion units of electricity, reduce the load by 20,000 MW and cut the emission of greenhouse gases by 80 million tonnes per annum.

"With India selling 770 million LED bulbs every day, the country will soon become the LED capital of the world. Prices of LED bulbs have come down 80 per cent to Rs 52 from over Rs 330 two years ago," Indian power minister Piyush Goyal told investors in London recently.

That is just one of the many initiatives by the Narendra Modi government to leverage technology to improve the lives of Indians. As part of the Smart Cities initiative, 100 cities would be retrofitted to make them "smart". The government recently released the list of the first batch of 20 cities that will receive funding this year to convert them into smart cities over the next five years.

Defining a smart city

There is no one definition of a smart city but all descriptions agree on some points. Such cities should offer sustainable and high quality lifestyles for

The Narendra Modi led government's smart cities initiative is well on its way with the first 20 short-listed for facelift. Crucially, the use of technology and innovation is the booster shot for the smart cities initiative to dove-tail other government initiatives.

all strata of society regardless of education or income levels and a quality of infrastructure comparable to the best in the world that includes, among other things, clean air, housing, sanitation, healthcare, job and livelihood opportunities, communication and transport solutions, education, 24x7 power supply, entertainment, sports and leisure facilities.

The scheme to replace incandescent and CFL bulbs with LED lamps ticks at least three of those boxes – it ensures clean air by reducing CO2 emissions, it helps keep healthcare costs down by bringing down environmental pollution and make it easier to provide 24x7 power by reducing the load on the grid.

Funding the smart cities

Each of the 20 selected smart cities will receive \$30 million in central assistance during 2016-17 and \$15 million per year over the next three years to upgrade and build the infrastructure necessary to transform themselves into smart cities.

The state governments, individual urban bodies and their private sector partners will have to raise an equal amount as well as any further sums of money that may be required to meet the goals set out in their agreement with the central government.

The first 20 smart cities

The 20 cities selected for funding under the first batch are Bhubaneswar (Orissa), Pune (Maharashtra) Jaipur (Rajasthan), Surat (Gujarat), Kochi (Kerala), Ahmedabad (Gujarat), Jabalpur (Madhya Pradesh), Vishakhapatnam (Andhra Pradesh), Solapur (Maharashtra), Devangere (Karnataka), Indore (Madhya Pradesh), New Delhi Municipal Corporation, Coimbatore (Tamil Nadu), Kakinada (Andhra Pradesh), Belagavi (Karnataka), Udaipur (Rajasthan), Guwahati (Assam), Chennai (Tamil Nadu), Ludhiana (Punjab) and Bhopal (Madhya Pradesh).

Top 20 Smart Cities



A further 40 cities will be selected next year and 38 the following year for funding and assistance under the scheme.

Handling migration

An important issue the planners will have to keep in mind is the continuing influx of rural migrants into India's cities.

"As the fruits of development reach an increasingly large number of people, the pace of migration from the rural areas to the cities is increasing. A neo-middle class is emerging, which has the aspiration of better living standards. Unless new cities are developed to accommodate the burgeoning number of people, the existing cities would soon become unliveable.

The Prime Minister has a vision of developing one hundred smart cities, as satellite towns of larger cities and by modernising the existing mid-sized cities," Finance Minister Arun Jaitley said in his maiden Budget speech in July 2014.

At present, a little less than a third of all Indians live in cities, towns and other urban and semi-urban centres. Experts say this figure will rise to 50 per cent by 2035. That means urban India will be home to 750 million people then, given the population growth rate of 1.2 per cent.

Managing waste

Handling the waste generated by this huge mass of people will be a major challenge for the smart city planners. Disposing this waste sustainably is sine qua non to ensure that these cities remain "smart", liveable and sustainable.

Planners have experimented with several alternatives. For example, Gujarat International Finance Tec City, India's first smart city, will have a high technology waste management system that will segregate organic and inorganic waste at source and process them into manure and thermal power, respectively.

Using technology from Switzerland, waste from individual buildings will be transferred to a collection centre via underground vacuum suction pipes at speeds in excess of 110 kmph. The manure produced from the organic waste will be used for gardening within GIFT City while the inorganic waste will be burned to generate thermal power that will also be used locally.

A successful trial run was conducted earlier last year.

Booster shot for the economy

The smart cities initiative will lead to a huge increase in demand for cement, steel, capital goods, household and electrical goods and provide a fillip to the 250 other industries that have backward linkages with these.

The green-shoots of recovery seen in some of these sectors, notably cement and steel, can be attributed to the early demand from this programme.

As the initiative gathers steam, demand from developers involved in building smart cities is expected to lead to an all-round uptick in economic growth.



Amazon steps up pace in India

The world's largest online retailer, Amazon, has invested another \$291 million in its Indian wing to step up its expansion in the market.

The latest funds injection is the second made by the company in less than two months as Amazon India said it was "very pleased" with the growth momentum in India.

Funds will be used to beef up services for Amazon's merchants like warehousing, logistics and marketing.

Amazon India is hoping to grab pole position in an industry expected to triple from \$23 billion in 2016 to \$68.8 billion by 2020, according to Goldman Sachs estimates.

The company said that it has added over 55,000 products per day, grew its seller base by 250 per cent and expanded fulfilment infrastructure by 300 per cent in 2015.



Lenskart raises \$25mn from IFC

The International Finance Corporation (IFC) plans to invest equity of up to \$25 million for a minority stake in Delhi-based Lenskart Solutions Private Limited.

The World Bank arm's proposed investment came in as part of the company's ongoing fundraising plan, with additional capital being provided by some of the existing and new investors.

Lenskart plans to use IFC's funding to expand its product distribution through its network of independent franchisee partners across India including into Tier 2/3 cities. It will also set up a manufacturing, processing and assembly facility with features like robotic manufacturing of lenses, cutting and fitting of prescription lenses for eyeglasses.

Delhi-based Lenskart, through its independent franchisee partners, sells and delivers across 531 cities. The company is currently engaged in the assembly, wholesale distribution and supply of affordable eyewear products.



Tata to tie up with Alibaba

Alibaba, Chinese ecommerce giant is looking to set shop in India in partnership with Tata Sons.

Michael Evans, Alibaba Group president and K. Guru Gowrappan, global managing director, recently met Cyrus Mistry, chairman, Tata Group, to discuss a partnership to cater to the online retail market in India.

At the meeting, both companies discussed and covered areas such as logistics, offline stores and Omni-channel to support Alibaba's core e-commerce business.

Evans had told reporters after meeting Communications and IT Minister Ravi Shankar Prasad: "We have been exploring very carefully the ecommerce opportunity in this country, which we think is very exciting against the backdrop of Digital India."

Recently, Tata has been associated with several other consumer brands in the country. Starbucks also entered India through an alliance with Tata Global Beverages. This will add another leaf to Tata's international alliances.

BIG DATA CAN TRANSFORM INDIA'S LIFE SCIENCES SECTOR

by Nitin Dahad



Nitin Dahad is a consultant and advisor to the technology, industrial and media sector, and to government agencies and trade organisations, to develop global market strategies and programs based on nearly 30 years' experience across Europe, US, Asia and Latin America.

Earlier this year, I wrote a piece on how technology and knowledge were the key to delivering rural healthcare. One of the areas in which technology and big data is going to play an important part in India is in genomics, and the ability it offers to provide precision, personalised medicine with greater results in treatment of cancer.

India has almost 1 million new cancer patients every year with almost 700,000 deaths estimated in 2015. In certain types of cancer, such as breast and ovarian cancer, 150,000 new cases are detected every year in India but staggeringly the 5-year survivability in India is 52 per cent compared to 89 per cent in US. According to the FDA, in 75 per cent of patients oncology drugs are not deemed to be effective. In 2015, almost \$15 billion is estimated to have been spent on cancer diagnostics and treatment and this is growing rapidly.

Against this severe backdrop, advances in life sciences, in particular the functional testing of tumours using either genomic or phenotypic approaches is changing the landscape and treatment options for cancer. According to Tufts University, in 2015, 73 per cent of the drugs in pipeline currently benefit from the use of genomics.

Bringing genomics innovation to India

Dr Jonathan Picker, faculty at Harvard Medical School and chief scientific officer of Global Gene Corp, an innovative genomics company co-founded by Harvard clinicians, is acquiring and applying genomics data in Asia. Having co-founded the company along with his Harvard colleague, Dr Saumya Jamuar (who is also clinical lead for Precision Medicine Initiative, Singapore), he says, "Given the vibrant life sciences ecosystem, I find it very interesting to note collaboration between innovative life sciences companies who are

further strengthening India-UK technology collaboration. A unique opportunity exists to juxtapose the global expertise in genomics, and the British National Health Service systematic processes with the wealth of experience and talent to help solve the challenges for patients in India."

He highlights a specific example of a tie-up that is aiming to bring the latest from global research into India in order to transform the cancer treatment options - from bench to bedside. With its expertise on the Indian genome, his company is collaborating with Imagen Therapeutics, a cutting edge British oncology company that targets chemotherapy precisely against the individual patient's cancer.

The partnership reflects the ethos of the latest generation biotech companies in being focused on applying the principles of precision medicine in an actionable way that actually benefits patients. Both companies however approach the challenge from very different perspectives reflecting their respective global Indian and British pedigrees.

Imagen, born within the British system, based alongside the Manchester University Medical School, developed out of the integrated British system that created the 'evidence based treatment' model. From this background Imagen has developed a method for determining the optimal chemotherapy regimen for individual cancers. This stands in contrast to the current model of protocol-driven treatment whereby standardised therapies are dispensed with minimal consideration to individual variations.

Understanding the unique genetic signature of Indians

On the other hand, Global Gene Corp, founded by Harvard Medical faculty and



alumni from prestigious Indian Institute of Technology (IIT), is embedded in the global genomics ecosystem and has deep expertise within India and Asia. With its core based in the Asian healthcare system and research presence in Mumbai, it works with a multitude of different approaches to healthcare that characterise medicine in India.

Currently, the company is focused on understanding how health care for global Indians can be enhanced by understanding the unique genetic signature of Indians. Corresponding applications include its proprietary IndiaCHIP™ technology, developed to identify genetic mutations that cause disease and disorders specifically in Indians. The analysis is carried out using a state-of-the-art Illumina® system and SNP (single nucleotide polymorphism) technology. The goal is to provide precision treatment that revolutionises outcome and wellbeing for the patient.

By bringing together the personalised cancer therapy born out of British rigour and the application of a pragmatic Indian approach, Global Gene Corp and Imagen are attempting to realise the opportunity to cancer care in India. Dr. Picker says, “Thus, while others theorise, in acting, this pairing of new gen life-sciences companies will put India in the vanguard of personalised medicine.”

Genomics 3.0 has the potential to put India at forefront of precision medicine and personalised cancer treatment. Moves to see how healthcare for global Indians can be enhanced by understanding the unique genetic signature of Indians holds the key.

He adds, “This real-life example demonstrates for me the power of the India-UK collaboration in life sciences, how exceptional people with disruptive technologies and intellectual property can combine to solve a very pressing problem for millions of cancer patients.”

This use of specific patient data derived from genomics and functional testing to enable health care providers to provide precision, personalised medicine that has been demonstrated to be far more effective at treating conditions like cancer. The UK-Indian collaboration in precision medicine, enabled by technology, genomics, functional testing and big data analysis, is likely to be the future of health care. The key to making it happen though, according to Dr Picker, is to focus on affordability to bring the best of applied genomics technology not only to the elite, but to the rural and real India in an affordable manner.



WE ARE IN A GOLDEN ERA OF INDIAN START-UPS

Vani Kola is the managing director of Kalaari Capital, an early stage venture capital (VC) firm based in Bangalore. She is seen as a visionary investor with an uncanny ability to identify emerging markets. At Kalaari, her aim is to nurture entrepreneurs with the conviction that Indian companies are poised to become global players.

With a 22-year Silicon Valley experience behind her, Vani now works with first-time entrepreneurs to build strong global companies within the context of Start-up India. Her focus is on technology companies and has successfully led investments in e-commerce, mobile services, education and healthcare. She gives 'India Investment Journal' an insight into what drives her string of successes.

Does Start-up India hold investment promise?

Indian tech start-ups have created more than \$40 billion in value over a relatively short span of time. Great CEOs have emerged who have proved that billion dollar companies can be built out of India. While the ecosystem is relatively young, there has been a lot of learning – both practical and emotional. More collaboration among stakeholders will definitely lead to the realisation of the promise that the India opportunity holds.

Is the start-up ecosystem building up in the country?

There were more than 4,000 start-ups formed in

India in 2015, a 400 per cent increase from 2010. Entrepreneurship is now a mainstream career choice. More importantly, there's a certain degree of coolness attached to it nowadays. This has resulted in the best young minds of the country taking an interest in starting up or working for a start-up rather than taking up a job elsewhere.

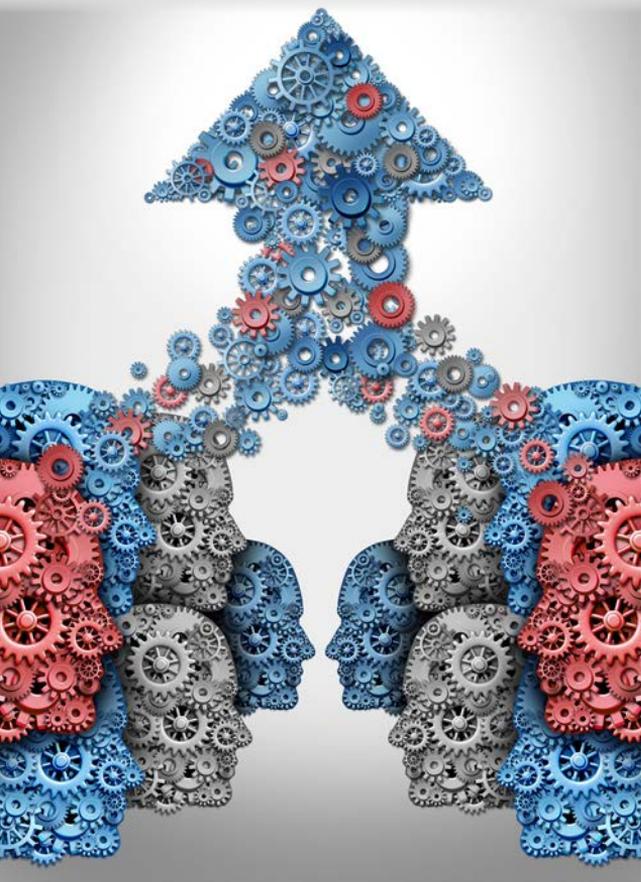
Years of economic development have finally paid off and many youngsters nowadays have a safety net to fall back on. That, along with a certain ambition which is perhaps a by-product of globalisation, has given rise to a risk taking appetite that's necessary for starting up.

Access to capital is no longer an issue for talented teams. Many VCs have set up shop in India and have raised fresh funds. Also, many successful entrepreneurs have started actively giving back to the ecosystem in the form of mentoring and angel investing.

To conclude, I believe that we live in special times and history books of the future may refer to this decade as the golden era of Indian start-ups.

What are Kalaari's major Indian investments?

We have more than 60 portfolio companies across three funds. Some of these are Snapdeal, Myntra, Via, Simplilearn, Urban Ladder, Attero, Zivame, 99 Games, Holachef, YourStory, ScoopWhoop, IndustryBuying and Dream11.



What are your future plans for the market?

We raised our third fund last year and we plan to deploy it in exciting opportunities over the next few years. Being committed to our entrepreneurs for the long run, we look forward to working closely with our portfolio companies as well. We have also started a seed initiative called Kstart to discover and mentor young start-ups.

What are the top 5 reasons to invest in Indian start-ups?

The India opportunity is centred around the 250 million plus Indians who will be exposed to the internet for the first time over the next five years. Never before has an event of such magnitude happened in history. Smartphone users are expected to grow from 160 million to 520 million over the next five years. This, along with rising consumerism, is expected to push annual online spend from its current level of \$25 billion to northwards of \$100 billion by 2020. There are many unsolved problems that Indian individuals and businesses face today and we are looking at disruptions that ease the digital life of a common man.

From discovery to execution, technology has the power to make things more efficient. Take the example of e-commerce. Earlier, a consumer was limited to a small set of local retailers for product and price discovery. On the other hand, retailers were not only geographically constrained in their reach but also faced high real estate costs. Now, with e-commerce platforms in place, retailers compete with each other to deliver better products and price to consumers who were earlier inaccessible to them. Information is perhaps the greatest source of power in today's world. Internet technologies makes it accessible to everyone.

What is the criteria used when investing in these companies?

The criteria for investing can be seen as a mix of founder quotient, disruption quotient, market opportunity and validation. First and foremost, we are in the business of investing in people. We evaluate the founding team on their capability to execute and this is mostly a subjective call. Then comes how disruptive the play is. Is the company reimagining the experience of the stakeholders? If the company is wildly successful, will the experience change significantly?

The significance of the role that technology plays in the undertaking also impacts the decision. We also look at how big the opportunity is and is the business scalable. Finally, traction plays a role in validating the hypotheses that the business idea rests on. A business needs to score high on most of these criteria in order to merit an investment from us.



HOW 'GREEN & CLEAN' TRANSLATES INTO BIG BUCKS FOR INDIA

by India Inc. staff

Internationally, green is considered the colour of money because the US dollar, the most widely used currency in the world, is green. The Indian rupee is not green by any stretch of imagination but green could soon mean big bucks in India.

The Narendra Modi government has invested a lot of political capital on greening and cleaning India. In a nutshell, the government wants to:

- Improve sanitation and cleanliness across India
- Clean the Ganga and some other polluted rivers
- Cut carbon emission and control atmospheric pollution
- Generate an additional 175 GW of solar, wind and nuclear power by 2022

Taken together, these represent a multi-year, multi-billion-dollar opportunity for Indian and foreign companies to contribute to India's development and earn handsome returns for themselves.

The Swachh opportunity

Improving sanitation and cleanliness across India will need to leverage the latest waste management technologies. Urban India, in particular, faces a daunting task in this regard especially as planners

have to simultaneously tackle the problem of mass migration into India already overstretched cities.

In most cities, most notably in Mumbai and Kolkata, as well as in several other urban centres, waste piles up and is often burned, causing air pollution and spreading diseases.

To encourage cleanliness and improve the health of its citizens, the government has unveiled plans for the following:

- To discourage open defecation, which is a major problem across India, every household should have access to toilets connected to an underground sewerage system;
- All schools, especially those for girls, should have adequate number of toilets;
- Every household, office and commercial enterprise should be connected to a city-wide waste disposal and management system;
- Put in place a comprehensive sanitation plan that is monitored daily;
- Put in place adequate technical and institutional systems for the collection, transportation and disposal of waste;
- Put in place systems for the segregation of organic and inorganic waste and solid and liquid waste too enable recycling of this



175 GW of solar, wind & nuclear power by 2022 [Jawaharlal Nehru National Solar Mission (JNNSM), International Solar Alliance (ISA)]



Sanitation & cleanliness [Swachh Bharat Mission]



Cleaning Ganga & other rivers [Namami Gange]



Carbon emission & atmospheric pollution [to Sign COP21]

Clean India re-cap

- material at multiple decentralised locations;
- Build and maintain adequate and efficient sewerage systems as well as flood management systems to ensure adequate as large parts of India get heavy rainfall that exacerbates problems associated with waste disposal and management; and
- Make use of technology to ensure that the above systems can be monitored on a real time basis and any deficiencies are plugged in the quickest possible time.

It has been estimated that this alone can generate business worth more than \$10 billion per year and provide massive opportunities for domestic and foreign companies with expertise in these areas.

Gold from Ganga

Taking note of the failure of previous efforts to clean the Ganga, the Modi government has come out with a comprehensive plan to rejuvenate the river by involving local communities that depend on the river for their livelihoods, thus, ensuring that they have some skin in the game. It has taken pains to ensure that corporate bodies and local citizens groups that participate in the clean-up effort are rewarded financially. For this purpose, it is working out an innovative financing model whereby the government will provide a small amount upfront but the rest of the costs will have to be met from 15-20 year annuities.

A large part of the technical knowhow and machinery to clean this 2,500 km long river will have to come from abroad, mainly Europe, which has considerable expertise and experience in this field.

The Government of India has recently signed a three year agreement with GIZ, an arm of the German government, to adopt river basin

management strategies that Germany used to clear rivers like the Danube and the Rhine of pollutants.

There are opportunities for other European and US consultants, firms and equipment suppliers with experience in this field to partner with Indian government agencies involved in the Namami Gange initiative.

Renewable push

The Modi government has planned to increase to 40 per cent the share of renewable energy in India's total generating capacity and cut emissions by 33-35 per cent of GDP by 2030.

Though a large part of the more than \$100 billion required for this initiative will come from private investments, the government will still have to spend a considerable sum of money to turn this vision into reality.

Finance minister Arun Jaitley has increased the cess of coal production from Rs 200 per tonne to Rs 400 per tonne. This is expected to raise about \$4 billion per annum (at the current rate of coal production) and will go mainly towards the National Clean Energy Fund.

Already, firms from the US, UK, Germany, France, China, Japan and South Korea have committed billions of dollars of investments in this sector or have expressed interest in doing so. Given the level of interest among investors, power minister Piyush Goyal has said it may be possible to meet the targeted capacity even before the 2022 deadline.

Thus, the efforts of the government to clean India, clean the Ganga and clean up the environment present a multi-billion opportunity for companies and consultants with the requisite expertise.

TOSHIBA
Leading Innovation >>>



Toshiba bags Clean India contract

UEM India, Japan based Toshiba Group's water service unit in India, has bagged a \$19.75 million (Rs 132.6 crore) contract from Jharkhand Urban Infrastructure Development Company (JUIDCO) to supply sewerage system in Sahibganj, Jharkhand.

UEM India said: "JUIDCO, which operates under the administrative control of the Urban Development Department of Jharkhand's state government."

The contract encompasses the construction of two sewage treatment plants based on sequencing batch reactor technology, with 5 million and 7 million litter per day capacities, along with a 55 kilometre sewerage network and seven pumping stations. It also covers 10 years of operation and maintenance services (O&M), and has a total value of Rs 132.6 crore.

Koichi Matsui, chairperson and managing Director, UEM, said: "The Sahibganj contract... reinforces our already strong record for delivering cost-effective solutions for wastewater management."

World Bank offers billions to Clean India

The World Bank has approved a \$1.5 billion loan for the ambitious Clean India campaign.

The international financial institution has backed the Indian government's efforts to ensure all citizens in rural areas have access to improved sanitation and end the practice of open defecation by 2019.

As per World Bank statistics, of the 2.4 billion people who lack access to improved sanitation globally, more than 750 million live in India, with 80 per cent living in rural areas. More than 500 million of the rural population in India continue to defecate in the open, suffering from preventable deaths, illness, stunting, harassment and economic losses.

The loan will be used for Prime Minister Narendra Modi's Swachh Bharat Abhiyan Support Operation Project. The World Bank will also provide a parallel \$25 million technical assistance to build the capacity of select state governments.

Clean Ganga: New PPP policy in waste management will boost investment

The Indian government's vision of a more integrated waste-water management policy got its first major boost with the launch of a new incentive-based corporate model.

This brings back momentum to the Namami Gange programme by taking the mission to its very roots – the local communities who stand to profit from not only a Clean India but also have the opportunity to explore its business potential. Bringing in the corporate sector also ensures greater efficiency in terms of delivery.

Flow of untreated urban sewage is one of the main reasons for pollution in the river Ganga. Under the latest plan, companies will collaborate on a public-private partnership (PPP) basis for urban sewage management.



SWACHH BHARAT MISSION BRINGS A SENSE OF URGENCY

The United Nations (UN) estimated that 2.5 billion people in the world lack access to adequate sanitation of whom 526 million defecate in the open. Chris Williams from the UN's Water Supply and Sanitation Collaborative Council (WSSCC) gives us the India perspective on funding models that tie in with the Swachh Bharat Abhiyan.

Chris Williams is the executive director of the Water Supply and Sanitation Collaborative Council (WSSCC), an international organisation of the United Nations that improves access to sanitation, hygiene and water supply in Africa and Asia. Established in 1990, the organisation combines knowledge management, advocacy and fund management.

What are some key WSSCC milestones in India?

WSSCC has had a long and deep connection with India since the meeting 25 years ago in New Delhi, which led to its formation. Leading Indian practitioners and policy makers have played an active role in the evolution of the council and formed a core part of its membership. The council enjoys trusted relations with national and state governments and

civil society in India, despite the absence of country offices. In addition, WSSCC has been keenly involved in policy, operational guidelines, capacity building and monitoring of government initiatives to increase access to improved sanitation and hygiene behaviours. The Council provided support through the Total Sanitation Campaign (1992-2002) and the Nirmal Bharat Abhiyan (2002-2014), building a trusted relationship with sector stakeholders and contributing to sector knowledge, capacity and policy. WSSCC has also played a leading role in the development of the SACOSAN as a government and civil society driven regional sanitation meeting. Regarding field operations so essential to the practical realisation of Swachh Bharat Mission (SBM), WSSCC has been instrumental through the Global Sanitation Fund in working with State Governments with high open defecation rates to

establish the modalities for implementing collective behaviour change at scale. In 2012, the governments of Jharkhand, Bihar and Assam together with the council and a nascent Programme Coordination Mechanism developed a country programme proposal to increase access to improved sanitation and bring about behaviour change. As of July 2015, the programme has empowered 2.4 million people to live in open defecation villages, and 800,000 people to gain access to improved sanitation. Importantly, government officials at State, District, Block and Gram Panchayat have fully internalised the methods of collective behaviour change, and WSSCC has been approached by the leaders of the SBM to expand to eight districts within Bihar. This has been an important recognition of WSSCC's success towards an open-defecation free Bihar.

What are some of your targets for the country in the coming years?

The advent of the SBM, launched in October 2014



Credit: WSSCC/Javier Acebal



Credit: NRMIC India



Credit: WSSCC/Javier Acebal

by Prime Minister Modi, warrants a call to action to all organizations committed to ending the practice of open defecation and ensuring equal access to sanitation and hygiene. Therefore, WSSCC's targets are in line with supporting the SBM, which has impacted our work in the region positively. Building upon the trust and historical ties to the Council, the Government of India called upon WSSCC along with other development partners, to contribute to the design of the SBM and its initial guidelines. Subsequently WSSCC has been asked to co-facilitate national workshops to define, measure, verify ODF status which contributed to the growing awareness of the importance of behaviour change across whole administrative units versus mere toilet construction.

In July 2015, the Secretary of the Ministry of Rural Water and Sanitation requested the Executive Director to establish a "light footprint" in India to enhance its ongoing support to SBM. WSSCC in consultation would henceforth combine

policy support, capacity building, monitoring and evaluation, and rapid action learning together with its support to select State governments through direct implementation mechanisms for ending open defecation and increasing access to improved sanitation using methods of collective behaviour change.

Have you noted a growing social consciousness around sanitation in the country?

Yes. Despite being one of the fastest growing economies in the world, the second most populated country in the world currently faces serious and deep rooted challenges to the well-being, prosperity and very survival of its 1.2 billion citizens.

Responsible for 60 per cent of the total open defecation (OD) taking place in the world, the deleterious impacts of poor sanitation and hygiene on health, productivity and well-being extend well beyond the country's borders and are nothing short

of a global emergency.

For the very first time a national campaign of this magnitude was officially launched on 2 October 2014 in New Delhi, by the Prime Minister Narendra Modi who decided to make it his government's flagship programme. All forms of media have been harnessed to spread the word and the private sector has joined hands to set up a financing mechanism in addition to the Swachh Bharat of 0.5 per cent levied on all services that are currently taxed. Touted to be the world's largest sanitation campaign and programme, the SBM campaign covers both rural and urban India, and is aimed at making India clean and open defecation free (ODF) by 2nd October 2019, the 150th birth anniversary of Mahatma.

How far has the Clean India Mission impacted your work in the region?

The Clean India Mission comes with a true sense of urgency that has galvanised all development partners

and brought many new actors into the sanitation arena. It has also been pitched as a collective national effort, with clear measurable targets, a sophisticated advocacy machine and deep financing. The challenge of changing mind sets is a complex one that requires partnerships, creativity and skills. These are challenges that beset the sanitation and hygiene sector globally and India is being keenly watched in the region and beyond for lessons that will have global relevance. The spotlight on sanitation and hygiene has also generated multiple investments, research and studies that will undoubtedly strengthen the sanitation sector overall.

Some key areas where India is a leader in the sector is an early move to address issues of faecal sludge management, sustainable toilet design, affordable supply chains and innovative behaviour change communication. WSSCC is both a contributor and apprentice in this collective endeavour by the sector, seeking to systematically share lessons across the region but also wider to Africa and beyond.

What more can be done at a policy level towards ensuring basic sanitation for all?

The Clean India mission has benefitted from advocacy and commitment at the highest level backed by financial creativity and support from the bulk of India's 29 states. The policy dialogue is forward looking highlighting consistently the need for achieving open defecation free administrative units- blocks, districts, whole states so that the benefits of a clean environment are widely felt, appreciated and sustained. The mission goes beyond toilets to also press for solid waste management, personal hygiene and clean open public spaces. The country's challenge is staggering- but resources and the political will to overcome this issue have been firmly deployed.

At the policy level the challenge will be threefold:

1. To move beyond household toilets and personal behaviour to address public spaces systematically across the entire country. These include all transport hubs and lines (rail, bus, roads); all public institutions- health and education; all government buildings; marketplaces- formal and informal; prisons and detention centres and the workplace. This is critical if standards of cleanliness, particularly hygiene are to be established and expected by every Indian- in a village, town or big city.
2. Target driven infrastructure approaches have been proven to be high risk and unsustainable. Policy discussions, expenditure reviews and training need to resist the temptation to cite numbers – at the input and output level seeking instead all pervasive changes in mind sets and ways of living. A social transformation where

cleanliness is expected and received.

3. The current focus on the end line of 2019 is understandable but also dangerous as knowledge, learning, monitoring and evaluation are narrowly interpreted for the purpose of accelerating progress against the national target rather than also thinking deeply about sustaining a radical and transformative nationwide change in behaviour.

Has there been progress on finding sustainable funding models?

Current efforts are aimed at eliminating the sanitation burden of almost 600 million open defecators as well as making a dent in those who need better more hygienic and sustainable sanitation.

The Finance Minister Arun Jaitley has proposed 100 per cent deduction for contributions, to the Swachh Bharat Kosh in the current Financial Budget. The current levy is excess of 0.5 per cent on all taxable services—which generated \$560 million in 2015-2016.

The India Sanitation Coalition was set up to bring organisations and individuals together to find sustainable solutions for sanitation through a platform for corporates, civil society groups, government, financial institutions, media, donors/ bilaterals/multilaterals, experts etc. The India Sanitation Coalition aims at bringing together all actors in the sanitation space to drive sustainable sanitation through a partnership mode. Attracting financing and technical skills from the private sector, it offers a parallel funding mechanism to SBM's in built centre-state grants for sanitation.

Sustainable funding models must also be understood in parallel with government efforts to ensure financial inclusion through micro banking, micro credit, direct transfers and reduction in leakages. India has a long history of financial inclusion services which have been further enhanced through a combination of better identification, suitable products and affordable credit.

How has the India Support Unit enhanced WSSCC's work?

The India Support Unit (ISU) was launched in late October 2015. Its first six months of operation was a critical component of WSSCC's work to amplify its support to the Swachh Bharat Mission (SBM) and to bolster WSSCC's Global Sanitation Fund supported work. The unit aims to enhance WSSCC's normative and implementation work to improve access and use, equality, knowledge and collaboration in sanitation and hygiene.

The unit in collaboration with Geneva based staff supports government of India and a few states on policy and monitoring guidelines, capacity building and rapid action learning.

A TECH SOLUTION TO THE WASTE PROBLEM

by Rahul Jaiswal



Rahul Jaiswal is the co-founder and CEO of EnCashea, which provides scrap collection and recycling services for individuals and institutions of all sizes. He described himself as a tech enthusiast with a passion for building solutions at the convergence of different technologies – software, hardware and design and in the application of technology to solve common, everyday problems.

Leveraging the existing kabadiwala (waste/scrap collector) network to build a scalable and socially-responsible enterprise sounds like a great idea. However, from our initial experience in trying to implement such a model, we realised that maintaining a high service quality isn't possible with such a model. Other problems such as price standardisation, faulty weighing, lack of professionalism cannot be solved by simply using the existing network.

So while our concept has its roots in the Indian kabadiwala network, it needs to be re-modelled to use newer technologies and measure-up to the modern standards of service quality.

Interestingly, some kabadiwalas have started using our services for both buying and selling to us. Our endeavour is try and bring more players at different levels, in our network and introduce to them, the benefits of using internet and other technologies.

As a private limited, Encashea has a strong social impact associated with our work and we have a great commitment to sustainability. Additionally, for anyone who wishes to donate their stuff, we have tied up with 'Teach for India' where we channelise all the proceeds of such donations.

We have witnessed steady rise in the number of bookings from individuals and businesses. The non-profit initiatives of EnCashea have also been growing steadily.

A lot more efforts are being put in using tech to solve the problems of waste management in general, and of managing recyclable scrap, in particular. Waste management is still plagued by the same problems of the "license raj" era. In recent times, government has been more active in defining clear regulations and at the same time, providing better environment

EnCashea is a company that leverages technology to find everyday solutions to the problem of waste management. We explore with its co-founder if the concept has a resonance with the traditional Indian outlook towards recycling.

for private players like us, to come up with tech-based solutions.

There is a lot of scope for internet-based solutions as well as other technologies like smart bins, home composters, alternate use of discarded materials like plastics for building roads or conversion to fuel. Use of internet is a defining factor in turning such one-man enterprises into highly scalable organisations and organise this highly fragmented industry.

The Swachh Bharat Abiyan has created a lot of awareness among citizens and stirred up a number of good samaritans to spread the message to others. There has also been a number of good initiatives by the local authorities in Bengaluru

and some much-needed regulations that have persuaded people to start managing their own waste better.

I feel India still has a long way to go in terms of catching up with the rest of the world. While recycle rates are over 60 per cent in countries like Germany (about 80 per cent for paper) and about 35 per cent in Europe, they are way below in India. We end up dumping a lot of our waste in landfills or oceans and it's not sustainable.

While European nations, Japan and Australia are putting a high emphasis on recycling, large corporations in US have been using technology to manage their huge quantities of scrap and diverting those to proper channels.



MOVING INDIA TOWARDS A ZERO WASTE MODEL

by Wilma Rodrigues

Indian citizens are catching on to the Saahas Zero Waste model. In cities like Bangalore there is also a good eco-system for zero waste systems.

Our Municipal Corporation now has a bulk waste policy which makes it mandatory for all entities generating more than 50kg of waste to define the destination of their waste. Large entities like tech-parks and apartments are expected to compost their own waste or have a bio gas system.

There is also support from other similar organisations who provide various services. For example, multiple brands of composters are now available. These products support on-site composting from 1 kg to 5 TPD.

Currently there is huge citizen resistance to large centralised waste projects which tend to work with mixed waste. These units are being shut down on account of negative health and environment impacts. Given this situation, the zero waste model becomes the best solution and Saahas ZeroWaste has the experience and expertise to execute this.

Waste Management needs a business model where revenues from a service fee and revenues from waste meet the cost of all operational expenditure. Even the decentralised zero waste model needs a structure, which includes standard operating procedures and a senior professional team. It needs technology platforms for tracking and monitoring quantities and quality of waste. It also needs better infrastructure.

A social enterprise with a business model is best aligned to deliver on the above.

There is, however, a space for not for profits

which need to constantly engage with government and create public awareness. We, therefore, have a hybrid model where NGO Saahas works with awareness and new pilot projects whereas Saahas ZeroWaste implements waste management services

The need for better delivery of services is quite obvious and this is reflected in an enhanced social consciousness. However, the larger public still remains on the periphery and expects the government to solve the problem.

Segregation at source is now mandatory but people participation is very poor. This applies to very highly educated circles as well. The recycling industry also needs to be supported through customers who buy recycled products. This market continues to be a niche market primarily because the prices of recycled products are slightly higher. Prices can be comparable if the market size increases.

The Swachh Bharat Abhiyan is a good movement that has caught the imagination of the public. To that extent it has helped us.

However, the movement has focussed

on a Clean India movement which is translated into sweeping and removal of waste. So far there is not enough said about recovery of waste and conversion of waste to resources.

There are large fractions of waste, including packaging waste and e-waste, which needs intensive support in the form of collection, storage, aggregation and dispatch to recyclers. This process is operationally intensive.

While 90 per cent of waste can be recovered and recycled, in the current situation there is a focus on



Wilma Rodrigues is a former journalist with a degree in Life Sciences from Bombay University and a post-graduate diploma in Journalism from KC College. As founder-member of Saahas, she leads and mentors the team working in the not-for-profit segment.



waste streams which bring better values. This makes up only 30 per cent of the total waste. The rest, which is as much as 70 per cent, gets dumped in a landfill or burnt.

The world today is also talking about Zero Waste and converting waste to resources. Developed countries have all mandated diversion of waste to landfills. India, therefore, should focus on better technologies for recovery of waste. Some technologies are indigenous and already available in India.

However, technology alone cannot solve our problems. People and technology must work in tandem with good policies

We already have excellent policies to achieve a Clean India. The Solid Waste Management and Handling Rules 2016 prohibits organic and recyclable waste going to a landfill. The same rules

The founder-member of Saahas ZeroWaste start-up gives her insights into how their business model is revolutionising waste management and recycling in India and why the Swachh Bharat Abhiyan needs a more wider focus.

have introduced Extended Producer Responsibility (EPR), where packaging companies are expected to develop a reverse logistics system for funnelling plastic waste back to recycling. The New e-Waste Rules also have the same mandate for producers.

We can achieve a Clean India only if all stakeholders take the policies seriously. We expect India Inc. to lead the way by actually implementing progressive EPR rules as also supporting the Zero Waste movement.

LET CLEANLINESS PREVAIL IN THE BACKYARD OF OUR SWARAJ

by Priti G. Adani



Dr Priti G. Adani is the chairperson of the Adani Foundation, which under her leadership is focusing its activities in four core areas of education, community health, sustainable livelihood development and rural infrastructure development. The foundation is engaged with communities and their upliftment across 12 states of the country where the Adani Group operates.

As I pen down this piece, it evokes me to tread a little back to the 1990s when the writings of Mahatma Gandhi on cleanliness, health and hygiene, were reproduced and hugely circulated post the unfortunate outbreak of plague in Surat, Gujarat. Only for the reason that we were all sensitised and motivated so much on maintaining sanitation and hygiene, Surat was transformed to become one of the cleanest cities of the nation. And, it continues to be so till date.

Although, the “medieval disease”

became a blessing in disguise for Surat; we, as a nation, still have a long way to pave as far as sanitation and hygiene are concerned. I

just wish that we do not need to have such a dreadful occurrence to make our people painfully aware that cleanliness is the prerequisite for a healthy living.

Not only healthy living, sanitation is, in fact, the first parameter to pass through when we calculate the socio-economic status of a country. To corroborate this fact, I would like to quote an incident. Once Mahatma Gandhi had visited Kumbh Mela and upon encountering the grave sanitation situation there, he excruciatingly said: “While I realised the grandeur of the holy Ganga and the holier Himalayas, I saw little to inspire me in what man was doing in this holy place. To my great grief, I discovered insanitation, both moral and physical.”

Fenced upon this passion and concern of Gandhiji on sanitation, our respected Prime Minister, Shri Narendra Modi, rolled out the ambitious Swachh Bharat Mission

(SBM) in 2014. While there are myriad of opinions and sentiments on the campaign; all I want to say is it does not matter how slowly you progress as long as you do not stop.

And the way we as a nation have come together speaks volume about the momentum of this campaign. Numerous corporates have joined hands in meeting the objectives of SBM. Individuals alike are also contributing their bit in one way or other. In a nutshell, the campaign has made all of us more conscious and concerned

towards maintaining cleanliness in our surroundings.

For us at Adani Foundation, sanitation has always been viewed with great gravity.

To complement government efforts towards cleanliness, since 2008 the Adani Foundation started providing material support for individual household toilet construction in the villages. I am very pleased to write that 26 villages in Mundra block (Gujarat) and two villages in Tiroda block (Maharashtra) were converted into 100 per cent Open Defecation Free (ODF) villages. Coming to numbers, in Mundra (Gujarat) and Tiroda (Maharashtra) alone, we built a total of around 4,000 toilets for individual households. Under our Rural Infrastructure Development activities, we laid an 81 km long drainage line covering 16 villages of Mundra.

This initiative was done with partial financial support from WASMO and a minimal 8-10 per cent contribution from the beneficiaries, just to instil a sense of ownership and belongingness among them.

The Adani Group has interests across agriculture, logistics and energy around the world. The Ahmedabad-headquartered conglomerate filters through its corporate social responsibility (CSR) with an environmentally friendly approach through the Adani Foundation.



Besides, we ensured that the all government schools and aanganwadis had appropriate number of toilets especially for girls at various locations. Apart from the schools, around 100 aanganwadis were also provided with toilet facilities, in and around Mundra.

Having mentioned all these, I would like to reaffirm that women in particular can play a key role in changing the mind-set and behaviour of the people toward using toilets. Since women have a direct bearing on other family members, we roped them in along with the adolescent girls to create awareness and motivate communities to promote and accept the general concept of household sanitation. With a quest to mobilise support, a number of innovative methods were put into practise to make the women aware about the vital issue.

For instance, 'Matka' (pot) meetings were conducted, wherein discussions and deliberations would take place till the 'matka' runs out of water. Further, interesting and innovative ways like 'Thali bajao' (beat the plate) activities etc. were organised with the help of the children of the community. The kind of buzz these initiatives created, it was way beyond what we had envisaged.

In another modest step to support municipal schools in Ahmedabad, we facilitated transforming the sanitation infrastructure of 40 such schools through an NGO. The transformation has been so impactful that I can comfortably say that the children in our facility now have access to clean drinking water and cleaner toilets.

Since we as a group are into ports, a humungous part of our social endeavours have always been centred on the marginalised communities of the operational locations. Fisher-folk community in Kutch (Gujarat) have been the cradle of our interventions. Among other regular CSR initiatives on education, health, livelihood and infrastructure, we had recently conducted a day-long cleanliness drive at Juna Bandar, Mundra, which is a temporary habitat of the community for as long as eight months in a year.

Apart from rigorous interaction with the women of the community on the co-relation of hygiene and health, the drive urged the women to inculcate the habit of using toilets amongst all their family

members. Further, while attempting to instil into them a sense of personal hygiene, we also took to the distribution of small gifts like a small set of a nail-cutter and toiletries etc. Waste bins were also distributed to all the dwelling unit holders and the fishermen for dumping the garbage of their houses and boats.

Giving a further thrust to this momentum, we have envisaged a nation-wide campaign which is inspired from the first and largest mass movement – "Satyagraha" – and is complementary to SBM. Like Satyagraha, we intend to make a cleanliness movement; a movement of the people, by the people and for the people. The initiative has been envisioned to rope in future generations of the nation and help them be the change agents to create a culture of cleanliness in the entire nation. I anticipate the movement will ensure that India not only achieves the state of cleanliness but also remains litter-free beyond 2019 and forever.

As far as our regular course of action is concerned, we are incessantly working towards providing several varieties of sanitation infrastructure in and around our operational sites for the rural populace. Having a stringent belief in investing towards promotion, protection and up-gradation of physical capital, i.e. infrastructure and equipment, we attempt bridging the gaps on community needs by ensuring that our infrastructure development programs are firmly footed and responsive to the actual needs of the community.

Lastly, as I believe in the reinforcement theory, let us keep reminding ourselves that this clean India fire that our Hon'ble PM has kindled must not douse off. It's time to make cleanliness, integral and important to our nation.

Let's blur the boundaries and make our public places as spic and span as our households, because it's undeniable that the entire nation is our home and it is our responsibility to keep its backyards, hygienic and sanitised. After all, a nation's cleanliness is its nationals' pride.

Jai Hind!

SWACHH BHARAT: COCA-COLA'S MISSION TO CREATE A RIPPLE EFFECT OF CHANGE

by **Ishteyaque Amjad**



Ishteyaque Amjad is vice-president, public affairs and communications, Coca-Cola India & South West Asia.

There are some startling statistics that should disturb all of us; a United Nations report highlights that India accounts for 90 per cent of South Asians and 59 per cent of the global population that practices open defecation. These numbers, by themselves, make the government's Swachh Bharat mission inspiring in many ways. Swachh Bharat is not just about eliminating open defecation but about changing behaviours, creating awareness about sanitation, and more importantly helping people get the dignity they deserve.

A lot rides on the Clean India mission as it is bound to have far-reaching and sustainable impacts besides improving the way our country is perceived. Open defecation exposes people, especially children and pregnant women to infections. Unhygienic living conditions result in poor health and has a direct implication on people's productivity. It is also one of the major causes of malnutrition that results in high child mortality and stunting in our country. Lack of access to toilets forces women and girls to step out at night, putting their personal safety at risk. Many of these aspects hamper the economic performance and prosperity of the country. According to the World Bank, poor sanitation costs India more than \$53 billion a year or over 6 per cent of its GDP.

Swachh Bharat Abhiyan has the potential to be a game-changer and corporate India recognises this fact. India Inc. is stepping in

to play a significant role to turn this mission into a success. India's expanse and diversity adds a layer of complexity to a programme of this scale. It is therefore important to understand that neither the government nor private players can make a lasting impact by working in isolation. This is precisely why we at Coca-Cola believe that the 'golden triangle' of government, civil society and communities should establish a synergic relationship.

Sustainability is at the very core of our business. Our sustainability framework of 'Me, We, World' defines the essence of our shared vision for how we can catalyse,

collaborate and create social value to make a positive difference in our communities as well as the lives of our consumers. Sustainable community wellbeing is accomplished not only through charities but through capability and infrastructure building along with the behavioral changes. This takes time.

Children are the bedrock of a thriving society and they shape the future of the nation. Investing in children, therefore, is essentially investing in the future of the country. Very often, children drop out of government schools simply due to the lack of a conducive environment. Studies suggest that lack of basic amenities like toilets, access to safe drinking water and basic infrastructure keeps children away from schools. This problem is even more pronounced in the case of young girls. Lack of separate toilets for girls in rural schools not just makes the girls insecure



but creates apathy amongst the parents as they find it unsafe and therefore discourage girls from continuing their schools. Educating and empowering women and girls are known to have multiplier effects. The World Bank suggests that educated women are more likely to be healthier, actively participate in the workforce, earn more and provide better health-care and education to their families. This growth is passed on across generations and helps develop entire communities. One of the fundamental prerequisites of economic growth is to get girls back to schools and ensuring that they can make the most of that opportunity.

To work around this problem, in January 2011, Coca-Cola India and NDTV launched the 'Support My School' (SMS) public service campaign in association with UN-Habitat, Charities Aid Foundation (CAF) and other partners. A public private partnership aimed to empower underprivileged sections of society by providing the necessary water and sanitation facilities along with the required basic infrastructure in the school, 'Support My School' has been instrumental in bringing back public attention to the state of affairs in rural schools across India. Over the years, the programme has gained momentum and has been supported by several corporate and developmental sector partners such as Plan India, Worldvision India and SRF Foundation among others. The

Swachh Bharat Abhiyan has the potential to be a game-changer and corporate India recognises this fact. India Inc. is stepping in to play a significant role to turn this mission into a success.

campaign so far has resulted in transforming over 600 (and counting) schools across India into schools with clean drinking water, separate toilets for boys and girls along with basic infrastructure like playgrounds, sports facilities. They have also been encouraged to implement rainwater harvesting. The initiative has had a positive impact on the lives of approximately 200,000 children with several schools even witnessing a rise not just in enrolment

figures but also in the children's attendance data. These schools also serve as models to the neighboring communities in triggering the necessary behavioral changes. It is heartening to see the engagement and support from other stakeholders such as the panchayat, District Education Officers, local elected officials, teachers, parents as well as community members.

The numbers speak for themselves but what is gratifying is that the campaign has been able to create phenomenal interest in highlighting the urgent need for more initiatives that will improve the condition of schools across the country and enable children to lead better lives. Sanitation is not dirty business. It is a critical utility service and one that calls for a well-rounded approach with technological interventions. The challenge is humungous but we together can play our part in triggering a ripple effect of change, just one step at a time.



MAKING WASTE PAY THE INDIAN WAY

by Kishor K. Thakur



Kishor K. Thakur is the COO and co-founder of Pom Pom, an Indian web-based recycling platform. He completed his BCom from Delhi University & Graduated from Indian Military Academy and served in the Indian Army. He has been in the waste management sector for many years.

The idea of individuals selling their waste and making money out of it has always existed in India, and many developing countries for that matter. Even if the individual household doesn't directly recycle, there is an informal system running at the grass root level that taps into this waste. But the industry is fragmented & informal, and certain items see a higher recycling rate than others.

We feel that a lot of other materials like paper and plastic packaging, milk packets, bottles, etc. end up getting trashed because people don't store these materials and don't realise they are recyclable. Many times this material also gets contaminated and eventually ends up in landfills.

Pom Pom believes that if every Household, School, Corporate etc is given a small incentive to store their dry waste and start segregation at source of materials other than just newspapers, it can go a long way for the recycling industry in India.

Pom Pom is working towards educating Individual homes, Residents Welfare Association (RWAs), Corporates and Schools about the importance of segregating and recycling even the smallest item.

Indians are used to getting incentivised for their waste due to the existing kabadiwala (waste collectors) system. In fact, this system has helped recycle a large volume of waste informally. Example, newspapers are one item that everyone sells. But we still feel some items escape the system because of a lack of link up to the end recycler. Hence individuals don't segregate these items and they don't end up getting recycled by and large.

Pom Pom wants to change that: We want you to recycle even the smallest shred of paper in your house or a price tag. We want households to start recycling for the monetary benefit as well as the



environmental impact in terms of energy saving and resources.

If you actually look at the Zara price tag and shopping bag, it carried a recycle sign. It doesn't matter how small an item is. It has still been manufactured using energy and resources and it should reach the correct recycler.

But we believe India has not yet caught up to the tech potential of waste management. But that's changing very quickly. In the developed countries tech is used from collection of waste to processing of waste and such innovative technologies are coming to India.

India is a country where statistics claim that people have more access mobile phones than bathrooms. We see tech has a huge potential.

We do get orders from our website & our 'Pom Pom Trash to Cash' App available on android and iphone. Also, we feel that technology will play a large role in our

planning and logistics in the future.

For a venture like Pom Pom, the Swachh Bharat campaign really helps because it is making citizens aware about cleanliness and keeping their surroundings clean. People are realizing the importance of not littering around them.

In addition, we see that Swachh Bharat has led schools and corporates to think more of sustainability issues and the environment in general. We have even started 'Recyclable Collection Drives' in schools to encourage children to segregate waste and start recycling.

Considering that citizens are now aware and impacted by Swachh Bharat, Pom Pom wants to go one step ahead. We want citizens to think about 'WHAT HAPPENS' to their waste once it goes to a dustbin or after it is cleaned from their premise.

We see that many citizens are conscious and want to do their bit for the environment. This is where Pom Pom steps in. We want to give every environment friendly citizen/corporate an option to recycle well.

We want people to start segregation at source and realize that their waste has the potential to be a factory's raw material. We see potential in waste!

India has a strong informal recycling industry running, but this needs to be formalized. In addition each and every individual needs to segregate at source.

In addition, with the new Solid Municipal Waste

Pom Pom is cashing in on a very traditional Indian concept of 'kabadi' or selling your waste for money. As a concept deeply rooted in the Indian ethos, it has found an easy fit with the Clean India programme.

management rules being implemented, waste as an industry will come to focus. We also see more investments in waste to energy plants, recycling plants, material recovery facilities, treatment of e-waste and formalizing this sector as a whole.

We hope that Swachh Bharat makes Indians more environmentally friendly and aware. A lot of emphasis is being laid on sustainability now.

Segregation at source has become mandatory in many cities which is very good step. This is the starting point of a Clean India. In addition, adequate infrastructure in terms of clearly labeled bins in public spaces and a strong collection system needs to be focused on. There should be policies that encourage use of environment friendly packaging material among manufacturers of different products.

Individuals and corporates need to be sensitized to waste and emphasis needs to be laid on educating people about waste, benefits of recycling and end uses.



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Rahul Sankhe is a veteran in the Indian solar industry, with vast experience in this sector, from providing inputs for the National Solar Mission Policy formulation to setting up and running Indian Operations of SunEdison. He has also worked with McKinsey and in the Silicon Valley during the tech boom of 1990s.



CHECKLIST: WHAT FOREIGN INVESTORS MUST KNOW ABOUT INVESTING IN INDIA'S SOLAR SECTOR

by Rahul Sankhe

India is expected to be among top four markets globally in solar installs over the next five years, largely driven by the mission level push of the central government with a vision of deploying 100 GW of solar by 2022. Under the leadership of power minister Piyush Goyal, 6950 MW of solar capacity has already been bid out in the last two years and the installed capacity stands at 6762 MW as of March 2016. Combined with a steep decline in solar PV capex over the last two years to less than 0.9 \$/Wp installed (for utility scale plants) and resulting drop in solar electricity tariffs to 7 \$cents/Kwh, growth in solar installations is only going to accelerate further.

As a result, the solar power generation in India has already attracted many foreign developers, and investors and several more are evaluating investing in the sector. Hence as the title suggests, this article attempts to provide guidance to foreign investors looking at solar in India. Note that this is not meant to be exhaustive, but rather highlights a few key areas that should be kept in mind by a foreign investor looking at Indian solar market.

1. Understand that India is not a single homogenous market: While the power

sector is essentially governed by the Electricity Act 2003, both central and State governments have a say in the formulation of specific policies and regulation concerned with electric power generation, transmission and distribution. As a result, every state has its own set of regulations, demand supply dynamics, and tariff regimes that define the power sector within the state. The financial health of state discoms also varies widely, and political considerations impact progress of renewable generation within a state. Hence it is important to develop a nuanced view of the Indian market while formulating overall strategy.

2. Invest for the long haul: A minimum 10-year view (and preferably longer) needs to be taken by investors eyeing the Indian solar market. The model of developing projects and selling either pre-construction or immediately post construction is untenable for the Indian market because of equity holding restrictions, and because the government as well as lenders frown on a “develop and flip” model.

Besides developing, financing, executing and managing high quality solar projects in India, that meet or exceed threshold returns is almost impossible without a strong local team that can successfully navigate the complexities of the Indian power sector. Finally, patience is a virtue, and it is important to be prepared for extended periods of time of subdued activity resulting from political and market dynamics.

3. Think through capital structure carefully:

Having a clear perspective on capital structure based on eventual exit/monetisation strategy for the invested capital is critical to ensuring that the return on invested capital stays true to the original investment thesis. Returns are already stretched due to competitive tariff bidding, so any inefficiency (eg: transaction costs, capital gains etc) resulting from having to re-structure at a later point in time for an eventual exit has the potential to diminish eventual realised returns. It pays to get the top tier law firms and tax/accounting firms!

4. Invest in an experienced and grounded local leadership team:

Power project development, execution and management in India is complex and is not for the faint hearted. In addition to heterogeneity of the market and the complexity of regulation, land aggregation, acquisition and permitting is difficult with land laws varying across states. Additionally, most solar project sites tend to be located in rural areas with their own socio-economic and political dynamics that need to be navigated carefully. An experienced leadership team that understands these elements and has experience dealing with these complexities is essential to ensure success. By “grounded”, I mean that the key leaders should not hesitate to roll up their sleeves and get their hands dirty to debottleneck problems on the ground.

5. Pro-actively engage with key government & regulatory stakeholders:

Electricity is a concurrent subject i.e. both central government and state governments are involved in formulating and enforcing regulation. CERC (Central Electricity Regulatory Commission), the central regulator, is a guideline formulating body, and the SERCs (State Electricity Regulatory Commissions), are responsible for drafting state specific regulations and implementing/enforcing them. As a result, it is important to

build capability to not just track regulatory developments at the centre as well as state, but also actively engage with key government and regulatory stakeholders. Government & regulatory affairs needs to be a critical function ideally driven directly by the local leadership.

6. Fully leverage the local execution eco-system:

Many renewable energy investors tend to have global relationships with vendors and EPC providers and it is natural to try and leverage these relationships to execute projects in India. However, it may well benefit the investor to work with Indian vendors and EPC providers, as the local solar PV execution eco-system of suppliers, PMC (Project Management Consultants), EPCs is now well developed in the country. In fact India now has the distinction of building solar projects at the lowest capex in the world. It is true that panels largely continue to be imported from China but there are a number of good quality local panel vendors as well. Single axis trackers are also now available in India and several top tier inverter suppliers have also started production in India. And local EPC companies have experience of delivering good quality projects on time. Hence thinking local would be beneficial. Besides it can also help you score a few brownie points with the government that is eager to support “Make in India”!

7. Build a strong compliance function:

If you intend to be a long term investor in Solar Power, it is inevitable that the local team will have to deal with management of multiple legal entities, since solar projects tend to be built under separate SPVs. Eg: One large developer present in the country for many years now has over 150 legal entities that are being managed by the local team. Given the complexity of Indian tax, labour, companies act and foreign investment regulations, managing all compliances across numerous entities is an incredibly challenging task. Hence investing in a strong team to handle compliances can prevent many headaches later.

The solar sector in India has just crossed an inflection point and is expected to grow rapidly in the near future. Foreign investment will be crucial to help power this growth and I hope the above-mentioned key areas serve as a useful ready reckoner to all foreign investors looking at investing in India.



India set to beat China in power deal

India's state-run Bharat Heavy Electricals Ltd (BHEL) is closing in on a contract from a Chinese competitor to build a \$1.6 billion power plant in Bangladesh.

China's Harbin Electric International Company Ltd, which has power projects in Iran, Turkey and Indonesia among others, lost the bid on technical grounds. Anwarul Azim, a spokesperson for the Bangladesh-India Friendship Power Company Limited, a joint venture set up to build the coal-fired plant, said BHEL had emerged as the lowest bidder. After years of negotiations, BHEL is expected to sign a contract soon to build a 1,320MW thermal power station in Khulna in southern Bangladesh. It would be the biggest foreign project by an Indian power firm, eclipsing a plant already built in Rwanda and a planned one in Sri Lanka. Nearly two-fifths of Bangladesh's 160 million people do not have access to electricity, according to the World Bank. The proposed power plant will have two units of 660 MW that will generate power for local consumption.

India eyes the first AIIB loans

India's need of \$500 million for its solar projects may be fulfilled by Asian Infrastructure Investment Bank (AIIB).

AIIB, the China-led multilateral investment bank, has an authorised capital of \$100 billion which it plans to invest in global clean-energy initiatives, and could fund eco-friendly investment projects to avoid allegations of promoting pollution. India, the bank's second biggest shareholder after China, fits the bill here.

Tarun Kapur, joint secretary, Ministry of New and Renewable Energy, said: "In about six months, funds could start flowing from AIIB." The interest on the loan is expected to be 2 to 2.5 percent and would be linked to LIBOR for a term of over 15 years.

Headquartered in Beijing, AIIB's expected funding can back Prime Minister Narendra Modi's plan of expanding installed solar capacity to 100 gigawatts by 2022.

IFC inks solar pact with MP

US-based International Finance Corporation (IFC) has clinched an agreement with the Madhya Pradesh government for an ultra-mega solar plant to be set up with a capacity of 750 MW in Rewa district of the state.

As per the agreement, IFC would be providing its services as a financial advisor.

The agreement was signed between Manu Shrivastava, principal secretary for renewable energy for MP, and IFC country manager Jun Zang for a project defined as the largest single-site solar power project in the world.

Rajendra Shukla, MP energy minister, said: "Successful implementation of the Rewa Ultra-Mega Power project will be a key milestone for Madhya Pradesh's outstanding efforts and leadership in renewable energy and the Centre's remarkable vision on solar power."

IFC is working with the Indian government to assist in meeting its large-scale solar energy generation goals.

A MARKETPLACE FOR CLEAN ENERGY – CLICKPOWER.IN

by Vishal Pandya



Vishal is co-founder of REConnect Energy. He is an alumnus of IIT Bombay with specialization in Power Systems. He is an engineer by heart who loves application of technology for scalable solutions. His areas of interest and expertise are – renewable energy marketplaces, restructured power systems, predictive analytics for energy markets, and grid integration of clean energy.

Background:

REConnect Energy is India's largest Renewable Energy services and sourcing firm. Between renewable energy credits (REC) and forecasting and scheduling of wind/solar power (F&S), the firm is serving about 13,000 MW of clean energy assets in the country. This also includes an assignment to carry out state level wind power forecasting the entire state of Gujarat and carrying out state level wind power scheduling for the entire state of Rajasthan. Having largest client base in Renewable Energy, and to meet the growing demand of RE Generators to sell their energy production to bulk electricity consumers, in Feb'2015 we launched a BETA Version of India's First Green Energy Marketplace - clickpower.in.

Clickpower.in is a vision to help every electricity consumer in India source cheaper and cleaner power simultaneously helps RE generators to discover larger consumer market through web-based marketplace.

The difference between Power Exchanges and clickpower.in

The concept of clickpower.in is very novel as there is no other marketplace like this in India. There are power exchanges, which offer standardized contracts. Clickpower.in compliments the power exchanges in a way where it aims to organize the over the counter contracts (OTC) market which otherwise is being operated by so many local brokers as in the real-estate business thus encouraging more consumer participation in open-access market with specific interest in renewable energy.

Functionally, the power exchanges acts as central counter party, settle the transactions financially and also schedules energy in coordination with the load dispatch centers. The contracts are highly standardized, of limited duration and primarily caters to inter-state open-access

market. Clickpower.in on the other hand, aims to cater to very specific needs of buyers and sellers to meet their highly structured power transactions requirements either through inter-state (yet to launch), intra-state or rooftop (under development) power requirements. The platform is online to offline transaction platform where two parties (buyers and sellers) meet online, negotiate terms online, meet offline once the terms are largely finalized via online negotiations and carry out transactions as per the mutual convenience. Its more like any matrimonial website where two parties discovers each other online and decides to engage via offline medium. Clickpower.in aims to facilitate counter-party discovery in far more efficient way by aggregating larger volumes of demand and supply across much larger geographical area including roof-top PV market where Hon. MNRE is aiming to establish about 40GW of roof-top solar PV capacity in next 5 years.

The Current Status

To widen the market acceptance of the OTC marketplace concept, we have placed before Hon. Central Electricity Regulatory Commission (CERC) an appeal to provide governing principles/guidelines along with a formal recognition for clickpower.in as a CERC approved marketplace for OTC transactions. We are hoping that the Central Regulator would evaluate our appeal favorably considering our endeavor to bring about large scale innovation in this sector especially in renewable energy transactions space where very large chunk of capacity addition is expected through bulk consumer's participation (either through open-access or roof-top segment). The overall intent is aligned to promote competition specifically in renewable energy space simultaneously expand the reach of renewable energy to all the consumer categories across India which can not be otherwise met by existing conventional platforms/marketplaces.



EASIER FOR GLOBAL INDIANS TO BUY PROPERTY IN INDIA



The over 1.5 million Global Indians in the UK are among the most prolific investors in India's real estate space. Srividya Rajan, General Manager, Corporate Sales & Brand Engagement, Sumansa Exhibitions, gives some key pointers on investing in India to coincide with the annual Indian Property Show in London in April 2016.

Cities to invest in

In terms of the most preferred city, according to a study conducted by Sumansa Exhibitions, Mumbai has topped the charts followed by Delhi, Bangalore, Ahmedabad and Pune.

Mumbai tops the list for non-resident Indians (NRIs) who are considering to settle down in India in coming years. Mumbai is regarded as the financial, commercial and entertainment capital of the nation and is competing with Singapore, Hong Kong and Shanghai to emerge as an international financial capital.

Delhi has continued to be the most stable market in terms of demand and absorption of both residential and commercial spaces.

Just after Delhi, Bangalore stands at 3rd position with 20 per cent, Ahmadabad at 17 per cent per cent assumes 4th position and Pune is at 5th position with 13 per cent.

New rules

Finance minister Arun Jaitley in the Budget 2016 proposed to amend section 206 AA of the Income tax Act, which clearly states that NRIs without PAN card will not be subjected to higher rate of Tax

Deduction at Source (TDS). Unlike the current situation, where NRIs are subjected to higher deduction of tax on furnishing documents other than a PAN card. This rule will definitely make buying property in India much easier for the people residing outside India.

Dos & Don'ts

While choosing a property an NRI must keep following things in mind:

Sale Deed: This will be the core legal document that will act as proof of sale as well as the transfer of ownership from the buyer to a developer. This should be registered compulsorily. Also, before executing the sale deed, you must check whether the property under deal bears a clear title, feel free to contact our legal experts and get all your queries answered.

Title Deed: This is especially applicable when you are buying a plot from a seller. Check if the deed title is in the name of the seller and he has the full right to sell it. Insist upon looking at the original and not just a photocopy.

Approval Plan of Your Building: Any building owner must obtain an approval plan from

the concerned authority, either from the jurisdictional commissioner or any other officer who has been authorised by the commissioner.

Completion Certificate: This will be issued by the municipal authorities stating that the building is in compliance with rules and is built according to the approved plans. This is very important at the time of purchasing a house.

Occupancy Certificate: An inspection will be performed by the authorities, when the builder is applying for this certificate, in order to ensure that the building meets all the norms that are specified. In simple terms, the certificate would certify you that the project is ready for occupancy.

Encumbrance Certificate: Before buying any land or house, it is important to confirm that the property does not have any legal dues.

Conveyance Deed: The word conveyance means the transfer of ownership or interest in real property from one person to another by a document, such as a deed, lease, or mortgage. In India, transfer of property or rights in immovable property is governed by the Transfer of Property Act, 1882. For the transfer of any immovable property or rights in immovable property, it is necessary to execute a conveyance deed.

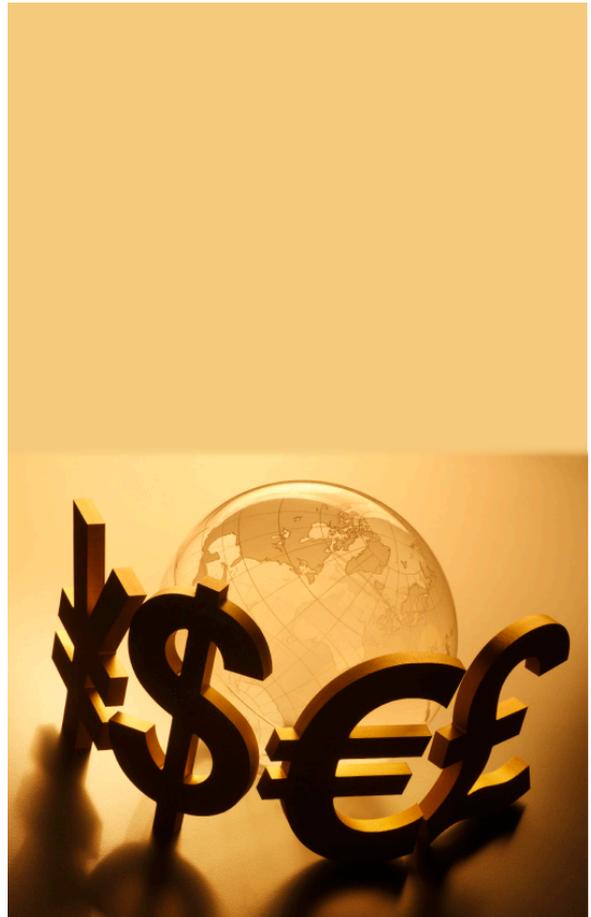
The power of attorney: It is advisable that an NRI should give the power of attorney to an Indian resident who is trust worthy. In case the NRI is not present in India for the legal formalities, the trusted person can complete all the formalities.

Who can buy property in India?

According to the regulations of Foreign Exchange Management Act (FEMA) and Reserve Bank of India (RBI), an NRI, OCI, PIO is permitted to make specific investment in real estate.

Any immovable property can be purchased by an NRI, PIO in India other than any agricultural land, farm house and plantation property. A foreign national of non-Indian origin, resident outside India cannot purchase any immovable property in India unless such property is acquired by way of inheritance from a person who was resident in India. However, he / she can acquire or transfer immovable

Sumansa Exhibitions is the producer and organiser of property and consumer shows around the world. They hold property shows in Dubai, Doha, Muscat, London, Durban, Singapore and Hong Kong.



property in India, on lease, not exceeding five years. In such cases, there is no requirement of taking any permission of /or reporting to the Reserve Bank.

An NRI, PIO, OCI can get any immovable property by gift from Indian resident, Indian citizen residing outside India or person of Indian origin. However, the property can only be commercial or residential in nature. Agricultural land / plantation property / farm house in India cannot be acquired by way of gift. A foreign national of non-Indian origin resident outside India cannot acquire any immovable property in India by way of gift.

An NRI, PIO or OCI can obtain any property by inheritance from a person resident in India

and a person residing outside India. However, the person from whom the property is inherited should have acquired the same in accordance with the foreign exchange law in force or FEMA regulations, applicable at the time of acquisition of the property. A foreign national of non-Indian origin can inherit and hold immovable property in India from a person who was residing in India.

REAL ESTATE ACT 2016: A WATERSHED MOMENT FOR INDIAN PROPERTY

by Deepak Varghese

The draft Real Estate bill was put up for consultation way back in late 2011 and was finally passed in March 2016 after a lot of debate and drama.

The bill marks a watershed in the Indian Real Estate market, which despite being an essential requirement for all citizens did not have a framework of compliance nor a regulatory authority. Entry barriers were so low that anybody could start a development company and take public monies, with the buyer having to turn to the courts. There the

storage spaces and showrooms. In smaller towns, there is a practice of building small commercial units on the ground floor, with parking over ground, while higher levels had residences. The bill now covers almost all developers in the country.

Until now, unscrupulous developers operated knowing that disputes would drag on in courts. The creation of an appellate authority alone will bring with it a fear of the law and prevent bad intent in majority of the cases, which in turn will take the pressure off the judicial system to a reasonable extent.



cases themselves were known to take as long as 30 years to reach a decision, and in most cases a sub-par outcome for the buyer.

This bill aims to protect the interest of buyers of plots, apartments and buildings by creating a dedicated appellate authority (Real Estate Regulation Authority) that will attempt to resolve disputes quickly. While the initial draft was quite limited to a residential unit, the final bill covers shops, offices,

Key Highlights:

Carpet area will be the sole measure of quoted prices. Current practice is to quote built-up, super-built-up and super-super-built-up areas. As there are no standard definitions for these measurements and tend to be unique to almost each developer in what was included in the saleable area, it was a challenge for the lay buyer to compare projects.

This invariably led to customers being disappointed with the purchased unit many years later, as the projected space sold did not meet the impression that was given at the time of sale.

While this single definition of saleable area will eliminate majority of wrong selling practice, developers these days build fancy show apartments that may have the right square footage but with higher than delivered ceilings and bangs and whistles that make the apartment look perfect. But they would choose to not give the buyer a clear idea of all the additional expenditure required to achieve the same standard for the unit that they will be purchasing.

Penalty rates for delayed delivery to be at the same rate as the developer charges the buyer for delayed payments. Sale agreements are so one-sided that developers can charge 18 per cent to 24 per cent for delayed payments made by buyers but in the case of delayed delivery, clauses normally carry a square foot rate per month that works out to 3-5 per cent per annum.

The bill states that the rates will be the same for parties and the developer will be obliged to refund the sums paid with penalty interest. In the case of cancellation due to delayed delivery, it will be due from the day that sums were paid to the developer and not from the day the delivery was committed.

Defined use of funds collected for the sold unit. The bill states that the developer That said, genuine developers are quite concerned that this clause could be interpreted with retrospective effect – in which case the industry as a whole would be defaulters.

Registration of all projects that are ongoing and have not received a completion certificate need to be applied for with the authority within three months of this bill i.e. by June 26, 2016. The exception being for developments where the land is less than 500 square metres and less than eight units are being delivered. Along with the application for registering the project, the developer will have to submit their past track record of development, including details of delayed deliveries and disputes.

Registration of real estate agents Until now,

anybody could become a real estate agent in India. No qualification or registration was required. It was a true cottage industry, with every home or shop possibly doubling up as a real estate agent outlet. This inclusion will bring about professionalism to the selling process

The sale of units to commence only after the project has received plan sanction and commencement certificate. It is common practice to launch off plan sales before any regulatory authority has given its approval. The buyer after having paid 5-10 per cent of the sale consideration

invariably has a long wait before the construction actually starts. Given that many projects are joint development projects, where the developer pays a small fraction of the land cost to the land owner, the developer is effectively using the buyers funds to draw up plans and submit it for sanction and paying all licence monies too.

Land owners roped in as the end beneficiaries of the sale proceeds of the land on which the development is being made.

Besides creating a defined framework of procedures and standards, the bill has brought about coverage to all concerned parties to a sale and has defined penalties for violation that could even lead to various parties being debarred from future development activity.

In all, a desperately required bill for an activity that contributed to a large portion of the national GDP.



The creation of an appellate authority alone will bring with it a fear of the law and prevent bad intent in majority of the cases, which in turn will take the pressure off the judicial system to a reasonable extent.

Deepak Sam Varghese, founder-director of Moonbeam Advisory, is a career banker with nearly two decades of experience in retail and private banking. He is a specialist in banking services and wealth advisory and has been advising domestic and non-resident Indians (NRI) in Mumbai, Delhi, Dubai, Singapore and London, where he was based. Now Bangalore-based, his special emphasis is on financial advisory in real estate transactions, advising investors and developers in key Indian metros.



TURNING AROUND INDIA'S HOUSING MARKET

Aditya Javdekar is the CEO of Vilas Javdekar Developers, a Pune-based firm focused on sustainable housing and real estate solutions. He gives his insights into what the recently passed Real Estate Bill means for the Indian property market.

What would you classify as the highlights of the Real Estate Bill?

The highlights are legal title and approval disclosures; committed possession time; five-year warranty; no misleading advertisements; commitment by developers will be a legal document; brokers will be registered property dealers; interest penalty for developers who delay possession; and several other highlights that will make the real estate industry more responsible and accountable to the consumer.

Is it friendly towards developers like yourself?

Yes, the bill is friendly because it advocates ethical business practices and financial prudence in order to ensure good quality product delivered in time to the consumer.

Would it help instil buyer confidence in the market?

Yes, buyers and well-meaning developers have welcomed this bill as it will introduce transparency and fly-by-night operators will be forced to exit the business. This will have a short term impact of high input costs to developers and buyers may feel the shortage of good homes, but eventually, once the system settles down, the buyers/investors in real estate will benefit tremendously.

Also, approval authorities (like municipal-corporation and government departments that issue permission to build will also have to be accountable for gross delays in issuing building permits and occupancy certificates (OC). Once permits and completion/OC issuance process is streamlined and

“ease of doing business” is established, reputed and professional real estate developers will have tremendous demand in a country which has a shortage of over 20 million homes.

What more could/needs to be done to stabilise the sector?

Administrative reforms such as deemed permissions, self-attestation for green clearance, industry status for real estate, and infrastructure banking interest rates will help in this transition and ensure prices do not rise steeply due to eminent supply shortage.

How important is the environment-friendly approach to your business model?

Being environment friendly is just not enough, we believe that every community needs to have a sense of collective pride of their home, their society, their neighbourhood and their city. Environment friendly construction needs to be second-nature for real estate developers as it makes the building operating system more efficient (both on resources and cost) but we believe that once we have set the environment infrastructure properly, we also need to monitor the happiness index of the project. If we achieve that, we not only increase customer experience tremendously, but we also generate tremendous value to all stakeholders of the project and community.

I can summarise our firm's ethos in one line “We love what we do”. Every VJ team member is absolutely thrilled to work each day and is able to generate tremendous positivity in her work. This leads to an output that has higher passion, resolve and will power to do the best.

AIMING FOR A HIGHER REALTY STANDARD IN INDIA

Muninder Seeru is managing director of G:Corp Developers Pvt Ltd, which has a range of large projects and over 3 million square feet of residential, commercial and retail in India to its credit. As someone with over 23 years' experience in the real estate industry and expertise in complex deal structuring, he uses his unique vantage point to analyse India's new Real Estate Bill for 'India Investment Journal'.

What would you classify as the highlights of the Real Estate Bill?

The highlights of the Real Estate Bill 2016:

1. The creation of the Real Estate Regulatory Authority (RERA): This Regulator/ Authority shall have by far the most far reaching impact on the Indian real estate scenario for all times to come, the registration of a development with the regulator makes it difficult for any developer to defraud customers because of the information that has to be put up and submitted and enables the customers to take calls based on actual facts.
2. Bringing in Transparency and Disclosures into this Business: Real Estate in our country has always been seen with suspicion because of a variety of reasons. The RE Bill of March 2016 brings in high standards of disclosures and transparency in terms of the developmental approvals, title, financial health etc into the open so that there are no surprises for stakeholders in the development. This is of immense benefit to the consumers.
3. The Imposition of Penalties and Revocation of the Developer's registration: We are all aware for any law to be effective there have to be stringent punishments so that it deters people from such actions. The RE Bill has taken care of this aspect quite well by the imposition of very heavy penalties on the promoters including fines and jail terms. This shall go a long way to protect buyers' rights.
4. Sale of Units by Carpet Area: This Bill makes it mandatory for a developer to sell and charge the rates based on the carpet Area (This is defined in detail in the notification) of an apartment/unit. India being a large country, every city has its own way of calculating the Super Built-up Area (SBA), and many developers just go by their whims and fancies and load fancy areas to arrive at the SBA, though the Developer community has a well-defined formulas on how to work out the SBA. This shall enable an apple to apple comparison for the home buyer and help them in making their choice.
5. Defects Liability Period (DLP) of 5 Years: A customer can now have the developer, rectify defects that are serious in nature (Though, this can be subjective, and not objective) even until five years from the date that he has taken possession of the property. This is in sharp contrast to what happens today to a hapless home buyer because of some unscrupulous developers in distant suburbs or Tier II cities.
6. Restriction on the Developer to Assign rights: This clause in the RE Bill restricts the Developers from assigning or transferring their rights. This is to protect customers who purchased homes/apartments based on the brand identity of a certain Developer. In such situations where a developer may have malafide intentions, this clause puts the brakes on the same and protects the consumer!



*Muninder Seeru, Managing Director,
G:Corp Developers Pvt Ltd*

Is it friendly towards developers like yourself?
The intent of this bill is to safeguard the rights of the

buyer and we feel that it shall meet that requirement quite well. However, by default many developers like us, who practise transparency and ethics in their business, shall indirectly benefit as the buyer shall find it easier to do business with such developers. This is in fact going to help the real estate industry mature with time as the industry as a whole understands the intent of the bill.

Would it help instil buyer confidence in the market?

This bill shall definitely help the real estate sector in the long run though, there might be a little bit of pain in the short term. Buyers have suffered earlier at the hands of fly by night developers and lost lifetime savings in some rare cases. This bill empowers the home buyer and gives him or her the confidence to make the right choice.

This is a move in the right direction but the government of the day or future has to enable it for the developer community as well and make it easier for developers to buy land, get timely approvals and ensure enforcement of the law of the land and not the jungle.

What more could/needs to be done to stabilise the sector?

Some steps that can be taken to stabilise the real estate sector:

- Online Approvals to completely eliminate the human interference and corruption.
- Home loans at 6-7 per cent interest rates.
- Hold the approving authority/bureaucrats accountable for any delays that are attributable to them.

These factors shall go a long way in helping this industry perform in terms of timelines and budgets. At this point of time there are too many loose ends and imponderables and the odds are stacked up heavily against the real estate industry. The need is to have major land and labour reforms for it to prosper and mature as an industry and it not to be vilified because of a few rotten apples.

What is the central ethos of your firm, across residential and retail?

We at G:Corp strongly believe in maintaining a strong culture of ethics and strive to conduct our business professionally and honestly to the best of our abilities. As a company we have two fundamental drivers that keep us motivated and going as an entity:

- We are driven by integrity in all our business dealings.
- We strive towards maintaining transparency with all our stakeholders.





Manoj is a UK-based entrepreneur and CEO of www.redgiraffe.com - a London-headquartered real estate technology venture which has recently launched its technology and real estate operations in Delhi NCR area in India.

FIXING THE TRUST DEFICIT IN INDIA'S RENTAL ARENA

by Manoj Nair

India is the world's fastest growing and third largest economy, 60 per cent of which is consumed domestically. Driven by a large population, rich resources, and skilled manpower, this growing economy experienced a gradual shift towards services and industry sectors in the past decade.

With the establishment of a stable government providing a strong mandate for reforms and a decisive shift in policies such as National Urban Rental Housing Policy, the country is in the process of formalising regulatory and legal frameworks for the real estate sector, which is expected to grow by 70 per cent in the next five years.

The rapid urbanisation, rising disposable income, and repatriation of non-resident Indians (NRIs) is fueling this ever-growing appetite for real estate, especially in urban residential space. The IMF estimates that there is a staggering 19 million housing unit shortage in urban areas alone.

Renting a house is more cost-effective than buying one, so this huge gap in urban housing supply creates a tremendous potential for the residential rental market.

Despite this demand, there are 11 million vacant and 0.8 million unsold homes in urban areas. This mismatch in supply and demand is largely due to the trust deficit issues faced by landlords who keep their properties locked up, and by large banks that are holding inventory as collaterals. Many of these landlords are NRIs, who dread dealing with brokers renting their property to unverified tenants, in case those tenants become squatters in a market loaded with tenant-biased regulations.

A similar issue of trust is faced on the tenant's side. Tenants hold misgivings owing to the lack of verified listings and the fear of losing their security deposit.

On the other hand, large banks are looking for a credible counter party to take the inventory into the rental market. This situation not only deprives

Renting a house is more cost-effective than buying one, so this huge gap in urban housing supply creates a tremendous potential for the residential rental market.

landlords the potential rental income but also prevents tenants the ability to rent their dream home in an efficient and timely manner. According to a survey, large MNCs experience substantial productivity loss during their employee transfers, both domestic and international.

It is no surprise then that a number of prop-tech start-ups have mushroomed in the last five years, aimed at solving this problem. But fragmented, untrustworthy, and part-solution offerings lack holistic and cost-effective attributes, with no post-transaction and long-term professional customer service.

What we are trying to do with RedGiraffe.com is to offer comprehensive real estate agency services with the seamless interplay of sophisticated technology interface and a clinical operational layout. We have chosen the most complex market - India as our first country of operational launch.

The firm aims to support its clients right from the search till the contract sign-up phase and all throughout the duration of the tenancy.

Its proprietary technology, verified listings and tenants, and tailor-made options for MNCs streamlines and expedites the process of renting a property with peace of mind resulting in substantial savings for corporations and continuous income for landlords.

This disruptive company hopes to build trust in the entire ecosystem by bringing transparency in its transactions via secure online payments, which will generate substantial revenues for the government in the form of service taxes.

ALLEN & OVERY



Delivering market-leading India expertise

Our driving ambition at Allen & Overy is to help the world's leading companies make sense of the commercial and legal complexities of globalisation. In a market as dynamic as modern India, that's an agenda that fits exactly with the needs of our clients.

We have taken a lead among international law firms in providing the right support for our clients, whether they are investing in India or looking to expand their operations in India to new markets across the world. We have done this by providing them with the right resources to complete complex cross-border transactions, often in multiple jurisdictions, and by giving them access to first-class legal support on the ground in India.

Our India Group is made up of over 100 partners and associates drawn from across our network of international offices. All of these professionals have deep specialist knowledge of the Indian market and

a long track record of working on India-related matters. But they also reflect the full range of practice areas in which A&O excels, including foreign direct investment, M&A, banking, capital markets, litigation, arbitration and employment, as well as the full range of business sectors, including energy, infrastructure, mining, financial institutions, private equity, insurance, telecoms, media and technology, real estate and life sciences.

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