1927-2017 FICCI @90

'India's Quest:
Targets for the Decade'



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Published by
©Federation of Indian Chambers of Commerce and Industry 2017
Tansen Marg, New Delhi - 110001

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ISBN Number: 978-81-936256-0-6

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Foreword

After taking a few knocks over the past half a decade, the Indian economy is once again on the move contributing to renewed optimism about India at home and around the world. India remains among the fastest growing large economies of the world. The new sense of direction given to the Nation by Prime Minister Shri Narendra Modi's call to build a "New India", balancing the imperatives of economic growth and the assurance of well-being of all citizens, will require a sustained focus on the nation's development agenda. FICCI has marked its 90th year with a renewed commitment to build a New India.

This book on India's Quest was initiated with a view to chart out the agenda for the next decade, when FICCI would celebrate its Centenary. With the objective of identifying India's development challenges over the next decade we reached out to experts and leaders across various fields - manufacturing, technology, tourism, social sector, arts, media and philanthropy, amongst others. The authors were asked to identify specific targets for India for the next ten years, and suggest a roadmap to achieve the same. The effort has been to bring together constructive ideas to address key challenges and unlock the true potential of India.

The core idea that has emerged is the need to have sustainable and inclusive growth. While economic growth is a pre-requisite, social development is paramount if India has to leap towards the next stage of development. Economic well-being and social well-being must go hand-in-hand. In the last two and a half decades, India has seen significant economic reforms and there is no doubt that more reforms will be unleashed in coming years. The next wave of reforms should focus on the social sectors, which are in dire need of transformation. Whether it is education, healthcare, sanitation, poverty alleviation, housing or gender conditions, the gaps are humungous and India has a lot to improve upon. Setting basic conditions right has been identified as the minimal target to be achieved by many authors in this book. Whether it is education or healthcare, policymakers need to lay additional focus in these areas as no country can prosper in absence of a healthy and educated society. Equally important is the continued focus on gender balance and women empowerment.

Solutions have to be found not only for today's problems but for challenges that lay ahead of us. Ten years from now, Indians should be able to lead a healthy and prosperous life that is sustainable for several more decades. And this is precisely what this book illustrates. The challenges of urbanisation, infrastructure and energy need innovative solutions that are green and environment friendly. In-fact, one of the articles also talks about a maritime strategy that integrates safe, secure and sustainable growth.

As a young nation, India has made a mark globally in fields like space and we have the potential to be a leader in this field. It is now time to take lead in other technologically advanced areas as well, such as defence manufacturing, which is also amongst the focus areas of 'Make-in-India' programme. We also have immense 'Soft-Power' that can be unleashed for larger economic gains. Targeted policies for promoting tourism, art & culture, and India's traditional knowledge can transform the way world perceives India and raise its global standing. This book in-fact elaborates some innovative solutions in this regard.

I would like to thank all the authors for identifying what they regard as imperative for laying out a roadmap that provides practical and effective solutions for not only policymakers but also for the industry and other stakeholders in furthering their contribution towards nation building.

In the last 90 years, FICCI has witnessed the evolution of the Indian economy from pre-independence to post independence, from the plan era to liberalisation, from a closed economy to a vibrant global player. I am sure that in the next ten years, FICCI will live through and contribute to a new era of transformation and the building of a "New India".

Sanjaya Baru
Secretary General, FICCI

Towards a Prosperous India: Getting the Basics Right

Pankaj Patel

Target for the Decade

Achieve 100% literacy to bring down the poverty rate to below 10% of the population.

In the last 70 years since India's independence and 26 years since the initiation of economic reforms, India has traversed a long distance towards social and economic development. Even as we celebrate our achievements, we need to double up our efforts as we still have a lot more distance to cover.

Only a literate and educated society will be able to create and utilize productive employment opportunities

The dream of economic prosperity for a large diverse country like India cannot be realized until we are able to provide every Indian with access to basic amenities of food, shelter, water, electricity, health and education. High economic growth in last two decades has helped India in reducing the poverty rate to more than half from 45.3% in 1993-94 to 21.9% by 2011-12. Sustained high economic growth over the next decade should help us in bringing it further down to below 10%, even though the ideal would be complete eradication of poverty.

While strong economic growth is important to create income generating opportunities to lift people out of poverty, I firmly believe that this can happen only through a fundamental shift in our education system. Merely handing out doles or subsidies cannot fight off or alleviate poverty and improve the standard of living of the poor. It is really wealth generation and redistribution of this wealth by means of employment that will fight poverty effectively. And only a literate and educated society will be able to create and utilize productive employment opportunities.

Globally, we have seen that in order for the benefits of economic progress and development to percolate to the poor in the shortest time, it is important to achieve 10% economic growth per year combined with major social development, especially in the key sectors of education and health.

Over the next decade, we want to see India leap towards the next stage of development but before that, we need to strengthen the fundamentals. Once the education scenario in the country is transformed,

India would be able to leap forward in providing its citizens access to all other basics - shelter, healthcare and basic infrastructure. India should thus aim at 100% literacy to begin with. The positive impact of education on poverty has been well established in several studies. Education is the only means of preventing transmission of poverty between generations. Educating children of poor families improves their health, nutrition and prospective income earning capacity. It is equally important to make education more inclusive. Education for girls is extremely important as it plays a crucial role in improving their own health and social status besides strengthening family health and providing income stability to the household.

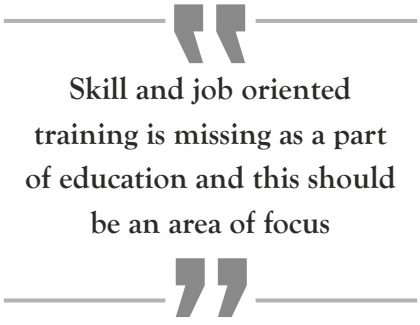
While India has made some progress in spreading literacy over the last decade, our literacy rate at 74% compares poorly with the global average of 86% and even with other emerging countries like Argentina, Brazil, China, Indonesia, Mexico, South Africa, and Turkey, which have literacy rates ranging between 92% and 98%. Within India too, there is a huge disparity in literacy rate amongst different States. While a few States like Kerala, Tamil Nadu, Tripura and Mizoram have high literacy rates of over 90%, a few States like Bihar, Uttar Pradesh, Rajasthan, and Andhra Pradesh continue to have literacy rates below 70%. In-fact, over the last two decades, states with major improvement in literacy rates have fared much better on poverty indicators as well. A concerted effort by the state governments is thus required in scaling up education across their territories to enable universal access to education for all.

At present, public expenditure on education in India is around 3.7% of GDP, which is much below the global average of 4.7%. There is a clear need to enhance the public spend on education. Another concern is that a major portion of this expenditure is channelized towards higher education. While investment in such institutions is important, the fact is that they cater to relatively fewer students. The primary schools in India, on the other hand, are under-funded and challenged by lack of infrastructure and unavailability of quality teaching staff. The central and state governments should ensure reasonable infrastructure for all schools in the country. Even today, many primary schools do not have access to electricity, adequate classrooms, furniture or even toilets. Fixing these basic infrastructure issues should be taken up on priority.

Equally important is to improve the quality of education. When class V students are unable to read a simple text of class II grade, it reflects poorly on India's state of education and needs strong attention of policymakers. The poor education quality in government schools prompt parents in India to send their children to private schools. However, a large majority of Indians cannot afford higher costs of private education and have to rely on government run schools. Unless we are able to turn the table and improve the quality of education in government schools, India will not be able to generate productive human capital which is a pre-requisite for sustaining high economic growth. To improve the quality of education, a shift towards methods of learning based outcomes need to be implemented effectively with appropriate training for teachers. Additionally, incentive schemes combined with performance based accountability should be introduced for teachers across all government schools.

To expand scale and reach of quality education across the country, there is a need to shift to technology based solutions. Investments in technological interface across all primary schools in India can help

address the issue of availability of quality teachers. Virtual classrooms can be an effective solution for improving learning outcomes for most of the schools in rural areas.



Currently, right from school to higher education, education does not guarantee employment. Skill and job oriented training is missing as a part of education and this should be an area of focus. Several schemes have been introduced by the government for skill development but these have largely been for higher age groups. There is a need for dovetailing skill education with primary and secondary education. By starting skill development at a younger age, we would be able to create a future generation with better life-skills and capability to create livelihood opportunities for themselves.

Not every entrant to the workforce can be absorbed in a regular wage/salary based job but every skilled person has the capability to be self-employed or become an entrepreneur and create additional jobs. This is what India needs for providing decent income generating livelihoods for millions of its future workforce and for bringing more than 270 million people out of poverty.

I believe an unwavering focus and a concerted effort on the three 'As' is important. Firstly, an Assurance of Quality - in the very approach to education, teaching resources and learning outcomes. Secondly, the Access to technology in classrooms, better infrastructure with basic amenities in the schools and skill development programmes at school level to make children more employable. The third aspect we need to focus on is Affordability and how we can make high quality and purposeful education affordable for the people. The government must enhance public expenditure in education, particularly at the school level, and raise the overall quality and standards of education. By making such education affordable, parents would be encouraged to help their children gain quality education which is within their means.

I also believe that innovation can be a powerful catalyst for triggering social development and well-being in unimaginable ways. It can spur new thinking, new linkages in networks, both human and technical to accelerate growth and enhance the living standards. We must create an innovation ecosystem that can challenge conventional thinking that hasn't produced results and usher in new ideas, thoughts and approaches that are more geared for the future.

This book about India's quest will help in identifying targets and roadmap that can help take India to the next stage of development. I am confident that suggestions by all authors will be considered in the future course of policy planning and implementation.

Pankaj Patel is President, FICCI, and Chairman, Cadila Healthcare

Promoting Gender Equality

Shobhana Bhartia

Target for the Decade

Over the next ten years, 50% of the workforce in India should comprise women.



The decennial question that is often asked in this 70th year of India's independence is a simple one – Has India fulfilled its goals or has it fallen down on them? There are no simple answers. India has made great progress in GDP, life expectancy, literacy and maternal mortality, to name a few. India certainly has become a much bigger player on the global stage but at home, many challenges remain. Among them the primary one I would like to focus on is the issue of gender parity and women's empowerment. Given how far India has fallen behind in terms of gender parity, I feel it has the most to gain from pushing this agenda. If we had gender parity, according to several estimates, we could add a staggering $2.9 trillion by way of GDP by 2025. That would be 60% more than projected at present.

But even if this ideal does not materialize, if India can come abreast with the best in the region we live in by way of gender equality, we could add $700 billion to the economy by 2025. But for this we need enabling conditions for women like education, essential services and a positive legal and political framework.

The goal of 'Gender Equality' often appears Kafkaesque given the many and complex struggles, the women wage day after day to confront the all-pervasive violence and indignities they face at multiple levels.

And yet, it may not be an exaggeration, if we say that today we have gone beyond the rhetoric and reached an inflection point and in many ways are poised for greater and more concrete advancement in achieving gender equality.

Where does this optimism come from? It arises from the evidence that has proven irrefutably that any economic growth is pushed by advancing women's equality. More importantly, gender inequality is

hurting more people or stakeholders than just women and their families living in downstream habitats and under impoverished conditions, often subject to willful neglect or left behind on some flimsy or unacceptable grounds.

It is hurting economic growth, setting back business and wealth generation and, most vitally, thwarting the global effort to achieve the goal of sustainable development.

Everyone, including the corporate or private sector, understands that they have to work together to address the gender gap. There is a growing recognition that gender inequality is not only an issue arising from the regressive mindset or stemming from entrenched notions and patriarchal values related to power and privilege but also from the equally compelling and stark reality of economic exclusion or disempowerment of women.

In fact, facts and figures speak loud and clear: "In 2013, the male employment-to-population ratio stood at 72.2 per cent, while the ratio for females was 47.1 per cent" (ILO, 2014); "Women devote 1 to 3 hours more a day to housework than men; 2 to 10 times the amount of time a day to care for children, elderly, and the sick, and 1 to 4 hours less a day to market activities." (World Development Report, 2012, World Bank); "In South Asia, over 80 per cent of women in the non-agricultural jobs are in informal employment..." (UN Women, Progress of the World's Women 2015-2016).

Investing in women and girls has proven to be a winner in more ways than one - A study using data from 219 countries from 1970 to 2009 found that for every one additional year of education for women of the reproductive age, child mortality decreased by 9.5 per cent.

If women are in senior management positions, there is greater diversity of leadership styles and thought and this impacts favourably on organizational effectiveness. These are all positives that a developing country like India cannot afford to ignore or even procrastinate about.

In India the main challenge lies in advancing women's right to education, skill-building, legal entitlements and, most important, ensure recognition of the unpaid care work that they are doing and advocate for policies that weed out biased notions about what constitutes women's work or sphere of responsibility and build a strong supportive environment and service that enable women to work as equal partners and members of the workforce.

The moot question is; are we ready for the much-needed push we need to give at the programme and policy levels to make gender equality not an ideal but a reality? The answer is yes, provided we approach the whole issue in a bipartisan way and work collectively to actualize it.

In terms of possibilities, if we can use tennis parlance, we have a two-point advantage over barriers. Firstly with the Sustainable Development Goals recognizing gender equality as a primary goal and embedding women's development and empowerment across all 17 goals has ensured a far greater focus and possibly strengthened the on-going cooperation between government, the private sector, and NGOs. Secondly, we know that having worked on gender mainstreaming for the last three decades, India has witnessed and continues to see many changes in its political, religious, social and administrative arenas, which have a far-reaching impact on women and their development. Raising the

age of marriage, educating women and inducting them into the workforce are the pivotal markers of empowerment. But there are many lacunae in these fields which hold women back. I very strongly believe that the foundation for gender equality has to be education. Once we have universal education for women, many other things like health and job skills will become that much easier to achieve.

While literacy levels for women in India are growing, it is still only 65.46%. There are many factors which should be addressed so that the pace can be accelerated. Among the foundational factors are low enrolment; one out of every 10 girls in the age group of 6-11 is not enrolled in school. Now, those who do enroll tend to drop out at a much higher rate than boys. There are many reasons for this. Among these are lack of sanitation facilities and easy and safe access to schools. Young girls do not feel safe or confident to go to schools without proper sanitation facilities. There have been so many cases of molestation and rape when girls are forced to go to unguarded areas because their schools have no toilets. Education is the bedrock of empowerment and gender equality and we need to focus on this much, much more. To understand the challenges of pushing these two concepts, we need to be clear what we are up against. It is not enough for education to be just available, it should be of quality. This has a direct bearing on access to jobs. The lack of employment skills explains why women in India have a low representation in the labour force. It is really unfortunate that the World Bank ranks India 120 among 131 countries when it comes to female participation in the workforce. Just 14.7% women in urban areas have a job.

With education will come greater workforce participation. In April, the World Bank released a report on the labour force participation of women in India. Using data from the National Sample Survey Office (NSSO), this report shows that labour force participation rate of women in India has slipped dramatically in the last 20 years. This has been most dramatic among women in rural India—research by the authors shows that while nearly half the rural women aged 15 years and above were "in the labour force" in 1993-94, the number dropped to less than 36% in 2011-12. Labour force participation rate of urban women has also dropped in the same period, though not as dramatically.

Yes, there are many young women coming into high tech jobs and there are many women becoming corporate leaders, but when seen on the whole, we have not done anywhere near enough to give all women a playing field, leave alone a level playing field. As Melinda Gates said, "It is not that we don't know what to do or that we can't do it. It's that we haven't chosen to." Today, in my opinion, we have better conditions than ever before to make a real difference. We have the political will – the beti bachao, beti padhao being one example, the reservation at the panchayat level for women being another – we have greater access to technology than ever before to deal with problems like maternal and child mortality, we have the information highway to generate awareness. We need to bring all these together to bring about the change that has to happen for half the population.

Yet when it has come to political participation, India has been a path breaker in many ways.

India saw the political glass ceiling breaking much earlier than in many developed countries. It has had powerful women leaders like Indira Gandhi, a woman president, a woman foreign secretary, social activists and chief ministers. These are indeed achievements to be very proud of. But this has not meant adequate gender representation in politics as a whole. The glitch is that there is a wide chasm between

the exemplary achievements of women who have overcome all odds to attain high office and the lot of millions of women across the country. Let us not gloss over the odds that women have to overcome in our country. Starting from female foeticide based on a false binary of the worthlessness of the girl child, the struggle just to survive is much greater for women.

As Facebook CEO Sheryl Sandberg said in her seminal work 'Lean In', that woman anywhere, particularly in a patriarchal society like India, has to really push herself, walk that extra mile to even keep up with her male counterparts, let alone get ahead of them. Despite many international and national agreements, women are still much more likely to be disadvantaged than men in our society. They have less access to healthcare, less access to property, education as mentioned earlier and economic empowerment in the form of employment. Then there is gender-based violence and a great lack of awareness of the legislation which is precisely meant to help women.

The legal environment too has been the best in a long time. We have comprehensive laws which weigh in on the side of women. From The Prohibition of Child Marriage Act, 2006, Special Marriage Act, 1954, Dowry Prohibition Act, Medical Termination of Pregnancy Act, 1971, Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, National Commission for Women Act, 1990, Equal Remuneration Act, 1976, the Judiciary and Parliament have certainly not let Indian women down. However, two main problems remain. These are lack of awareness of their far reaching provisions among women themselves and the lack of adequate implementation. This has meant that many women have fallen through the cracks.

A worrying development in my view is the increasing crimes against women which seem to have no bearing on socio-economic circumstances; it is an ugly trend spreading across classes. Violent crimes against women have gone up 34% in the last four years with an abysmal conviction rate of roughly 24%. This is and will remain a major roadblock to their empowerment. A woman who is at risk of violence or harassment will be reluctant to go out to work and will face much greater family pressure not to. This is an added shackle for Indian women.

Successful empowerment must see women integrated into every sphere, from the economic, political and social. Her worth must be realised in the household, not just as a workhorse but as a person contributing to the economic value of society. This must transcend to the community level which I feel will be the first step to gender equality. Economic empowerment must focus on income generation for women. A woman who is cognizant of her economic worth creates a domino effect in society beginning from her family right up to the national level.

The Hindustan Times which I manage has taken a significant initiative in this field because as a leading media house we realize it is our responsibility to be a catalyst for change wherever we can be. I believe that the media can play a great role in raising awareness and influencing policy with regard to gender parity. With an aim to capitalize on the potential of boosting women's capacities at the grassroots level, our initiative focused on women's education, sanitation, health, nutrition and proper maternity care in two villages in UP, arguably among the most backward states when it comes to development indices. To carry forward the empowerment process, computer literacy classes were conducted for women as well as skill training in different fields. The results were nothing less than astounding. These villages have

become magnets for talent seekers from places like Meerut and Agra. The result has been that women have become economically independent. They now demand and get respect and they have become change agents. Being part of the workforce changes the dynamics of gender relations, and this has happened in these two villages. It has led to a paradigm shift in the very way women are perceived and the way they perceive themselves. An economically empowered woman changes the family and social equations for the better. Imagine how the economic fortunes of India would change if women were to contribute to their true and full potential. That alone should propel change.

The journey towards empowerment cannot be seen in gender isolation. It has to involve men at every step

On the education front, HT runs Paathshala, an initiative that supports and funds the education of underprivileged children, many of whom are girls. This initiative was started in 2012 as the "You Read They Learn" campaign. Over the years we have made a difference in the lives of 60,937 children. We put a certain amount of money from every copy of Hindustan Times sold, into a corpus. This provides the funds to support our NGO partners who directly work in the education of underprivileged children. So every time you pick up a copy of Hindustan Times, you help send a child to school.

But I must add here that the journey towards empowerment cannot be seen in gender isolation. It has to involve men at every step. The mistake made often is to think that this is a struggle by women for women. It is not so. In semi-feudal and developing societies like ours, power still vests with men. They have to be influenced and involved in the movement for gender equality. It is not an easy task but not at all an impossible one. The example of states like Kerala bears testimony to this. When men understand the immense benefits of women's empowerment to the family's economic and social wellbeing, to its health and stability, to society at large, these barriers tend to dissolve.

Today we need to seize every opportunity that we have to advance gender equality. Given the favourable policy environment and with multilateral global institutions scaling up the work on gender and prioritizing it and the efforts being made across countries to strengthen gender budgeting and higher spending on gender-related development, we in India cannot afford to lag behind. We need to seriously address the gender imbalance in jobs and entrepreneurship. More importantly, do everything possible to ensure increased access to health and education, greater workforce participation of women and access to land and bank loans, and critical levels of representation in decision making bodies as this will go a long way in creating the much-needed level playing field for achieving gender equality. As a media house, I am committed to doing whatever I can towards this critical goal. No nation can progress in the absence of true empowerment for half its population. As the Chinese proverb goes, 'women hold up half the sky'. They need and deserve their rightful place in the sun.

Shobhana Bhartia is Chairperson and Editorial Director, Hindustan Times Group

Promote the Culture of Giving

Amit Chandra

Target for the Decade

In the next ten years, if wealth creators (billionaires) could target to give 50% of their wealth back to building the nation by addressing social causes, we could win many battles against big problems faced by our country.

Philanthropy is an age-old Indian tradition with roots dating back to ancient times and references to it being found even in Vedic scriptures. Giving away a part of ones wealth to the needy (even everything - like Emperor Ashoka did) was considered a virtue and even a responsibility in Indian tradition as per all prevalent religions of the land. However, somewhere down the line, we seem to have largely lost this philosophy!

"Giving away a part of ones wealth to the needy was considered a virtue and even a responsibility in Indian tradition as per all prevalent religions of the land"

Today, I would say unhesitatingly that there is a lot of room for philanthropy in our country to step up. Over the last two decades, the Indian economy has grown at a very rapid pace and so has the creation of wealth amongst the top 1-2% of Indian society. While a large middle class has got created, unfortunately, economic disparities have also increased massively between the top 5% and the bottom 33% who live in abject poverty! Seventy years after independence, this bottom third is still grappling with basic socio-economic problems that we need to address with urgency. In my view, while the Government certainly has to play the core role, philanthropy can offer great solutions to many problems being faced by our fellow citizens in this segment of society.

We have had many role models amongst the wealth creators who have or are trying to do their bit - be it Jamshedji Tata and Dorabjee Tata in the past or Azim Premji, Nandan & Rohini Nilekani, Kiran Mazumdar Shaw, Ajay Piramal, Sanjeev Bikhchandani, Ashish Dhawan, S. Ramadorai, Nachiket Mor, Venkat Krishnan, Atul Satuja, Ujwal Thakkar and many more in the present. These are people who are leading the way by giving their time and/or money and are an inspiration for all of us. I truly believe that by following them, philanthropy in India will eventually reach a tipping point and will emerge as a major national movement, when every wealth creator or professional of high calibre will get involved in building the country that we all aspire to see.

For this to happen, we need to address three core issues.

The first is how much of wealth created should people give (versus spend or pass on to the next generation)? There are definitely a lot of people donating some of their time and/or money on the social work. However, a key issue is that most of the wealth creators are giving only a very small percentage of their wealth back to Indian society. I feel there is a scope to do a LOT more, as is being shown to us by Bill Gates, Chuck Feeney, and Warren Buffet. In the next ten years, if wealth creators (billionaires) could target to give 50% of their wealth back to building the nation by addressing social causes, we could win many battles against big problems faced by our country. This way India would also set the bar for compassionate capitalism and show the way to the world. This idea is not alien to India and the Tata Family was a pioneer of this concept way back in the early part of the 20th century and Mr. Premji and a select few signatories of the Giving Pledge from India are heading that way!

The second issue is that while there has been a significant increase in the number of Indian professionals and industrialists leading the way in philanthropy, we clearly need a lot more people to get involved, for many of our wealth creators / senior professional are also great problem solvers. Things have definitely improved over the last ten years. The case of Ashoka University is a classic example. Who would have thought that a World Class University could be built in India without a major family, company or government backing it? It has become possible thanks to the collective efforts of a group of over 100 professionals, who have pooled financial capital of over Rs. 850 crores and also contributed human capital for this important cause. This would not have been possible without the leadership of three exceptional first professionals - Ashish Dhawan, Pramath Sinha and Vineet Gupta who gave up their careers to this venture to make it successful, while many of the other Founders also gave it some of their time and made meaningful financial contributions.

The wise Dr. F C Kohli keeps telling me and I fully agree that, for this country to be great, every Indian at some stage in his/ her life gives back at least a third of the time to solve a social problem. I believe that around 50 is a good age to start with because we are still young and energetic then. I would love it if around that age (if not earlier) people spent a third of their time for their own community, village, factory, school, hospital or any other social work area in the neighbourhood. India has no dearth of talented individual, and if each one of them spends some time in applying skills to solve social issues, many problems of our country will get addressed.

Corporate philanthropy has also been on a rise in recent times. I think the CSR rule has helped in hastening this trend because it has actually brought the social sector into the boardroom. There are a lot of CEOs and CXOs who are actually investing some of their time to see what is happening on the ground. I believe 10-20% of Corporate India is already doing that. On the flip side, there will always be another 10-20% who are never going to care. My bigger concern is about the people in the middle 80%, who will eventually start swinging to one of these sides. The task is to influence and convince them to emulate the philanthropic model and begin to think more deeply about nation building. In order to make that happen, in my mind, we do not need so much of a regulatory impetus, but more of a social impetus. There needs to be a constructive relationship between all the stakeholders so that there is

progress. There is a need to bridge the trust deficit that exists between the government and the civil society, and just a deeper understanding of issues. Most of us feel that social equity is just the primary responsibility of the government but I believe that does not mean we simply and completely abdicate that responsibility to the State. Greater partnership between private sector, civil society and the government in shouldering social responsibility is the way forward. The CSR law has indeed brought the civil society, the government and the private sector closer.

Greater partnership between private sector, civil society and the government in shouldering social responsibility is the way forward

The third core issue is that of a dilemma that every person wishing to do charity encounters - that is how to get involved more meaningfully with the social sector? We need to probe answers to the question of imagination and engagement when it comes to philanthropy. Mr. Azim Premji and Nandan Nilekani are both shining examples of people who have engaged with their time, Mr. Premji with education and Nandan with Aadhaar. I think when exceptional brains like these get engaged in social activities, we can actually help solve the sticky problems plaguing society.

When all these things happen, we will actually see this country change. This is huge opportunity for us and we must work in this direction for us to realise the country we dream to see, wherein there is a lot less inequity and inequality; a country that we can all be proud of having built alongside our government. That, because of our efforts to carry along the "have nots", we don't have to build walls to hide them from our eyes or to contain the anger that will arise amidst some, from time to time, for being denied basic rights as citizens of this amazing country. Philanthropy, in India, is not just an amazing opportunity to help lift a few hundred million fellow citizens out of poverty, but also an imperative that we need to pursue with urgency.

Amit Chandra is Managing Director, Bain Capital Advisors (India)

India - Future in Progress

C P Gurnani

Target for the Decade

India has the potential to become a global powerhouse of digital innovation leveraging the tech capabilities of the domestic IT industry.

India has already sown the seeds of a digitally connected future with its teeming millions crossing over to the other side of the digital divide. The gap will be narrowed further and over the next ten years, what needs to be seen is how digitally savvy young Indians reap the benefits of this connected ecosystem through a policy focus on transformation.

"Connecting citizens to civic and administrative authorities must become a norm in all cities and rural areas if India is to appear on the global map as a clean and safe country"

A projection by United Nation's Department of Economic and Social Welfare indicates that by 2050, 50% of Indians will live in urban areas. This calls for some rather radical changes in the way India approaches issues of citizen empowerment, education, infrastructure, and a host of other priorities.

Here are the ten things we need to target for India of 2027:

1. Digital Democracy

Indian citizens are now used to trying apps for everything except for reaping the fruits of digital democracy. The power of social connectivity is yet not fully realized to the extent to which we can galvanize citizen participation in governance. Be it municipal priorities, local development, or allocation of budgets, electoral feedback powered by digital technologies is the way forward for citizen engagement in India.

The momentum gathered by initiatives like the MyGov portal shows us that 39 lakh citizens posted over 40 lakh comments within a few months of it going live. Although, it is a small beginning in this direction, by 2027, digital democracy must translate to India becoming the most digitally savvy administrative functioning society in the world. This would mean, mobilizing a neighborhood debate,

issue-based citizen feedback, and driving effective opinion making through social and mobile applications.

2. Skill Capital of the Globe

Currently, only 4.5% of India's population is skilled enough to take on the mantle for the future. Given the fact that AI and automation are going to bring sweeping changes across industries - in manufacturing, construction, IT/ITeS, e-commerce, hospitality, healthcare and other sectors, India's future workforce requires more thinking caps and not just craftsmanship.

By building tech capacities in areas like AI, automation, Big Data, cloud, and IoT across the globe, the Indian IT sector has emerged as a torchbearer of digital modernization. The sector contributes around 10% to the gross domestic product in nearly 25% of the countries it serves today. After 70 years of independence, if India can become a global powerhouse in digital innovation, there is no reason why we cannot become the skill capital of the world. We can make this happen by inviting the industry to integrate with the academia and make our citizens a key bespoke of industrial revolution 4.0.

3. "Cleaner and Safer" before Smarter Cities

Technology and collaboration with local communities of India must not stop at smart e-governance. We can perhaps learn from UP 100, which is the world's largest integrated response center run by Tech Mahindra. It is an emergency response mechanism that connects citizens of India's most populous state UP, with its police force - 24x7. Imagine what we can achieve by transforming citizen response in other areas by making all amenities available at their beck and call.

With regards to using India's indigenous digital capabilities to make cities clean, one has to see the example of Jabalpur - a prominent town in the central Indian state of Madhya Pradesh. Jabalpur, with its smart eWaste Management implemented by Tech Mahindra, ensures timely pickup, disposal, and transformation of garbage into clean energy. Connecting citizens to civic and administrative authorities must, therefore, become a norm in all cities and rural areas if India is to appear on the global map as a clean and safe country.

4. Access to basics - a Fundamental Right

The real benefits of India taking giant strides in technology will be realized only when its vast population gets to experience the very basics - clean water and electricity. With India's growing ability to innovate in IoT and Big Data, we can curb water loss, which in cases of cities like Delhi accounts for nearly 40% of distribution damages. Smart solutions reduce the cost of delivery while ensuring sustainable delivery of smart water.

Studies also show that beyond 2023-24, power generation will no longer be the real issue. It will be more about increasing renewable capacities with digitization. However, renewable energy will be viable only if the grid can absorb large amounts of renewable energy together with battery-based balancing. It is imperative that India's rapid growth in renewable energy is backed by smart grid applications that are homegrown and easily available so as to make complete electrification affordable.

5. Secure Borders...both physical and virtual

A recent study shows that the IoT sensors market is expected to reach $267 billion by 2020. India is expected to be one of the largest contributors of this market by 2027, with the application of - infused devices, connected business assets, infrastructure, and much more. By this time, India would have also moved to intelligent applications for real-time visibility across all state-owned assets. These teeming data sprouting devices although address critical issues like detection, monitoring, etc., they also increase the threat of cyberattacks.

Cyberattacks on the power sector, for instance, can have a cascading effect on critical infrastructures such as transportation and communication, and its failure can bring any city to a grinding halt. Similarly, our physical security too will have to undergo a complete overhaul as relying on human capabilities alone to analyze actions captured by millions of smart cameras will not be viable. AI and robotic process automation is the way forward to a secure India with secured borders.

6. E-Monetize: The next frontier of demonetization

The buck for demonetization does not stop at bringing more citizens under the tax bracket. With digital banking becoming the new normal, products offered by banks will move beyond conventional banking and tap into the delivery of new services. Market reports indicate, the Indian digital payments industry will grow to $500 billion by 2020, and it will contribute to almost 15% of its GDP. Clearly, by 2027, the way ordinary Indians do banking will cross over to the digital plane completely.

Indian consumers will be the real winners in this new digital economy. With over one billion mobile users in the near future, India is set to become the country with the fastest and cheapest payment systems. With this, India is on its way to become a digital leader that not only innovates for itself, but also for the billions of natives across the developing world.

7. Education for Everyone

It is estimated that India is one of the world's largest higher education systems with enrollments of over 33 million students spanning institutions across 50,000+ higher education institutes and 750+ universities. However, we are still a long way from the desired mark - which is easy and affordable education for all. The use of technology for making education affordable will emerge as a game-changing feature of our vast democracy. By 2027, advanced coaching and customized-on-demand course material will become the order of the day.

Agreed, nothing ever can change personalized attention that students require. But with the proliferation of new technologies like AR and VR, education in India is set to get an exceptional make over. With the use of AI, personalized performance monitoring and timely response will make it possible for a single teacher to reach out to thousands out there who are hungry for knowledge.

8. Greenest country

India plans to go completely electric by 2030, and Tech Mahindra will be among the pioneering companies from the country who will join the global swell to promote clean energy. It's a new sunrise

sector and we are going to see a growing emphasis on new digital technologies that promote green practices. One report pegs close to $12 trillion in savings that can be accomplished by companies who unlock green opportunities through low-carbon models.

The bigger question for India is - how do we leverage digital technologies to save the country's forests and rivers. Advances in AI, AR, and VR will help us draw data on nature, data on people, data on irrigation and data on the health of our rivers. These advances will go a long way in helping us expand our green cover and reduce our carbon footprint significantly until 2027.

> **The use of technology for making education affordable will emerge as a game-changing feature of our vast democracy**

9. Road to future: I mean the real roads, transportation

Over the next 10 years, India will also be home to one of the world's youngest workforce. With an average age of 29 years, India will witness a healthy trend of cross-country migration for education and new job opportunities. It will not be possible to support such a large working-class population unless the country nurtures a vision for transportation of the future.

Without any doubt, citizens of India require connected systems that help them go from home to office to everywhere, effortlessly, using different modes of transportation. This requires investment in technologies in areas like traffic management, electric meters, automated parking meters, route management, better capacity and asset utilization, among many others.

10. Hyper - Healthcare

India's growing population is expected to surpass that of China very soon. With this, the idea of making world-class healthcare affordable and accessible to all its citizens is gaining momentum. However, making healthcare affordable and accessible to all Indian citizens by 2027 calls for increased investments in the future of networks to support the many wearables and remote-monitoring platforms that the future demands.

For instance, let's take the case of Manipal's adoption of Tech Mahindra's eICU solution. It is a boon for patients as it now allows setting up of the ICU right inside the patient's bedroom. All of this is enabled by the cloud and this takes out tedious manual data feeding and reduces chances of human error. Now, every 30 seconds, doctors get the patient's vital statistics virtually. This solution represents a revolutionary transformation in the way patient care operates and is truly game-changing for not only Indian healthcare but for the whole world.

India has always led from the front when it comes to innovations that show the world - how to do things differently. A couple of years back, India's ISRO launched a record 104 satellites in one go, something that was never expected of this country. It shows that Indian enterprise has what it takes to do the unthinkable and turn challenges into new opportunities.

Looking at the future, there are many unprecedented changes that await ordinary citizens of India and it is truly the beginning of an amazing journey that lies ahead of us. It is indeed the best time ever for Indian Industry to come together and unlock new experiences and drive this change.

C P Gurnani is Managing Director and CEO, Tech Mahindra

Transforming Indian Tourism

Deep Kalra

Target for the Decade

India to become a global air transit hub; and for that to happen we need to bolster our policies to double down our efforts in powering India's economy through tourism.

Endowed with best of nature's wealth, be it the mighty Himalayas, beaches, backwaters, or serene islands, besides the rich architectural heritage including the ruins of Hampi, marvel of Taj Mahal, forts of Rajasthan - India should be on the radar of every tourist in the world. Yet, India's share in International Tourist Arrivals is mere 1.2% with 25th rank in the world. A much smaller country like Thailand is amongst the top 10 tourist spots in the world with 2.6% share of International Tourist Arrivals.

> **India's share in International Tourist Arrivals is mere 1.2% with 25th rank in the world**

For Thailand, Tourism is a Core Industry and all efforts are made to ensure that it remains an attractive and safe place for tourists. Similarly, many other economies have made Tourism a core contributor to their economic progress.

Despite its massive potential, Tourism is treated as a nice ancillary and not as a core industry that can be an engine for growth with employment. Travel & Tourism is an important economic activity that has significant direct, indirect and induced impact on a country's economy. It is a sector that holds strategic importance in the Indian economy providing employment to millions and benefits across sectors.

Travel & Tourism generated over 2.5 crore jobs directly in 2016 and by 2027, Travel & Tourism will account for over 3.1 crore jobs directly, an increase of 2.1% per annum over the next ten years. Of note, these numbers reflect direct contribution of Travel & Tourism industry which does not include 'wider contribution' through indirect and induced impact on the economy.

Tourism has a huge multiplier effect, benefiting the entire eco-system around the tourist area, including hotels, restaurants, local transport, aviation, retail shops, artisans, local people, etc. Both inbound and outbound tourism in India have seen growth over the last decade, but the number of outbound tourists is much higher. Outbound tourism is a good indicator of overall spending and is directly correlated to the economic well-being of the country's population. However, it does not have any multiplier effect on

income generation, except when the tourists travel via the Indian carriers. The key contributors to economic growth are thus inbound tourism and domestic tourism, and there is a great potential to enhance these multiple times over by transforming tourism in India into a core sector.

Foremost, India needs to bolster its policies to become a global air transit hub utilizing the country's location advantage from aviation point of view. India's geographic location makes it a logical stopover for refueling European carriers travelling Far East or down Pacific. We can take a leaf out of Dubai, which has built a world-class airport capable of handling foreign tourists and is today amongst the most preferred and busiest airports. This would of course require heavy investment in airport infrastructure and developing world-class facilities for transit and baggage handling. The Government needs to carefully consider aviation friendly policies to mitigate competition by neighbouring countries who have invested heavily and developed the infrastructure to take the lead in powering their economies through tourism.

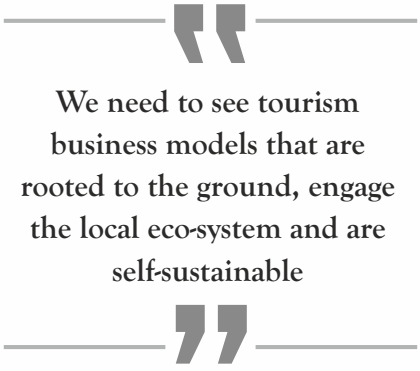
The need to develop tourist circuits cannot be over-emphasised. The Taj Mahal in Agra attracts 7 - 8 million tourists with nearly a million overseas tourists. However, the occupancy of hotels in Agra has declined in the last few years. Even though there are a lot of other places to visit in Agra besides the Taj Mahal, it has become a day-trip for most travelers from Delhi who are choosing to come back because of lack of things to do in Agra. If we build a tourist trail around the Taj, adding activities like a world class light and sound show, virtually guided tour to enhance experience and attractive, fun activities - tourists may choose a lay-over instead of a day trip and it may even enhance footfalls. There are many such destinations, especially beautiful heritage sites where we can lean into our history and create programmes and trails that will keep tourists engaged in exploring instead of tick-in-the-box visits.

It appears intuitive but there is so much more desired to make domestic tourism easy and convenient for more and more Indians. Domestic tourism will get a huge boost through improved connectivity. Even as the Government is making good effort to improve air connectivity, certain areas deserve more attention. The UDAN scheme launched by the Government will go a long way to connect metro cities and tier 2 and 3 cities at an affordable ticket price and we are beginning to see its positive impact on ground.

Tourism as an industry doesn't exist in isolation and its benefits too aren't reaped just by those directly involved with it. Built around an indigenous ecosystem, domestic tourism can boost the local economy and economically empower locals. We need to see tourism business models that are rooted to the ground, engage the local eco-system and are self-sustainable – something on the lines of what the brilliant entrepreneur Sonam Wangchuk has developed in Ladakh. It will also create opportunities of 'rural tourism' on the lines of 'farm tourism' in countries like the US, where families take their successive generations to the farm with a lot of pride. By developing local areas as tourist spots, we can effectively monetize it for the benefit of local community.

Hygiene, sanitation and infrastructure development need to run parallelly to fuel tourism in India. Tourist experience can be spoilt for good because of lack of cleanliness or toilets, sometimes repulsing tourists to never return. It is not just about having sanitation facilities but about regular maintenance and lifting the overall hygiene quotient to ensure comfort and ease for our guests.

There is a strong need to address the perception of India being a safety challenged destination. As of now, inbound tourism in India is largely bipolar - on one side there are rich tourists who travel, stay and shop in luxury and on the other side there are backpackers on a shoe-string budget exploring the country. There is a near vacuum of foreign tourists in the middle, who are giving India a miss over Thailand or Indonesia. And that is not because India is too far or not on their radar but because it is perceived to be unsafe. Law and order, of course, has a major role to play in changing this perception. Moreover, introduction of multi-lingual helplines for assistance of foreign travelers, time bound cross-agency support for foreign travelers in distress and many such initiatives will go a long way in helping travelers from world over pick India as their preferred travel destination. Tourists may be aware of the incredible side of India but they are unsure of their safety, leading many to choose neighbouring countries over India.



To further attract the middle class travelers, there is a need to regulate the alternative accommodation market that will also boost tourist confidence in these accommodation options. This market, currently unorganized, is a good alternative for middle-class travelers arriving in India during peak seasons when hotel rooms are either too expensive or too full.

These are just some of the fundamental changes that we need to bring to attract travelers from around the world and make tourism in India an experience like no other. India's soft power will only be unleashed fully when we are able to showcase India of the 21st century to the world.

Deep Kalra is CEO, MakeMyTrip

Second Generation Reforms in Housing

Renu Sud Karnad

Target for the Decade

India needs to set a target of doubling its mortgage to GDP ratio to 18% within the next decade.

FICCI, India's oldest business organisation, has made invaluable contribution to the growth of the Indian economy. Over a period of nine decades, FICCI has been the collective voice for a large segment of Indian industry. It has played an effective role as the bridge between corporate India and the government. FICCI has remained steadfast in its commitment to help shape policies, build global business ties and develop expertise across a myriad of sectors. In light of FICCI's 90th anniversary, it is perhaps befitting to look at the role of housing and its impact on the economy over the next decade.

> **"World over, nations that focus on affordable and equitable land policies and those who believe that decent shelter is a fundamental right are nations that prosper economically and socially"**

India is poised to remain amongst the fastest growing major economies. The housing sector assumes significance given its strong backward and forward linkages to several small, medium and large scale industries. Besides its multiplier effects on the economy, the real estate sector serves as India's second largest generator of employment.

2017 - A Watershed Year for Housing

Housing in India has now earned its rightful place at the centre stage. The union budget 2017 will go down in history as an 'affordable housing' budget. For the first time, all constituents in the housing chain - be it developers, borrowers and lenders have all been incentivised through measures that are practical and implementable in a bid to increase affordable housing.

The government's thrust on housing is a recognition that a rapidly growing country like India with a large young population needs more homes at affordable price points which in turn, would enable more households to become homeowners.

Currently, no other sector in India has got the benefit of a 100% tax holiday on profits and gains other than developers building affordable housing. Given these incentives, there is greater confidence that the pipeline of affordable housing units will steadily increase.

For home loan customers, besides direct fiscal benefits, the government has also extended its support through interest rate subventions. The government's flagship Credit Linked Subsidy Scheme is an outcome of the realisation that a small bit of support can go a long way in enabling both, the middle-income and lesser privileged groups to become homeowners earlier in life.

> **Affordable housing is India's future and this is most likely to happen in the peripheral areas of our cities, thus blurring the urban-rural divide**

Subscribers of the Employees' Provident Fund Scheme can now withdraw up to 90% of their accumulated funds for a down payment to buy a home or service the equated monthly instalments through their provident fund account. This measure effectively helps increase the loan eligibility of a borrower. It facilitates extracting the borrower's own savings, which otherwise would have been locked up.

In short, the enabling environment for housing has been created. World over, nations that focus on affordable and equitable land policies and those who believe that decent shelter is a fundamental right are nations that prosper economically and socially.

Housing Reforms - Building Blocks of the Future

India has embarked on a series of reforms ranging from demonetisation, to the implementation of the Real Estate (Regulation & Development) Act (RERA) and the Goods and Services Tax (GST). Initially when demonetisation was announced, there were fears of a free fall in real estate prices. However, property rates have more or less remained status quo. The government's relentless drive to reduce corruption, curb black money through multi-pronged approaches and the crackdown on benami properties will strengthen the real estate sector.

RERA and GST are both welcome measures. It is inevitable that in the initial stage, these legislative changes may pose challenges as they do require recalibration and structural adjustments. Yet, undisputedly, these measures will bring in the much-needed transparency into the sector and will be salutary over the longer-term.

A critical issue that needs addressing is how land cost can be reduced. Currently, only non-bank financial intermediaries and private equity funds are permitted to fund land transactions, but these are at prohibitively high costs. A long standing recommendation is to permit banks and housing finance companies to fund land transactions, which would in turn help reduce the costs for the end consumer.

Targets for the Next Decade

The government has set for itself a bold target of Housing for All by 2022. Affordable housing is India's future and this is most likely to happen in the peripheral areas of our cities, thus blurring the urban-rural divide. The affordable housing mission is not about putting up concrete structures; it is about believing in the well-being of society.

What gives rise to immense hope and optimism are new efforts in deepening housing finance penetration. India's mortgage to GDP ratio currently stands at 9%. This is significantly lower than many of India's Asian peers. India needs to set a target of doubling its mortgage to GDP ratio to 18% within the next decade. This would translate to a six fold increase in outstanding mortgages. Housing finance players are recognising the benefits of offering a wider bouquet of home loans, targeting customers in urban and rural areas, employed and self-employed and those from the formal and informal sectors.

65% of India's population is under the age of 35 years. This means that a vast segment of the population will be potential home buyers. Generation Next has a natural inclination towards digitisation. Technology is already playing a defining role in how mortgages are sold. While many players today are able to do the initial scrutiny for mortgage loans online, for complete end-to-end online mortgages to take off, there is a need for greater regulatory clarity and streamlining of the legal framework, particularly issues pertaining to payment of stamp duty on electronic contracts and registration of mortgage documents since this varies across different states.

The decade ahead is likely to reap the benefits of financial inclusion initiatives through digitisation. Digitisation lowers transactional costs. Further, since intermediaries get eliminated, mis-selling of financial products online get minimised as all the features of the product have to be clearly stated on the app or the website. Going forward, housing finance players will have to strike a judicious balance between catering to customers who prefer a brick and mortar set up and those opting to go online.

To conclude, while the world holds great expectations for India, the country's best home-made solution is creating decent shelter for its citizens.

Renu Sud Karnad is Managing Director, Housing Development Finance Corporation

Transforming Indian Healthcare: Emerging Paradigms

Zahabiya Khorakiwala

Target for the Decade

The public expenditure on healthcare should be increased to at least 2.5% in the next decade from the current 1.4%.

India stands on the cusp of major change. In the next decade, the country will undergo a transformation that could lead to unprecedented economic growth paired with radical improvements in the nation's Human Development Index (HDI). In 2027, India will be the world's most populous nation with 1.5 billion people and the world's third largest economy with a GDP of more than $6 trillion. The literacy and internet penetration in the country, both will touch the 80% mark, while the average life expectancy is expected to increase to more than 70 years for both genders; the population growth rate is expected to fall, with the average fertility rate to fall below the replacement rate of 2.1. These wide-ranging and profound changes in the country along with greater integration of global economy and technology will present myriad opportunities and challenges to the Indian Healthcare Industry, metamorphosing it into a completely different form.

"In next decade, the country will see advent of nanotechnology enabled wearables, which coupled with AI enabled machine learning (ML) capabilities, will constantly record and relay individuals' health metrics data to remote servers"

The biggest disruptive challenges that India faces in its health profile are an ageing population, a shift in the disease burden, rural inaccessibility to healthcare, manpower shortage, low insurance penetration, inadequate investment, inconsistent quality standards and lack of emphasis on technology and digitisation. At the same time, evolving trends in the sector which are still at nascent stage such as more patient-focused care, evolving continuum of care and increasing digital integration, along with government policy initiatives and a societal support can pave a very bright future for healthcare sector in the next decade. For India to overcome aforementioned challenges and progress in the decade to come, it needs to establish new paradigm in healthcare technology, skills development, healthcare insurance coverage, quality assurance & accreditation and public/private investment facilitation.

There are lots of changes taking shape on the digital/technology front. In next decade, the country will see advent of nanotechnology enabled wearables, which coupled with AI enabled machine learning (ML) capabilities, will constantly record and relay individuals' health metrics data to remote servers. The adaptation of Electronic Medical Record (EMR), big data analytics, algorithmic mapping of patient's health history will also increase greatly in the next decade. These technology advancements and adaptation will transform our healthcare delivery from present episodic format (largely curative) to subscription based where providers will be actively involved in care and reach out to individuals based on real time for an intervention instead of the other way round. Also, AI and ML will help in better interpretation of patient's data, indicating that this data-driven healthcare paradigm will enable patients to directly approach super-specialists in future. To ensure that the country reaps maximum benefits of these technological advancements, the Government should ensure that all 2.5 lakhs gram panchayats in the country are connected to high speed internet network by 2027. As an individual's digital heath data will become paramount in next decade, it is imperative that the entire Industry along with government roll out standards to ensure that the data is interoperable between various service providers, giving greater choice and movability to consumers.

To serve a growing population of India, healthcare sector urgently needs to bridge the manpower and infrastructure gaps. WHO recommends 1 doctor, 2.5 nurses and 3.5 hospital beds per 1000 population, while the respective figure in India are 0.65 doctors, 1.3 nurses and 1.3 hospital beds. India needs to urgently achieve these targets of training more than 7 lakh doctors, 21 lakh nurses and creating additional 36 lakh hospital beds in the next decade. Human resource in healthcare is central to its functioning, and specifically the acute shortage of nurses negatively affects the quality and efficiency of services provided by the country's health system. Reasons like lack of training institutions, international migration/global demand, high attrition and drop-outs are the primary reasons behind nursing staff shortage. Thus, the Government needs to target to open more medical institutions to train doctors and nurses and streamline the way for private sector to invest in the same by easing regulations. Also, the imbalance between rural and urban areas needs to be corrected as well, since 70% of Indians live in rural areas but only 33% of the total medical practitioner work there.

As per the National Health Profile 2015, compiled by the Central Bureau of Health Intelligence, less than 1/5th of Indian's population is covered by any kind of health insurance. Consequently, India's health-related out-of-pocket expenditure, which pushes families into indebtedness and deeper poverty, is among the world's highest. Furthermore, the cost of outpatient treatment, which the poor prefer over hospitalisation, forms 65.3% of out-of-pocket expenditure in India, according to a 2016 Brookings report. Most of the government insurance schemes like Rashtriya Swasthya Bima Yojana (RSBY) do not cover that. Coupled with low awareness, the state of healthcare insurance in the country is highly inadequate. China recorded one of the greatest improvements on the Universal Health Coverage (UHC) indicator (as studied by the Institute of Health Metrics and Evaluation (IHME)) between 2000 and 2016 by expanding its health insurance scheme to rural populations and unemployed urban residents in the 2000s and followed with further reforms in 2009-10. The Government needs to

increase awareness about the importance of healthcare insurance, and together with private insurers and through IRDAI should facilitate to enhance the insurance coverage in the next decade. Government should also set up a separate health saving fund which can be used to pay for out-patient treatment cost and preventive health check-ups.

India needs to urgently achieve targets of training more than 7 lakh doctors, 21 lakh nurses and creating additional 36 lakh hospital beds in the next decade

Inconsistency in quality standards is very high in Indian Healthcare sector. Unfortunately, even after 12 years of the establishment of the NABH, only 480 hospitals have bagged accreditation tag till date, which accounts for only 1 per cent of hospitals/nursing homes put together. Hardly 1,500 laboratories in the country are NABL accredited. Also, the number of JCI accredited hospitals in the country is less than 30. In the West, hospitals have insurance schemes which prompt them to adopt best healthcare standards. In India, IRDAI should make it must through Insurers. As Small Health Care Organisations (SHCO) like Nursing Homes provide the bulk of primary healthcare in India in contrast to bigger hospitals, accreditors like NABH should further simplify its present standards for SHCO, making it feasible for Nursing Homes to receive accreditation. This will give big boost to the quality of healthcare provided in the country and to medical tourism too. Also, accredited private healthcare providers should support government in creating awareness and importance of quality accreditation to boost demand of quality healthcare.

The healthcare expenditure in India is a meagre 4.7% of GDP (1.4% public and 3.3% private), while globally the figure is 9.9% of GDP (6% public and 3.9% private). To establish a healthcare paradigm which will adequately support a population of 1.5 billion in the next decade, the government along with private sector has to make multiple strides to boost investment in this sector. Some of the targets for next decade to ensure the same are:

- The public expenditure should be increased to atleast 2.5% in the next decade. This increase in public spending will spruce up private participation in creating new healthcare infrastructure.
- Healthcare sector should get National Priority status (Priority sector for bank lending) like agriculture, education, MSME, etc. This will help channelize funds to the sector.
- Government should establish policies to ensure discipline in timely reimbursement of scheme (like CGHS, etc.) dues to empanelled hospitals which will ensure viability of the sector.
- Policy should be framed to provide tax benefits for setting up healthcare infrastructure in Tier 3 and 4 cities as well as rural areas.
- Also, to scale up Public Private Partnership (PPP) in healthcare sector, government should standardise concession agreements, collateral and exit clauses.

Today all three stakeholders - government, private players and the society have an exciting opportunity to collaborate and redefine India's health system in order to power the nation's growth and development, ensuring effective utilisation of the resources - capital, drugs, technology and human resources. If the country achieves the aforementioned targets, then it will be able to fully capitalize the immense prospects and we can hope to achieve a massive shift in healthcare within a decade.

Zahabiya Khorakiwala is Managing Director, Wockhardt Hospitals

Green Finance for Sustainable Growth

Naina Lal Kidwai

Target for the Decade

India would be able to achieve a renewable energy capacity of at least 260 GW by the end of the coming decade; India should attract huge financial investments to match such a scale.

The 2015 United Nations Climate Change Conference, COP21, held in Paris resulted in an agreement among the parties to limit global temperature increase to 2°C and strives for a limit of 1.5°C if possible. Following the agreement, India set some ambitious targets to meet the climate goals set at Paris. To enhance the contribution of non-fossil fuels in total power capacity and thereby reduce carbon intensity of electricity generation in the country, the renewable energy capacity was targeted to be increased to 175 GW by 2022. This would include 100 GW of solar power, 60 GW of wind energy and 15 GW of biomass and hydro energy.

As of 31st March 2017, India has achieved a third of this target at 58 GW, with wind power leading the way, and huge strides being made in solar power via auctions for solar parks. In order to achieve the 2022 targets, India will have to add about 23 GW of renewable energy capacity every year for the coming five years. If the momentum can be maintained, India would be able to achieve a renewable energy capacity of at least 260 GW by the end of the coming decade.

An addition to renewable power capacity of such massive proportion would undoubtedly need unprecedented financial investment. Both public and private capital is required to advance setting up clean energy infrastructure in the country. It has been estimated by various agencies that between 2016 and 2022, a total investment of close to US$ 200 billion will be required, which includes US$ 60 billion in equity and US$ 140 billion in debt.

India faces the triple imperative of meeting its growing energy needs, extending access and improving environmental performance of its power sector. The Government of India is playing an active role on this front. To promote adoption of renewable energy resources and development of the sector, it has been offering various incentives, such as generation-based incentives, capital and interest subsidies, viability gap funding, concessional finance and fiscal incentives, etc. The recently published report of Ernst and Young has placed India at the second spot on the list of world's most attractive renewable energy markets after China.

In the three years between 2013-14 and 2015-16, India has attracted US$ 14 billion for renewable energy investments out of which wind power projects received US$ 7 billion and solar power projects attracted US$ 4.5 billion. The Government made capital investments and gave incentives to the tune of US$ 1 billion. Other than this, the World Bank has extended a grant of US$ 100 million and the European Investment Bank and SBI have disbursed € 200 million towards the development of various projects.

The investment by the private sector has been on the rise in recent years; however there is a lot of potential that remains untapped to reach the targeted investment requirement. It is paramount that the private sector becomes an active player in the green finance market and brings its agility and commercial soundness on the table. Given that our country is a growing low-carbon environment market, the rise of private investment is inevitable. The need of the hour is to make the investment climate more conducive and financially viable in order to offer the private sector enough reasons to invest in this area. There is also a need to develop a formal definition of 'green' which will bring further clarity in terms of the projects which can be classified as green and ensure better understanding across sectors, and hence better targeting of finances.

Regulatory bodies in India like the RBI and SEBI have done an excellent job to reinforce investor confidence in the nascent green finance market, in an effort to broaden it. The RBI has augmented the extent of partial credit enhancement provided by banks to 50% from 20% of the bond size issue. The FICCI-United Nations Environment Programme (UNEP) Inquiry Report on Delivering a Sustainable Financial System in India released in 2016 highlighted how India is introducing innovative approaches to attract private capital for green assets - and outlined a number of key steps to deepen this process in India. One of the recommendations included developing a sustainable capital market strategy building on SEBI's guidelines to further scale up the green bonds market. SEBI has published its official green bond guidelines and requirement for Indian issuers in 2017, placing India among an exclusive class of countries which have developed national level guidelines.

The need of the hour is to make the investment climate more conducive and financially viable in order to offer the private sector enough reasons to invest in this area

FICCI has also launched the India Green Bonds Council in collaboration with Climate Bonds Initiative to facilitate the development of a green bonds market in India. By carrying out policy advocacy, market education and investors-issuer interface, the aim of the Council is to bring together investors, (public/private sector) banks, insurance industry, companies and other local market actors in a neutral forum to provide inputs for drafting the "National Blueprint" that will be used to facilitate and promote the issuance of green bonds.

What we now certainly require is a mitigation of financing problems known to us. Green Bonds have come up as a key financing mechanism to finance environment-friendly

businesses and assets. The global green bond market has grown rapidly and is at US$ 235 billion in cumulative issuance till H1 2017. India's green bond market, measured in cumulative issuance as of 2017, pegged at US$ 3.2 billion, is the 8th largest green bond market in the world. Following the success of green bonds, there is now a need to innovate and create alternative instruments for green finance.

Following the success of green bonds, there is now a need to innovate and create alternative instruments for green finance

In that respect, the Climate Finance Lab, which works globally for mobilizing finance for climate change, has been effective in streamlining such innovative alternate instruments for green finance. Other than Sustainable Energy Bonds, the Lab provides a host of other alternate services. It provides matchmaking services between investors and municipalities to help clear the project pipeline. The Lab also undertakes an underwriting exercise, insurance activities and foreign exchange hedging for green financing activities. The Indian arm of the Lab was launched in 2015 as a public-private initiative to provide solutions to the financing challenges to investment in green infrastructure in India.

The idea of developing a 'Green Bank' is also an attractive proposition. The Indian Renewable Energy Development Agency (IREDA) has announced plans for itself to become India's first green bank. Establishing a dedicated green bank entails several benefits. Firstly, it can attract a pool of resources specifically directed towards environmentally sustainable projects at a low cost. It can help private banks execute initial transactions for clean energy projects via their risk mitigating products. A credible green bank may also help attract much required foreign private capital. Its specialization and core competence will help finance smaller projects more smoothly. Eventually a green bank should help develop a deep market for green finance via demand aggregation.

Multilateral organizations have also taken a lead role towards green financing and are expected to continue to remain a prominent investor group in the coming years. The United Nations Framework Convention on Climate Change (UNFCCC) has established a Green Climate Fund, set up by all 194 countries that are a member to the UN. The Asian Development Bank too has set up the Climate Change Fund. Together, both funds have received pledges to the tune of US$ 15 billion in a span of two years. Such funds pay attention to the needs of society today, especially in the developing and the Least Developed countries. Such funds will help open new markets for green investments.

The New Development Bank (NDB) established by the five BRICS nations in 2015 for promoting infrastructure and sustainable development projects in emerging economies has also set a strong example. It is expected to extend its cumulative loan portfolio of about US$ 4.5 billion by the end of 2017 towards green projects, out of which US$ 1.5 billion was extended in 2016. Given the important role played by these organizations, it is imperative to provide further encouragement to them by bringing in suitable changes in the methodologies used for rating their green finance instruments, with such instruments attracting better ranking as compared to other financing instruments. The investors should also be acknowledged and given higher ratings for their green financing efforts.

India should also closely follow the green finance experiences of western counterparts and learn from them.

The Business and Climate Summit which was hosted by FICCI in September 2017 in New Delhi brought together various stakeholders from different countries on a common platform to share their ideas on climate change. Representatives from both business and government, from various advanced economies like UK, France and Wales advocated measures taken in their respective home countries for lowering their carbon footprints. These success stories provide lessons for developing industrial countries like India where significant proportion of energy requirements is still met through coal. India meets around 60% of its energy requirements through coal, while 16% is met through renewables.

In conclusion, the future path for green finance needs to be more pronounced and well defined. All stakeholders have well realized that climate change is upon us and we need to act and act quickly at that. Global developments, as well as developments in India in this direction clearly show that we are taking the right steps to mitigate it, but a lot more needs to be done. If we continue on this path, I am confident India will be able to achieve the goals she has set for herself, well in time.

Naina Lal Kidwai is Past President, FICCI, and Chairman, Max Financial Services

India's Space Programme

A S Kiran Kumar

Target for the Decade

The domestic industry to become a part of the global space-economy and ecosystem.

India's Space Programme evolved from vision of Dr. Vikram Sarabhai whose prime intention of harnessing space technology for national development was further shaped by Prof. Satish Dhawan. It was just seven years after the launching of the Sputnik by Russia, demonstrating for the first time that space is accessible to mankind, India launched sounding rockets for studying upper atmosphere from the small fishing village of Thumba in Kerala. The idea that one-third of the globe could be visible from the vantage in space 36,000 km away, and following the live transmission of the 1964 Tokyo Olympics Games using satellite, India established the first Experimental Satellite Communication Earth Station (ESCES) at Ahmedabad in 1967, and, as the next logical step, conducted the Satellite Instructional Television Experiment (SITE) during 1975-76, which was hailed as one of the largest sociological experiments in the world benefiting over 200,000 people from 2,400 villages of six states through development-oriented programs beamed using the borrowed American Technology Satellite (ATS-6). The Satellite Telecommunication Experiments Project (STEP), conducted using the Franco-German Symphony satellite during 1977-79 as a joint project of the Indian Space Research Organisation (ISRO) and the Post & Telegraphs Department, provided system-level test for using geosynchronous satellites for domestic communications, and developing capabilities in designing, manufacture, installation, operation and maintenance of various ground facilities for eventually moving towards realising the proposed operational domestic multi-purpose satellite system for the country, the INSAT.

> **As of now over 500 Indian industries are partners in the Indian space program**

Aryabhata, the first in-house-developed and built Indian spacecraft was launched using a Soviet launcher in 1975. The first Satellite Launch Vehicle of India, SLV-3, with capability to place around 40 kg in Low Earth Orbit (LEO), had its maiden successful flight in 1980. This gave momentum to launch vehicle and mission design, material, hardware fabrication, solid propulsion technology, control, power systems, avionics, vehicle integration checkout and launch operations, etc., with multi-

stage rocket systems. The 80s also saw India gaining hands-on experience in designing, development and in-orbit management of space systems together with associated ground systems through the Bhaskara-I and II missions as pioneering steps in remote sensing area, and the 'Ariane Passenger Payload Experiment (APPLE) becoming the forerunner for the communication satellite system. Then came the more complex Augmented Satellite Launch Vehicle (ASLV) with technologies such as use of strap-on boosters, bulbous heat shield, closed loop guidance and digital autopilot, and so on, paving way for learning many nuances of launch vehicle design for complex missions, ultimately leading to realisation of operational launch vehicles, the Polar Satellite Launch Vehicle (PSLV) and Geo-synchronous Satellite Launch Vehicle (GSLV).

Also, in early 1970s itself, ISRO had initiated Remote Sensing Applications activities, that began with the pioneering coconut root-wilt disease detection experiment in Kerala using colour-infrared aerial photography; followed by various other studies conducted using aerial data and images from the American Landsat series of satellites, from 1972 onwards. A host of Joint Experiment Projects (JEPs) in the areas of land and water resources including agriculture, forestry and environment, earth science, etc., were conducted in collaboration with user agencies, and involving academia as well, as precursor to the operational satellite-based remote sensing applications activities, that has since become so vibrant in the country.

Today, ISRO is a one of its kind, most comprehensive and cost-competent space program in the world, taking India to the league of major space-faring nations, with Russia, USA, France, Japan and China. Currently, India has 42 satellites working up in space, of which 15 are Communication satellites (INSAT/GSAT), seven Navigation satellites (IRNSS/NavIC), 18 Earth Observations satellites (Remote Sensing and Meteorological), one Planetary Mission (Mars Orbiter) and one Science mission (ASTROSAT). The three distinct classes of operational launch vehicles developed indigenously, viz., the globally acclaimed PSLV, GSLV and the more recent heavy-lift launcher GSLV-MKIII (4t to GTO), provide us access to space.

The advanced ground infrastructure and facilities established by ISRO to cater to country's end-to-end space program are also world class; so also the human capital in this high-technology area built over the years. A significant achievement of ISRO has been developing and associating domestic industry - small, medium and large - in the Indian space program from the very early days; as of now over 500 Indian industries are partners in the Indian space program.

The successful insertion of the Mars Orbiter spacecraft into the Martian orbit on 24 September, 2014 made India the fourth space agency to successfully send a spacecraft to Mars, and the first nation to have done so in its maiden attempt. The Mars Orbiter Mission (MOM) has been an innovation, wherein the capabilities of the spacecraft and of PSLV were meticulously combined to achieve a workable orbit at launch, navigate the spacecraft precisely up to the red planet, and finally achieve its insertion in Martian orbit; the spacecraft is continuing to orbit around the Mars giving bountiful of scientific data. The Chandrayaan-1 launched in October 2008 was also an equally significant milestone ISRO has achieved, which is credited with the discovery of water molecules on moon.

ISRO, through its commercial arm Antrix Corporation Ltd. (Antrix), has been marketing ISRO's products and services to domestic as well as international customers. ISRO, among other, has built two advanced communication satellites for European customers, and launched so far 209 international customer satellites from 29 countries on board PSLV.

Space-based applications are operationally used in the country today for management of natural resources, monitoring environment, meteorology and weather studies, disaster risk reduction, developmental planning, telecommunication, TV broadcasting, tele-healthcare, tele-education, etc., to name a few; and above all, in Good Governance at different levels of ecological, administrative and societal hierarchy. At the same time, space being the next frontier, space science studies and proactive steps towards space exploration, including development of certain critical technologies pertaining to human space flight are accorded due prominence.

Today, India's Space Program is well recognised as a prominent catalyst in socio-economic transformation in the country. Over 60 Departments and Ministries of Government having come on-board in recent time, and embarking upon around 160 discrete application projects at national-level, in addition to a host of application activities at regional and state levels, is true to the spirit of the national development goals being at the core of ISRO's overall activities.

To cite some examples; space-based inputs are being used in planning and monitoring the mega-societal programmes of the Government, such as Pradhan Mantri Awas Yojana (PMAY), National Mission for Clean Ganga, Digital India and Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) and Mahatma Gandhi National Rural Employment Guarantee Scheme. The availability of high-spatial-resolution images from IRS satellites combined with precise location information coming from IRNSS/NavIC constellation, along with the Geographic Information System; have enabled putting-in-place web-portal based geo-spatial information systems in the country catering to many applications in different sectors at the national, regional and local levels. It is also worth highlighting, the Indian Space Program that germinated in a fishing village in the early 60s displacing the fishermen living there-in, today provides comprehensive space-based information on availability of fish in the open-ocean, the shortest way to reach over there in order to make a good catch in short time, and the sea state and weather conditions, through a single hand-held device, benefiting the entire fishermen community of the country.

In the coming time, it is obvious that county's space programme will bring-in enhanced as well as newer space based enablement in the country, in terms of broad-band connectivity linking far-flung rural areas of the country through High-Throughput Satellites (HTS); high-spatial resolution and enhanced all-weather imaging through advanced IRS satellites, both optical and microwave; improved tools for ocean and weather studies; and space science research through ensuing a second mission to the moon and other science satellites under plan. While GSLV



and GSLV-MKIII will join country's work-horse launcher PSLV, augmenting country's operational space transport system; the ongoing work will continue towards reducing the cost of access to space.

The Indian Space Programme has been a saga of success, technology-wise and in supporting the national development process with content and connectivity. The space as a frontier is emerging with greater opportunity globally. In the coming years, ISRO's aim is to build capacity within the country to not only significantly enhance our ability to meet the demands of the country but also get a share of the global space market. In all these activities, ISRO seeks deeper engagement of Indian Industry. In the process, it is ISRO's endeavour to see that the domestic industry becomes a part of the global space-economy and ecosystem.

A S Kiran Kumar is Secretary, Department of Space, and Chairman, Indian Space Research Organisation

Art and Culture: India's Soft Power

Paresh Maity

Target for the Decade

In the next ten years, India should aim at developing world class contemporary Art Museums and Art Galleries across major cities in the country.

As history has stood witness to all the time, events and ideologies that have passed us by, one can only assume the magnitude of knowledge that it has collectively garnered.

When taken into account, the history of the world as we know it is in fact a compilation of a vast array of information spanning across decades, centuries and invariably the cultures of all the nations that make it what it is. One common element that has progressively interlinked these aspects is art. It has been the most consistent yet evolving mode of portraying and recording information throughout civilizations.

Indian Art and Culture is organically and exponentially growing. I see and feel a very positive social change being spurred by art

Nations' histories have mostly been known of, on account of having their experiences recorded in a form that was both expressed and understood within their capacity. It is safe to say that art as we know it has come a long way. From mere etchings on cave walls by the inhabitants of their time 40,000 years ago, up till the current satirical graffiti by the British street artist Banksy, both are stoic examples of art that so blatantly depicts the predominant state of their times. To understand what contemporary art stands for, it is important to acknowledge its transition over time because, be it as it may, art has always been the go to medium to express what cannot be expressed solely in words and numbers.

Indian Art and Culture is organically and exponentially growing. I see and feel a very positive social change being spurred by art. It is understood that culture prefigures economics and politics, it moulds markets, and it expresses and embodies the creativity and resilience that are the strength of the human species.

In the new paradigm, art and culture are given its true value. People care passionately about how they and the things they value are depicted.

After a long day at work, they re-energise and revive themselves with music, dance, watching a film, writing poetry, sketching, singing, or doing something creative.

Art does not show people what to do, yet engaging with a good work of art can connect you to your senses, body and mind. Positively, the tide seems to be turning in favour of taking the power of "soft" elements like art and culture seriously.

What is extremely encouraging is the conscientious decision of individuals to invest in art and culture, social responsibility and giving back to society. Here lies the secret of its growth and sustainability.

While I was growing up in Kolkata, only cultural institutions like ITC were there, but now there are hundreds of private organisations doing brilliant work in the field of performing and non-performing arts and promoting art and culture. A case study would be how one shop opened at Hauz Khas and this idea led to the whole area developing into a cultural space covering arts, crafts, textiles, food, exhibition galleries, etc.

Not for profit organisations have encouraged the youth in Delhi to come and paint walls of public spaces to make the surroundings more cheerful. Unable to change the existing architecture - they expressed and made changes through their art.

The most encouraging signs are the younger generation believing in forming their own culture which is influenced by their immediate environment and not connected to religion and conflicting issues - they have connected with cyberspace, global opportunities, networking through social media, experimenting with startups, coming together on creative platforms to form "An All World Culture" which is inclusive and forms a positive culture matrix. The primary reason we make both public and private investments in art is the inherent value of culture: Life-enhancing, entertaining, defining our personal and national entities.

Art and artists seek, in particular, to bridge the gaps between the global and the local, east and west, and to bring positivity and light to both the congruences and dissimilarities through their thoughts and expressions on canvas and their ability to communicate, educate, debate, interact, collaborate with people from different backgrounds and strata of society to make a positive difference.

The artistic timeline has known all kinds of forms, expressions and inevitable plights in order to make it stand as it is today. From the devout catholic inclination throughout the middle ages, to the awaited breakthrough of the Renaissance, what was brought upon the world bridged the gap of what was medieval to what was to constitute as modern. No longer was biblical conformity a rule to adhere to. Dimensional depiction of the material world was now the new and acquired truth. The great minds and works of pioneers of the 17th century such as Raphael, Michelangelo and Da Vinci, were to shape the thinking mind and expand it to horizons then unheard of. There was no dearth of mediums in doing so, prose, poetry and most significant of all, art.

The known history of art shows the evolution of the world as we know it. Industrial revolution brought about the age of realism in the 18th century. An attempt to bring their everyday onto a canvas with the

inklings of an avant-garde merge of art and life gave way to modernism and the beginning of modern art. This anti-institutional, not conformist art movement at the time was pioneered by key artists such as Courbet, Manet and Whistler.

Art has always held the power to draw influence from their current times as well as influence them

Realism as a movement paved way for impressionism and, eventually, expressionism. The smaller visible brush strokes of Monet and Cezanne commenced a break from tradition in European painting. With a more scientific research into the intricacies of colour portrayed a more vibrant capture of what was imagined by the artists. Expressionism, that followed, was characterized by the newly acquired sense of all that was abstract. What was seen to the naked eye was no longer what determined the artistic outcome. It was a time of making anything appear possible, whether envisioned physically or emotionally. The greats like Kandinsky or Paul Klee faced a canvas of opportunities where nothing was no longer forbidden. And their works also influenced art the other side of the world in countries like India, where budding artists like V. Gaitonde took to their works in order to draw inspiration for their own.

Art has always held the power to draw influence from their current times as well as influence them. European art may have eventually been an obvious precursor to what followed globally, but there were similar revolutions happening around the world. In India, art had come a long way from the Mughal art and architecture to the Progressive Art Group that redefined that stance of Indian art, putting it on an international platform at par with the European pioneers.

Historically, Indian art is abundant with an incomparable magnitude of works spanning across civilizations. Be it the earliest form of art from the Indus, to the highly skilled Mughal miniatures, it is a country that has been a cradle of mythology, devotion and wonder. It was never one to shy away from glorifying the human form in all its splendor. From the courageous tales of Mahabharata battlefields to the perfection of form displayed by the Chola dynasty or, for that matter, the Temples of Khajuraho that projected the raw sensuality of eroticism, art in ancient India stands undisputed.

Post-independence, a group of artists got together, M. F. Husain, Souza, S. Raza, Ara, Ghade, Bakre and declared the arrival of contemporary Indian art. With Husain paving way for the others that followed, each was unique in their style, story and contribution. With a predominantly acquired colour palette that at the time reflected the country in all its shades, their inimitable works, still valued as the highest amongst other contemporaries that followed, remain so for various reasons. As a nation rooted deep in mythology and art, there was never a dearth of inspiration. Add a history of rulers, regimes and socio-economic reforms, the need to express the buildup sentimentality yearned for a modern day contemporary platform. The group, as a collective movement, managed to set this required base for the art scene in India.

It is essential that today in a world of such unsure circumstances, the means to achieve and maintain a certain unity despite the scattered disparity, art has and most certainly always will be the most infallible

means to achieve that. One should hold on to what is relevant, even though the version of it may change. Art, for that matter, has been a means of emoting, portraying and unifying minds, even for the ones who critique it. The definition of what constitutes as art differs from person to person. Today, the festival of Ganesh Chaturti, the Taaziyats of Moharram, the Dussehran depiction of Ram Leela, while they are perceived as just festivals for some, could probably count as a modern day versions of artistic installations for others. The trick is to find what makes a creation what it is and have the courage to appreciate it.

Going ahead, we need to collectively make sure that the rich legacy of Indian Art and Culture is preserved and maintained. There is immense talent in our country, but only a few get the opportunity to showcase their abilities to the world. Providing adequate opportunities to talented artists from all across the country will give a strong boost to Art and Culture. In the next ten years, we should aim at developing world class contemporary Art Museums and Art Galleries across major cities in the country. This will spur tourism, generate revenues and most importantly provide opportunities to many talented artists in India.

Just as support to Information Technology has unleashed India's IT talent and made India a leading knowledge economy, strategic promotion of Indian Art and Culture has the potential to make India a world leader in terms of soft power.

Paresh Maity is an Artist

Education Scenario in the Next 10 Years

Roshni Nadar Malhotra

Target for the Decade

Targets of quality and not just scale are important to create a more robust educational system.

Understanding the best global systems

There is no single formula for creating a successful schooling system; however, one can look at some of the most successful and effective schooling systems in the world and adopt the best practices that they follow. The schooling systems of South Korea and Finland are rated as the most effective in the world but they are diametrically opposite to each other in terms of their approach. While South Korea believes in putting its children through an exceptionally tough educational regime, where hard work and grit are expected and adhered to without exception, Finland gives its student community an absolutely free choice of pursuing whatever interests them. South Korea does not lay too much emphasis on talent and the students are put under enormous, unrelenting pressure to perform. This has, however, put South Korea on the map for best performance in international comparative tests of achievement, including tests of critical thinking and analysis and of course 100% literacy rate. On the other hand, Finns value intrinsic motivation and the pursuit of personal interest above all else and their education system also tops the world charts.

> **"Any educational system should rest on three pillars – Access, Equity and Quality"**

The Indian scenario

For a country like India, with the second largest population in the world and a low GDP, education is one of the basic necessities. With approximately 250 million children going to about 1 million schools, India boasts of the largest education system in the world. The question that now arises is if our schooling system is robust enough to propel these 250 million children to excel in their respective fields. While India has been inching close to achieving 100% literacy, the quality of education offered in public schools leaves much to be desired. It is, therefore, hardly surprising that 40% of Indian school going students are currently enrolled in private schools as opposed to 7% in the UK, 8% in the USA and 2% in Finland.

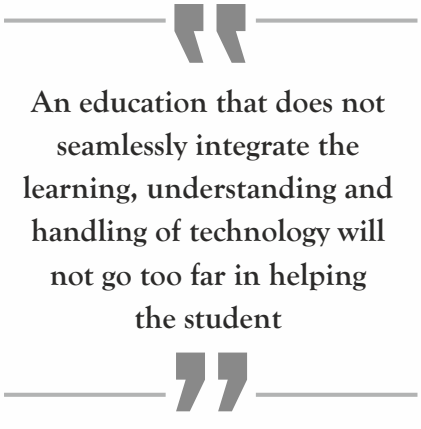
Any educational system should rest on three pillars - Access, Equity and Quality. While India has been able to address the first two with reasonable amount of success and has achieved remarkable results, the third pillar of Quality needs a lot of attention in the years to come. It is not just about the standard of education delivered, or low teaching motivation among the staff. The student base is so vast that providing proper infrastructure to the children is also a challenge. A study of 188 government-run primary schools found that 59% schools have no drinking water and 89% have no toilets. In fact, one of the biggest reasons for girls dropping out of school has been the lack of toilets.

Looking towards the future

With the ASER report reminding us every year that the basic skill set of our students are suffering year on year, there is no overlooking the fact that the schooling system in India needs some rethinking. The ASER 2016 survey shows that the proportion of Class V children who can read a Class II level text fell to 47.8% in 2016 from 48.1% in 2014. It is obvious that targets of quality and not just scale are important. Here are some ideas that may help create a more robust educational system:

1) **Teacher training** - Teachers are the ultimate custodians of the education delivered in individual classrooms. The two best educational systems in the world - that of Finland and South Korea have just one thing in common - a deep seated cultural respect for teachers. Thus teachers are chosen with a lot of care. In Finland, only one in ten applicants to teaching programs is admitted. While revamping their education system, the country closed down 80% of teacher colleges in 1971. Only the best university training programs remained, elevating the status of educators in the country. India may find it beneficial to take a leaf out of Finns' book and relook at teacher training.

2) **Integrated technology education** - The movement towards digital and smart classrooms has started in the country with over 30,000 already adopting such practices. An education that does not seamlessly integrate the learning, understanding and handling of technology will not go too far in helping the student. Additionally, the delivery of regular teaching content if shifted to the realm of technology will help tackle the shortage of qualified and motivated teachers in the country.



3) **Skill training** - The staggering student dropout rate at the Secondary level is a clear indication that our education system is not able to meet student expectations. A major reason for this is that students, especially from low income families, realize that a high school education will not help them get a job. Employability is still correlated with at least an undergraduate degree. Introduction of vocational studies at the higher secondary level can lead to more students being part of the education system and also help in improving the employability figures. Subjects like retail, hospitality, nursing, etc. can easily be taught at the +2 level to allow a trained workforce into the system sooner.

4) Encouraging alternate classrooms - Unlike other countries like the US, alternative schooling or home schooling is not very popular in India and the root cause of that can be traced back to the colonial era, which saw the rise of schools with common curriculum across institutions which relied on rote learning. Earlier, the Vedic and Gurukul systems of education were actually based on the principle of skill acquisition in accordance with a child's talent. It focused on nurturing well rounded individuals with cultural and spiritual learning seamlessly integrated into the process of education. In fact, many of the early twentieth century thought leaders born in India including Rabindranath Tagore, Jiddu Krishnamurti, Sri Aurobindo, Maria Montessori and Walden recognized the cons of mass instruction and tried to start models of alternative schools. A few alternate schools like the Abhaya School in Hyderabad, Bangalore Steiner School, Students' Educational and Cultural Movement of Ladakh (SECMOL), Ladakh, etc are proving how successful this model can be.

Today, we inhabit a world where the blinding pace of change mandates that we produce a faster, smarter, better grade of future citizens. Standardized education where the student only manages to learn the basics of history, geography or mathematics is not a viable solution any longer, not unless we as a nation are ready to face the consequences of producing a generation of future workers who are not employable.

Roshni Nadar Malhotra is Executive Director and CEO, HCL Corporation, and Trustee, Shiv Nadar Foundation

Urban Development and Cities of Tomorrow

Harshavardhan Neotia

Target for the Decade

Indian cities to become sustainable, citizen-centric, economically vibrant, accessible, resilient, well-governed and responsive.

What we can say is urbanisation today is happening at a pace and a scale which is effectively 3,000 times the impact of the UK industrial revolution. So how did we arrive at that headline number? When the UK experienced industrial revolution, it took about 150 years to double income and to move people from farm to factory. And then, as time went by and urbanisation happened about 100 years later in North America, Europe and in Germany, it took 50 years to double income.

For India, as it urbanises, it is taking about 10-15 years to double income. And, of course, we are not talking about 10 million people but we are talking about a billion people. That means we are moving 10 times faster with 300 times as many people. So, 3,000 times the impact. This is a revolution- an asteroid hitting the planet.

- Jonathan Woetzel, Senior Partner and Director, McKinsey Global Institute

Urbanization indeed is a significant phenomenon of this century and the developing world is where this demographic change is taking place. Urbanization in the developing world was once considered too fast and uncontrollable, something to be opposed and controlled. For many today, the issue is not one of how to contain urbanization, but rather how to plan for it - exploring benefits of economic development associated with urbanization while proactively managing and reducing the negative externalities such as crime, overcapacity, informal settlements, slums, etc.

As large number of people gathered around our mega-metropolises, urbanisation seems an unalterable course. The Ministry of Housing and Urban Poverty Alleviation acknowledges India's intention to implement the New Urban Agenda and steer India's urban transformation towards more sustainability encompassing inhabitants and the larger eco-system. India's urbanization is now geared to focus on the creation of 'Smart Cities' as also revamp urban institutional structures and policies. The urban agenda of the Union Government is inextricably linked to the economic vision of creating centres of investment for private capital.

Many believe India will have one of the largest country-wide concentration of cities in the world, including some very big ones. According to a recently released study by Oxford Economics that ranked

> **Resources integration and management innovation are two major growth drivers for urbanization**

Asia's 30 largest cities, Indian cities are set to expand the most across the region, with growth speeding up from the past five years.

Matter-of-factly, urbanization being one of the most important facilitating parallel processes in rapid growth, making it work well is but critical. Certainly, cities are an appropriate platform for driving a new agenda and are the places where new ideas crystallize, technological and artistic innovation happen and creative solutions to problems emerge.

I guess resources integration and management innovation are two major growth drivers for urbanization. That said, cities of tomorrow will have to fill the infrastructure gaps to handle significant imminent growth in the need for civic amenities including housing, transportation, public utilities, educational institutions, healthcare services, and recreational facilities. Future cities must find its own USPs and exploit those to the benefit of metropolitans and its citizens. Cities thus built are likely to attract businesses as also international investment and tourism from around the world. It could turn out to be hubs of non-agricultural, high-paying professional jobs like banking, law, and engineering.

Economic development

As cities battle several issues including economic development, they increasingly have to do so with fewer resources as they face budgetary constraints and battle with suboptimal devolution of funds and functions. Public- Private Partnerships (PPPs) are now must for feasible solutions to address imminent urban demands. PPPs are an increasing source of finance for large-scale infrastructure projects across energy, transport and other sectors. But, clearly, the value generated should be far greater than the costs. Therefore, a system of value sharing is needed to address the investment needs.

Future cities will need to adopt new business models and technology to transform themselves and continuously improve. In order to attract talent and capital in an increasingly competitive global landscape, cities of tomorrow will need to be agile and focused on city services while they follow the action plan for urban transformation. As cities adopt principles of co-creation, civic employees will increasingly engage with stakeholders (other government bodies, the private sector, NGOs, citizens and academic institutions) to identify solutions that address urban issues.

Technology penetration

Technology penetration holds maximum significance in city network services. The advancement of technology over the past decade has been utilized to great benefit by cities around the world. Future cities should make good use of GIS technologies for infrastructure service planning, waste collection and sewage monitoring, road traffic management systems and connected closed circuit television (CCTV) for police surveillance to reduce crime. Certain city municipal corporations have already adopted certain measures to improve local revenue collection; automated municipal financial

management information systems to strengthen budget reporting, billing collection, capital investment planning.

Significant progress in green technologies as they penetrate the market are also beginning to pay dividends, using smart infrastructure plan that is more useful. Efficient application and adaptation of such technologies in cities over the decade ahead will be a key element of the urban list of items.

"In the Fourth Industrial Revolution we are likely to see the biggest industrial shifts in a generation, changing the way we work and live in the urban environment. Innovations such as 3D printing, artificial intelligence and next-generation robotics will shift models of work and production in ways that are impossible to predict. Cities and businesses need to be adaptive. Public-private collaboration will be required to enable cities to navigate the path of this urban transformation," said Alice Charles, Lead, Urban Development, World Economic Forum.

Transportation

In order to make urbanization a real growth generator, our cities of tomorrow must have good connectivity to transport infrastructure and appropriate linkages and connectivity between cities and their hinterland to serve as markets for agricultural goods and production centers for agro-processing and marketing.

Smarter transportation solutions such as integrated fare management (single fare card) for hassle free journey including break journeys by multiple modes of transportation. Smarter traffic management for improving overall traffic management, traffic prediction, improved traffic signalling based on congestion, traffic enforcement, etc. Smarter parking for trouble free parking experience for street and closed parking areas.

Affordable housing

Affordable housing remains a key component of future cities. The Union Government launched "Housing for All by 2022" that aimed for urban areas with following components.

a) Slum rehabilitation of Slum Dwellers with participation of private developers using land as a resource;

b) Promotion of affordable housing for weaker section through credit linked subsidy;

c) Affordable housing in partnership with Public & Private sectors; and

d) Subsidy for beneficiary-led individual house construction or enhancement.

On the issues of affordable housing and transportation, the observation made by Jonathan Woetzel of McKinsey Global Institute seems significant. He said 'In practical terms, it comes down to various challenges, the first one being finding affordable housing within an hour-and-a-half's commute for everybody to their work. We know this for a fact that people who commute to work for more than two-and-a-half hours have poor lives: they are more likely to be alcoholic, more likely to be divorced, their children are more likely to go to jail, and they will lead shorter lives. It can't



be a good thing to spend 20% of your day sitting by yourself or standing in a bus.'

Skilling

We will have to bear in mind that while the urban economy generates much employment, the urban poor face challenges in accessing that employment due to low skills. Most workers in the informal sector have low wages and unsatisfactory working conditions. Here comes the role of skill building programmes and policies that the government is talking about so emphatically.

Safety

Smarter public safety solutions can help future cities to create a single public safety platform spanning multiple agencies such as police, police control rooms, emergency numbers, fire, traffic, and anti-terrorism agencies, etc. Video analytics can be used to improve effectiveness of surveillance by providing features such as crowd detection, tripwire crossing, abandoned object, facial recognition, illegal turns and parking, vehicle classification and counting.

Waste management

Smarter waste management solutions can be taken up for end to end planning, monitoring and efficient operation of waste management. Pan city waste management infrastructure and assets can be mapped (key sites and locations, such as community/RWA collection points, infrastructure, personnel, as well as location of any citizen-reported issues).

Certainly we are seeing a lot more policy-level will and impetus for several large scale initiatives than witnessed in several preceding years. With the right policies in place, the faster a country like India urbanizes, the faster it could reduce poverty and increase shared prosperity.

The time is ripe for Indian cities to initiate and propel their journey towards becoming sustainable, citizen-centric, economically vibrant, accessible, resilient, well-governed and responsive.

Harshavardhan Neotia is Immediate Past President, FICCI, and Chairman, Ambuja Neotia Group

Defence Manufacturing: Make-in-India for Regional Supremacy

Jayant Patil

Target for the Decade

No country can aspire to achieve regional supremacy by remaining dependent for majority of its defence & security needs. India should enhance defence indigenisation from current levels of 35-40% to 70-75%.

Building indigenous capability is strategic and confers on India ability to gain an edge over adversaries in the form of surprises through force multipliers

Few industry sectors rev up the economic growth engine quite like manufacturing can. The present government having recognised this reality is pushing hard through its 'Make in India' campaign to promote indigenous production and place the country on the world map as a leading manufacturing destination. This initiative has the potential to realise India's ambitious plans to grow manufacturing sector from the current 17% of GDP to 25% over the next decade by harnessing mainly the energies of the country's youth. There is little doubt that channelizing our demographic dividend would provide the necessary impetus to accomplish the goal of becoming a regional superpower. The 'Make in India' programme promises to create opportunities to achieve this ambition, albeit in the short run, by building strong partnerships, transfer of technology and then building on them indigenously.

However, no country can aspire to achieve regional supremacy by remaining dependent for majority of its defence & security needs. Thus, concurrent push to 'Design in India' and 'Digital India' is an imperative to indigenously design, engineer, develop, and manufacture one's own defence necessities and needs to be at the core of our policy making and implementation. With planned Defence Capital Acquisitions to the tune of INR 14-16 lakh crore over the next decade and a vision to enhance defence indigenisation from current levels of 35-40% to 70-75%, this sector alone can contribute an additional ≈ INR 40 lakh crore or 1.7-1.8% to India's GDP over the next ten years with economy growing at 8-10% YoY (considering the multiplier effect across tierised value chain that one expects from defence manufacturing). India's defence sector is a monopsony. The country's defence procurement historically depended primarily on Government-to-Government (G2G) relationships, and thus it was only consequential for the Ministry of Defence (MoD) to create and trust only

government owned companies as production agencies. The ownership syndrome in MoD also manoeuvred production of indigenously developed defence products (by Defence Research and Development Organization (DRDO) and industry partners) to Defence Public Sector Undertakings (DPSUs) and other government owned entities with mixed success. In case of complex systems, the DPSUs remained as prime contractors, supported by private players as development partners to DRDO. This model with implicit handling and margin at the hands of prime contractors yielded poor financial efficacy. Post opening up of the sector in 2001, the private sector majors and development partners to DRDO evolved into system integrators par excellence and competitively positioned themselves to design, develop and manufacture complex platforms like Submarines, Warships, Radars, Artillery Guns, Armoured Systems, etc. It was with this backdrop, that the Dhirendra Singh Committee recommended a Strategic Partnership model for MoD and private sector as an imperative to cut imports, implement Make-in-India and create system integrators in addition to already established DPSUs. This would transform India's defence production from hitherto being 'import dependent' to it being a 'foreign-exchange neutral' one, create jobs, build competition and help stretch the budgets to acquire higher capabilities through force multipliers.

The 'Strategic Partnership' model for Indian defence acquisition as proposed in Defence Procurement Procedure 2016 is akin to successful practices in countries like USA, France, and others where governments have optimally utilized strengths of both the public and private sector on a level playing field basis to achieve self-reliance in defence. In USA, Defense Advanced Research Projects Agency (DARPA) funds and gets developed futuristic and disruptive technologies, while the Defense Contract Management Agency (DCMA) (Department of Defence - DoD) handles placement of large programs by following Project Oriented Design & Construction cost model where it is jointly evolved between the Services and PA, first of class is ordered on a Cost Plus model, Learning Curve and Incentive Sharing model is evolved to share savings in costs between partners in development. This has resulted in creating strong global leaders and building a robust defence industrial base. The Government steps in aggressively to promote exports through G2G contracts for strategic leverage based on its foreign policy.

Similarly, the fulcrum of French defence development / procurement is the Direction Générale de l'Armement (DGA), created by General Charles de Gaulle with the prime objective of making France completely self-reliant in defence. DGA mission is threefold - Equipping the Armed Forces (through life view), Preparing Industry for Future Requirements (technological and industrial goals to deal with future threats), Promote Arms Exports (25 - 40% on Industry revenues from exports). Thus DGA processes include National Procurement with or without competition (70% volume), International Procurement from European / Atlantic NATO (20% volume), and balance 10% procurement from International sources where Price and Quality is critical. The DGA procures preferably on Fixed Price basis but defines Responsibility Principle. This deals with unforeseen design and realisation challenges in complex programs and also puts responsibility to pay on the one not meeting contractual obligations, whether Government or Industry in a shared sense of fairness. In the decades since the DGA first came into being, it has played a key role in developing some of the leading French private sector companies which presently feature in the global list of largest Defence Companies as also among largest Defence Exporters.

Indian defence industry has the necessary capabilities in many major target segments for indigenization

Globally, governments control export of defence technologies, being strategic by nature, and hold the Intellectual Property (IP) rights as well (through Government funding); and companies are not at liberty to part with them, at will. Having invested plenty over several decades, sovereign nations do not share critical technologies, without commensurate benefits and controls having geo-political implications leading to control / denial regimes. G2G relationships, thus play a decisive role in making available requisite level of technology, mandate IP control framework and demand appropriate FDI limits.

Thankfully, the Indian Defence Industry is maturing by the day. Under the new regime, we see programs being categorised under 'Buy Indian' signalling that we are no longer fully dependent on any external agency for the core of our products. There are also increasing number of programs under 'Buy & Make (Indian)' category, indicating preference to trust Indian companies over Foreign OEMs, with a mandate of >50% indigenous content. Also visible are the increasing number of local industry players competing for Buy Global contracts putting them shoulder to shoulder with international players. Although this has to scale up in a big way, industry confidence would be further buoyed through active support of MoD by conclusion of development contracts under the "Make" Programs and initiating acquisition under Indigenously Designed, Developed and Manufactured (IDDM) category. This would allow Indian industry to demonstrate its maturity and establish its credentials.

Building indigenous capability is strategic and confers on India ability to gain an edge over adversaries in the form of surprises through force multipliers. It also positions India for export of Defence Systems / Platforms, and achieves a balance of trade on defence goods.

This national imperative puts an increased focus on R&D to stay at the bow wave of latest technology at all times. Today, none of the Indian Defence companies feature in the Top 2500 Global List of R&D spenders. The private sector accounts for roughly 35% of India's total R&D spending. In order to ensure defence indigenisation, every Indian company needs to be encouraged to innovate and keep pace with technology. The Government can provide requisite encouragement under strategic partnership policy as well as by offering tax incentives for R&D and product development. Such an approach is sure to smoothen the path for 'Make-in-India' and boost Defence Manufacturing.

MSMEs and start-ups are often the bedrock of innovation. As a nation we need to promote generation of Intellectual Property through Make Programs by 'trusting' companies that have invested in Defence and gained maturity. The tierised value / supply chains under such indigenous programs generate multiplier effect to economy and thus need to be cleared at an accelerated pace. Instead of phasing out incentives on R&D expenses, it would be prudent on part of the Government to provide accelerated weighted tax deduction incentives for a targeted sector like Defence to promote spending on products and services developed through in-house R&D, whether sold domestically or exported.

It is my belief that the Indian Defence Industry has the necessary capabilities in many major target segments for indigenization. Hand-holding by MoD through a trust-based model can mature these to establish the much needed robust and vibrant Defence Industrial Base in the country. Having brought about a slew of important policy reforms in the last three years, the Government has sown the seeds for a strong defence economy to concurrently facilitate enhanced participation of the private sector as well as nurture and support the government owned entities. All it needs to do is take a few more bold steps, speed up decision making, de-layer approval stages, and eliminate repetitive process steps to unleash and actively promote indigenisation. I believe that the Make-in-India for defence is the journey that, with time, will evolve into Make-for-India, and later lead to Made-in-India.

Jayant Patil is Whole Time Director (Defence Business), Larsen & Toubro

Preserving India's Traditional Knowledge

Devdutt Pattanaik

Target for the Decade

For the next ten years, can we set the target as to how many 'successful' people will consciously walk away from 'ambition' at a set age, say 60 years, and focus on generosity and enabling future leaders?

India's culture and traditional knowledge is unique and can offer a new way of thinking to the world. Modern knowledge is restricted to science and technology. But neither subject can give life a purpose of meaning. For that we need traditional knowledge. In the West, the trend has been to completely reject the past, and hurtle towards the future, before swinging back to the former extreme. In India, nothing is rejected, and nothing is taken in extreme, and there is a mix and match of everything always.

Modern knowledge looks at life as a problem and seeks a solution. Traditional knowledge notices that every solution creates new problems. It knows that when one is greedy and insecure, the world looks like it is full of problems. A tribal man lived a happy life in the forest. Then modern man came and told him he was uneducated, poor and unemployed because he had not gone to school, he did not have a toilet and he did not have a job. To build a school, a toilet with drainage and flush, and to create a factory where he could get a job, the modern man destroyed the forest. When the forest was destroyed the climate changed and food habits changed which caused the arrival of new diseases. The owner of the factory was richer than all the factory workers. The tribal man got the lowest paying job. And now, the tribal man is being asked to solve the problems of the world, problems created by 'solutions' he never asked for. Is it not ironical? Western thought is so driven by 'objective' and 'targets' it does not understand consequence (karma), that every target/objective/solution contains the seed of many more problems. We are seeking short-term answers, quick fixes and market strokes that are only giving a false sense of positive energy and making the long-term worse.

We need to have the humility to accept that we don't know everything. That we have some understanding of life and there were many things the ancients understood that we tend to ignore. For example, modern "management by objective" is totally oblivious of the concept of "consequence" and so we refuse to accept that the mad rush for 'development' is the main reason why there is 'climate change'. The globalized world has decided that 'having' more

> **We need to contribute to the globalized world and not just be passive recipients**

creates happiness. They simply created power hierarchies where the powerful are those who deprive others of property. Modern knowledge is responsible for less than 100 people controlling 80 percent of the world's wealth, by legitimate means in all probability.

> **Leadership is about paying attention to the other and enabling people, not to mimic or pretend, but to be genuine about their fears**

Over the years, the traditional Indian culture has been waning. If we want to preserve and benefit from the traditional Indian knowledge, we need to rein in one thing: an obsessive desire to mimic the West. We are so obsessed with measurement and objectivity that we have stopped valuing the subjective, the inter-personal and the cultural. Whether we accept other cultures or not, we will always be influenced by them. The point is to include them, rather than let them overwhelm us as we are ashamed or unaware of our own belief systems. We need to contribute to the globalized world and not just be passive recipients.

Indian knowledge however cannot be reinforced by authority or institutionalisation. By its very nature, India's traditional knowledge cannot be 'sold' or 'propagated'. It is designed around individuals who can pass it on to worthy students, as it is strongly rooted in human spirit. The authorities/ government can be facilitators by focusing on building suitable infrastructure and creating ecosystems where individual entrepreneurs and practitioners of traditional knowledge can thrive and cheats are weeded out.

On the educational front too, we can take a leaf out of ancient systems. Modern education is not based on attention to the individual. This can only be provided in affluent schools that can afford to allow fewer students per qualified and sensitive and caring teacher. Gurukul also works in small ecosystems, and not large ecosystems. This industrial mindset that focuses on growth and size destroys the very essence of Indian thought which is based on nurturing the self through relationships.

In present day business organisations, the management expects humans to give up all values they have at home and adopt new values in the office. We live in an age of political correctness where we have to say and do the right thing, whether we believe in it or not. This schizophrenic approach to work and life is supposed to make us more efficient, but it does not. It fractures us and the fault lines have started to show across organizations, industries and societies.

Leadership is about paying attention to the other, and enabling people not to mimic or pretend, but to be genuine about their fears. This means creating an ecosystem where people are not vulnerable but rather feel secure and empowered, for example, to express uncomfortable views without fear of censure. If a leader cannot sense fear in people around him, if a leader feels good when people around him are frightened into pretending, there is a problem. In that case, power flows towards the leader/ boss rather than towards the organization. People are slowly realizing that management has long ignored the culture lever making it rather mechanistic.

We should spend a lot more time understanding our imagined hunger and fear, and our quest for social status. This is what the ancients called atma-gyaan. Most leaders are so unaware of India's complexity

that it makes them so insecure that they end up taking self-serving rather than society-serving decisions. We give lip service to our spiritual heritage and reduce it to either spa-activities (yoga by the bay) or tourist events (Ganga aarti) or magic (charismatic gurus who bring rain and fortune). Likewise, Yoga Day focuses only on asana and pranayama, which reduces yoga to a gym-activity or spa-activity: it needs to focus on samadhi, the ability to let go of wealth, power and status. The whole purpose of yoga is to uncrumple the crumpled mind, and thus unravel the ego by realizing the divine.

For the next ten years, can we set the target as to how many 'successful' people will consciously walk away from 'ambition' at a set age, say 60 years, and focus on generosity and enabling future leaders? We need targets that involve letting go. There is just too much greed in the world that is being valorized as ambition.

Devdutt Pattanaik is a Mythologist

Responsible Competitiveness: A New Paradigm for Economic Growth with Social Equity

Sanjiv Puri

Target for the Decade

A new dimension of inclusive growth and development can be unleashed when India creates many a National Champion who can create larger societal value through a paradigm of responsible competitiveness.

In about a decade from now, India will surpass China as the most populous nation. By then, India is expected to be a $5 trillion economy, more than doubling its present size. The Indian consumer market is set to quadruple from $1 trillion to $4 trillion, making India the third largest consumer economy in the world. This growth momentum will get a fillip from the country's favourable demographic dividend, rising incomes, urbanisation and progress in rural India. Indeed, India's story as one of the fastest-growing large economies is being hailed by many across the world.

Given their creative capacity, innovative capability, diverse managerial resources and presence in the frontline of economic activity, enterprises can significantly contribute to a competitive economy whilst enabling larger societal value creation

The country's economic resilience and innovative capacity will, however, be put to considerable test in the coming years. By 2030, India will be home to 1.5 billion people. The critical need to provide gainful livelihoods to the teeming millions is a daunting challenge. Already, more than 10 million youth join the workforce every year. The global trends of automation, digitisation, robotics and artificial intelligence while influencing the context of job creation will also offer opportunities for generating new livelihoods for the competitive growth of the economy.

By 2025, India's demand for water is expected to exceed all current sources of supply, threatening agriculture - the mainstay of rural livelihoods and the lifeline of the economy. Besides, agriculture is also the most vulnerable to climate change - a global threat that is escalating with every passing year.

These challenges undoubtedly require a new paradigm of growth that will not only enable sustained economic progress but simultaneously ensure that larger livelihoods are generated with environmental replenishment to ensure that the outcomes are sustainable. This is indeed a task of colossal proportions and one that will need the collaborative efforts of all sections of society be it government, industry or other sections of civil society. While the government's laudable flagship programmes inspired by the

Prime Minister's vision such as Make in India, Skill India, Digital India, Doubling Farmers' Income, Swachh Bharat and others are addressing several of these challenges, it is my strong belief that businesses can make a transformative contribution to these areas of national priority. Given their creative capacity, innovative capability, diverse managerial resources and presence in the frontline of economic activity, enterprises can significantly contribute to a competitive economy whilst enabling larger societal value creation. At ITC, it is this philosophy of triple bottom line performance - building economic, environment and social capital as a unified strategy - that inspires thought and action in conducting business. We call this approach "Responsible Competitiveness" - building extreme competitiveness of businesses whilst simultaneously ensuring that innovative strategies build natural capital and generate livelihoods.

To my mind, any strategic intervention to generate livelihoods and ensure ecological security would benefit from a larger focus on agriculture, food processing and wood-based industries as well as services like tourism and information technology. Livelihood creation is more likely to get spurred when competitive value-chains in such focus sectors are built and nurtured.

Let me take this opportunity to highlight some examples of triple bottom line performance from our own experiences over the years.

Fostering Agriculture Growth and Sustainable Livelihoods

India's agriculture sector is super-critical for the economy. It employs nearly half of India's workforce and 70% of its rural population, besides providing food security to the nation's 1.3 billion people. Yet, this sector contributes less than 15% of the nation's GDP. Less than 10% of agri-produce is processed in India, and colossal agri-wastages significantly diminish the rural income potential. Farmers are bereft of an efficient system of market signals as well as contemporary technological know-how. As a result, the farmer is unable to align production to changing consumer demand. Agriculture is also most vulnerable to the vagaries of nature, necessitating climate smart practices.

Given conducive policies and greater corporate involvement, the agriculture sector can be a force-multiplier of growth and employment in the country. There are enormous opportunities in three specific areas of intervention. First, in the backend, farmers need to be empowered with market information and linkages as well as productivity enhancing know-how. Creating supplementary income opportunities through women empowerment, livestock development and others help diversify livelihoods and derisk agricultural dependence. Second, the front-end comprising the market for value-added and processed agri-based products is a substantial livelihood generator given that it anchors the entire agri-value chain. This is even more reason to promote the food processing industry, which is at the intersection of agriculture and industry, and has the potential to drive agri-growth, reduce wastages and create employment. This can get accentuated through the creation of powerful brands that drive the competitiveness of the entire value-chain. Third, given the vulnerability of the agri-sector, social investments in building common assets like watershed, or in creating large-scale afforestation addresses both livelihood and environmental security.

In this regard, ITC's extensive 360-degree involvement in the agri-based business and the impact of its rural programmes has been immensely encouraging. Through the celebrated ITC e-Choupal network,

more than 4 million farmers have been empowered by providing market information, customized extension services to increase productivity and climate smart agri-practices to reduce environmental risks. Its soil and moisture conservation through watershed development has covered over 8,00,000 acres. More than 15 lakh milch animals have benefitted from livestock development, raising rural incomes. Over 6,00,000 acres have been greened whilst generating 110 million days of employment. Such programmes indeed point to the potential for growth and employment latent in this sector.

Indian manufacturing industry can also participate in long-term national capacity building by investing in cutting-edge research and development for the future

ITC's agri-value chains are anchored by world-class Indian brands in the Foods, Paper and Stationery segments that have enabled larger value capture and retention in the Indian economy. Creating winning Indian brands is of extreme importance because the value captured in the economy supports larger livelihood generation.

Enriching Value Creation from Manufacturing and Indian Brands

Today, India is literally at the epicenter of a global consumption explosion. While the Government's Make in India initiative aims to retain higher value addition by manufacturing in India, such endeavors can gain a multiplier impact when world-class Indian brands are created and nurtured to capture even larger value. Currently, most high value brands in the country, as well as many of mass consumption, are owned overseas leading to a perpetual outflow of value in the form of royalty and other payments. When intellectual property in the form of trademarks is owned in India, winning Indian brands can capture and retain larger value within the country. Global brands like Samsung and Toyota today create significant value for the countries of their origin besides being a badge of national honour. It is for this reason that ITC has invested significantly in creating a strong portfolio of Indian brands that can increasingly contribute to retaining value in the country.

The Indian manufacturing industry can also participate in long-term national capacity building by investing in cutting-edge research and development for the future. Innovation can in fact create new markets and spur creation of new value chains. Recognising the critical role of innovation in shaping game-changing products of the future and open new markets, ITC has invested substantially in creating intellectual capital through the globally benchmarked ITC Life Sciences & Technology Centre. In addition, the Company is investing significantly in creating state-of-the-art manufacturing facilities across the country, which will anchor value-chains in food and agri sectors among others, promote green and efficient technologies whilst multiplying jobs through backward and forward linkages.

The Potential in Services Sector to Multiply Employment

India's large pool of human resources provides the driving force to enrich a diversified services sector. The Government's Skill India Mission is contributing significantly to bridge the vast demand-supply gap in the sector whilst unlocking a larger value for the economy as a whole. ITC's engagement in the

Hospitality and Tourism sector as well as in the Information Technology industry provides us the opportunity to contribute to the government's efforts in multiplying employment.

ITC continues to pursue an asset-right strategy to further add to its hospitality footprint, given the belief that these large investments will not only enrich India's tourism landscape but add significantly to its employment generation potential. Led by the iconic ITC Hotels, with its credo of Responsible Luxury, the signature properties not only represent India's rich cultural and glorious heritage and its exemplary cuisines but are also trailblazers in green hoteliering, winning global accolades and distinctions. ITC continues to strengthen its hospitality business, which will grow to a total inventory of more than 13,000 rooms in the foreseeable future, and contribute further to putting India on the global tourism map. In addition, ITC has also invested in building prestigious hospitality training institutes to hone skills and provide the country with employment-ready professionals.

The IT industry in the country is today going through a major disruption phase with a mix of challenges ranging from economic slowdown overseas, to technology change, automation, and the pressure to in-source jobs abroad. However, disruptions are also opportune moments to recalibrate, reposition and re-emerge with value-adding propositions to go up the ladder in service delivery and application development. Riding on the wave of digitisation and trends towards Artificial Intelligence, Internet of Things and Industry 4.0-readiness, India has a new opportunity today to win the world with value-adding offerings that build competitiveness of clients whilst enabling the creation of new job opportunities, critical for a country like India.

Building National Champions for Responsible Competitiveness

India's challenges require a quality of growth that creates, captures and retains larger value in India. It requires organisations to consciously strengthen the competitiveness of the value chains of which it is a part and more so those that extend to the country's rural areas and backward regions empowering the weakest. Winning nations across the world, especially from among emerging economies, have supported the creation of National Champions who are prime drivers in creating sustainable wealth and livelihoods. Going forward, a new dimension of inclusive growth and development can be unleashed when India creates many a National Champion who can create larger societal value through a paradigm of responsible competitiveness.

Sanjiv Puri is CEO & Executive Director, ITC

Towards a more Financially Inclusive India

Rashesh Shah

Target for the Decade

Expanding number of active demat accounts from present 2.7 crore to 20 crores in next ten years.

Financial inclusion is the underlying base for sustainable growth in any economy, especially a developing one like India. 2014 and 2015 were watershed years for the Indian economy in this respect. The Pradhan Mantri Jan Dhan Yojana (PMJDY) launched in August 2014 made available a basic savings bank account to a common citizen who was unbanked. In the first five months after its launch, more than 125 million bank accounts were opened under the PMJDY. As of November 2017, the number of beneficiaries has increased to more than 300 million. Currently, out of India's current adult population of 930 million, about 53% own a financial account. In contrast, in China, 8 out of 10 adults had a bank account in 2015 itself. Clearly, there is a lot more catching up to do yet. And this is not merely in terms of active account holders, but more importantly in access to other financial services, like payments, savings, investments, credit and insurance. Going forward, trends like democratization of credit and financialisation of savings will enhance access to financial services in India, particularly to the under-served sections of the society.

Going forward, trends like democratization of credit and financialisation of savings will enhance access to financial services in India, particularly to the under-served sections of the society

In terms of access to credit, it is reported that nearly one-fifth of India's population still does not have access to formal financial credit. With the continued efforts of RBI and the government to expand the reach of financial credit through co-operative banks, regional rural banks, micro-finance groups, business correspondents, launch of MUDRA scheme, etc. as well as the digitization initiatives which will create a digital footprint for every citizen, access to credit is expected to become more secular going forward. The issue of last mile connectivity still continues and aggressive efforts from government are required in this direction. However, once the bottlenecks are taken care of, we can expect the household debt in India to rise substantially.

The launch of schemes for accidental insurance, life insurance and pensions by the government in 2015 is a noteworthy step in ensuring access to insurance. The mandate of these schemes was to provide comprehensive cover to beneficiaries at a nominal financial cost. The Pradhan Mantri Suraksha Bima Yojana for accident insurance saw enrollment of around 10 crore people. The Pradhan Mantri Jeevan Jyoti Bima Yojana for life insurance covers 3.1 crore under the scheme. The Atal Pension Yojana saw enrollment of 38.2 lakh people, targeting primarily those who are not covered in the formal sector and have no entitlements. This attempt to take basic financial products like insurance and pensions to the common man tells us that if executed with vigour, Government policy can have far reaching effects. India currently has about 360 million life insurance policies, which in absolute terms is amongst the largest in the world. However, India's insurance penetration at 3.3% is almost half of the world average of 6.2%. Likewise, India's insurance density at US$ 55 is way below the world average of US$ 621. The scale now needs to be expanded and there is a need to target universal coverage for both health and life insurance. Sustained efforts from all stakeholders are required to achieve such a scale.

Financial inclusion in terms of investments is also considerably low. As of January 2017, a mere 2.7 crore demat accounts were active. The reach of capital markets is only at a fraction of that of the banking system. Promoting the culture of investments is extremely important for a growing economy like India. A demat account opens up possibilities of investments not only in stock markets, but also in various financial instruments like Mutual Funds, ETFs, and debt instruments. However, the awareness regarding investments among Indian adults is severely lacking. In the coming decade, we must work towards taking the number of demat accounts to at least 20 crore. The reasons for poor financial inclusion in India stem primarily from the lack of awareness and limited financial literacy amongst majority of Indians. The financial literacy campaigns being run by the Government of India are informative, but largely remain passive. There needs to be a more hands-on, active campaign as far as financial literacy is concerned. And I have two specific suggestions in this regard.

Firstly, I think that the government is only an initiator and the onus of financial literacy falls on the private sector and NGOs as well. Banking companies, NBFCs and financial intermediaries can play a huge role in building awareness. The role of each of these three stakeholders should be clearly defined. Ideally, a structured approach is required for wider and deeper reach of financial education. Just as the National Skill Development Corporation has been able to create a good model of partnership between government and private sector to achieve set targets, a similar body can be considered for financial literacy as well. While the government can be the key facilitator and main anchor, private sector can eventually take the lead in wider spread of financial literacy.

Secondly, financial literacy must begin right from the school level. Various banks are currently carrying out financial literacy programmes in a few thousand schools across the country. However, this is only a scratch on the surface given lakhs of primary schools across the country. The National Centre for Financial Education (NFCE) conducts assessment tests for financial literacy in schools across India and has covered close to 2 million students between classes VI and X. What is required is a more concentrated effort to extend the programme geographically, as well as to begin learning right from the

primary section of schools. Building financial skills right from childhood would make participation much easier when children reach the working age group and are willing to part with their incomes and savings after taking calculated financial risks.

> **The reach of capital markets is only at a fraction of that of the banking system**

In addition to the teaching and building skills and improving distribution and access to financial services, we also need to create an investor friendly environment, with minimal regulations. To encourage participation of first time investors, there is a need to enable people to experiment with various instruments of investments and get hands-on-experience of their benefits. For this to happen, hurdles both in form of regulations and cost should come down. Financial inclusion will be complete only when people invest their savings in the domestic markets fearlessly. Efforts need to be taken to make investing friendly for first time investors and we should be careful so as not to repulse them away.

The success of Jan Dhan campaign has shown that even ambitious targets are achievable through concerted and mission mode approach. We need to set aggressive targets for financial inclusion for next ten years and work towards those in a mission-mode. We have been able to create right set of institutions, but have not been equally successful in creating the requisite connect with potential consumers. Over the next ten years, we thus need to have unique models with both push and pull drive towards financial services.

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Healthcare Service Delivery in India: Where We Stand, Strategy and Roadmap for the Future

Malvinder Mohan Singh

Target for the Decade

The national expenditure on healthcare delivery must be enhanced progressively from 4% to 7% of GDP.

India has come a long way in the last seven decades since Independence. There have been a series of defining moments as the healthcare sector evolved over this period. By 2020, India will probably be amongst the top three global health care markets in terms of incremental growth. As per the India Brand Equity Foundation Report 2017, we are one of the fastest growing, estimated to advance at a CAGR of 22.87% (US$ 280 billion) from 2015-20. The scope for healthcare services in India is immense, thus providing ample opportunities for both the public and the private sector.

Healthcare in India has undergone a substantial shift in the last few decades. Our initial focus was on eradication of infectious, communicable diseases; healthcare was primarily citizen-funded, with health centres and government hospitals providing most services. But gradually, a growing economy, industrialization, urban-rural migration, changing eating habits, lifestyles, longer work-shifts and stress, resulted in increasing number of patients with non-communicable diseases such as diabetes, heart disease, stroke and hypertension, all of which need longer, sustained care and treatment. This required expansion of services and investments. Over the years, the private sector started emerging strongly and has gradually become a dominant contributor in addressing India's healthcare needs.

There have been some significant achievements that India has achieved over the last several decades in healthcare. Increase in life expectancy from 32 years in 1947 to 65 years in 2011, eradication of small pox, polio and reduction in cholera, malnutrition, TB, leprosy, HIV as well as maternal and infant mortality cases are some notable accomplishments. While the government played an important role, the private sector also contributed significantly, working in partnership and independently.

The private sector has emerged as a vibrant force in India's healthcare industry, lending it both national and international repute. Today, the private sector accounts for around 70% of the country's healthcare delivery services providing majority of secondary, tertiary and quaternary care. Further, the presence of world-class hospitals and skilled medical professionals has strengthened India's position as a preferred destination for medical tourism. The sector's increased involvement in tier-I, tier-II and tier-III cities is

expected to drive the Indian healthcare sector's growth in the future. Customized solutions are being developed to meet increased public expectations, individual needs of educated and aware patients, with diagnostics centres, hospitals, and nursing homes working to facilitate greater access and improved services. There have been significant medical breakthroughs in India in the last two decades within the private sector - better diagnosis, advanced medical technology, new surgical techniques to reduce pain and discomfort with shorter hospital stays, robotic-aided surgeries for greater precision, therapeutic equipment and growing clinical skills of doctors have revolutionized the way health care is being delivered today. Telemedicine is bridging the rural-urban divide in terms of medical facilities, extending low-cost consultation and diagnosis facilities to the remotest of areas. The growing clinical skills of doctors is revolutionising the way health care is being delivered today. There is a growing shift from hospital care to home care; illness to wellness; patient centric to consumer centric; doctor intervention to robotics. In the coming years, hospitals will have a lot more Artificial Intelligence (AI) which will play a huge role in providing most healthcare solutions. There will be a growing desire for greater efficiency and convenience. An aging population, greater number of health insurances, will contribute to a continued reliance on private sector resources for financing and delivering health care.

Despite significant improvements over the past decades, there are still vital service delivery gaps with challenges of access, quality and affordability. India's public healthcare spending is among the lowest in the world. NCDs, if not tackled on war footing, will have a staggering economic impact of over $6 trillion by the year 2030. A historical bias towards curative care has prevented enough resources being directed towards prevention, wellness, primary care and public health. Insurance covers less than a quarter of the population, with out-of-pocket expenditure being the highest in the world. Severe shortage of infrastructure and talent exist, with very significant regional and rural-urban imbalances in healthcare delivery. Other key gaps include shortage of beds, scarcity of doctors and nurses, shortage of medicines and life-saving equipment, etc.

This year, the Government of India has introduced the 'National Health Policy 2017' (NHP 2017) which aims to achieve universal health coverage and deliver quality healthcare to all at affordable cost. The policy rightly advocates engagement and collaboration with the private sector to fill the critical gaps. It also reinforces the need to encourage the growth of private sector by incentivizing and creating an enabling environment.



There is a growing shift from hospital care to home care; illness to wellness; patient centric to consumer centric; doctor intervention to robotics



The NHP 2017 has set a roadmap for the coming decade. If implemented in right earnest, the healthcare sector can grow rapidly with the combined efforts of the Government as well as the private players, enabling more Indians to have accessible, affordable and quality healthcare services. The national expenditure on healthcare delivery must be enhanced progressively from 4% to 7% of GDP. Many reforms were introduced in the last two years' Union Budgets, where the Government is seeking to transform the

sector with greater public-private partnerships and consultations with multi-sectoral stakeholders. For the success of health reforms it is however necessary for the centre and state governments to work cohesively by creating a framework that provides common commitments, retaining flexibility for respective centre-state priorities. Government must leverage the vast private sector infrastructure and capability, through PPPs, to deliver the country's healthcare needs. Private funding will be essential for the development of vital infrastructure, including talent generation. More collaborative PPP initiatives, can therefore, set higher benchmarks for quality health services and improved health outcomes. To achieve the desired result, all stakeholders must work closely with the Niti Aayog to finalize an operational framework that enables proper implementation of public private partnership programmes.



A robust and inclusive mechanism will enable the private sector to participate in the Government's agenda to increase healthcare service outreach. Owing to the rising lifestyle diseases and the increasing awareness, health insurance is becoming a necessity for people. The Government's support in health insurance coverage will help to provide healthcare services to a wider population base. The prime need of the hour is also to increase the pool of medical, nursing, allied health and management talent and to increase the number of institutions that can provide these skills. The government has in principle agreed to permit new medical colleges in the Public-Private Partnership (PPP) mode in an effort to address India's burgeoning need for doctors. The government should create an enabling environment that provides incentives for private investment in delivery infrastructure, medical education, R&D and domestic manufacturing. Government has shown its strong intent to increase the use of technology and IT in healthcare to overcome access barriers in remote under-served areas.

The Government of India, through NHP 2017, has expressed its intent in assigning national priority to healthcare and work closely with the private sector by creating a conducive ecosystem and let us hope that the coming decade can be a game changer in healthcare delivery, heralding a new, healthy India!

Malvinder Mohan Singh is Vice President, FICCI, and Chairman, Fortis Healthcare

Sustainable Growth for Marine Logistics within the Underwater Domain Awareness Framework

Arnab Das and Praful Talera

Target for the Decade

A Maritime Strategy Framework with Underwater Domain Awareness is the way forward if India aspires to become a maritime superpower.

Maritime trade will continue to be the key to international trade and the prime driver for the global economy. This translates to steady increase in the maritime traffic and every nation has to maximize its share in the marine logistics chain. No global power has attained its economic status without a substantial contribution of the maritime sector to its GDP. It demands an integrated approach to achieve a level of synergy among the maritime stakeholders to propel its national objectives. "Safe, Secure, Sustainable Growth" remains the buzz word.

Maritime shipping is the single ubiquitous source of low frequency ambient noise in the ocean. Radiated noise from the marine vessels as a result of its onboard machinery operation is a major source of ambient noise. The volume and well distributed nature of marine traffic makes it an effective contributor to ambient noise. Reliable scientific data reveals a 3 dB per decade rise in the ocean ambient noise due to shipping, since the 1950s (since the data is available). This means doubling every ten years and the trend is only going to continue as global economic trend and its dependence on maritime trade is strongly linked. The advancement of technology has not improved the situation in the past. The irony is that stealth technology for the naval platforms is a given thing, however, in the absence of regulatory provisions the profit conscious merchant marine fleet is reluctant to adopt such quietening measures.

Marine species, particularly the mammals are known to use sound for biologically critical functions like foraging, navigation, communication, breeding, avoiding predators and more. They use acoustics to perceive (acoustic vision) the environment around them. The growing ambient noise particularly in the low frequency band interferes with their perception of their surrounding and degrades their well-being as a species. This is particularly termed as Acoustic Habitat Degradation. The big whales (Blue whales, Bryde whales, Sperm Whales and lot more) have overlapping hearing frequency band with the shipping noise and we are witnessing more frequent stranding of such species and subsequent fatalities. The extent of acoustic habitat degradation is extremely alarming.

The United Nations (UN) way back in 1982, in its declaration of the Convention on the Laws of the Sea (UNCLOS) articulated the hazards of noise in the ocean to marine species. However, even after thirty

five years, it is yet to take shape of a regulation. The International Maritime Organization (IMO) in its Kobe (Japan-2002) convention recognized the impact of shipping noise on the marine mammals and accepted to take forward the regulatory framework. They have declared few zones as Particularly Sensitive Sea Areas (PSSAs) and banned shipping in those declared areas as a response to acoustic habitat degradation of the marine eco-system. It may be considered that noise in the open ocean, particularly in the low frequency band cannot be restricted to a specific area and shipping noise contributes to the broad background noise. More recently, the European Union through its Marine Strategy Framework Directive (MSFD) has tried to regulate the noise emissions from ships in the EU region. There are multiple other regulatory instruments in place in Europe that address this concern of noise in the ocean. The Marine Mammal Protection Act (MMPA) in the USA is one of the pioneers to implement the Precautionary Principle of Environmental Conservation related to noise in the ocean, however, its effectiveness on ground is far from desired.

In India, the 21st century is witnessing a major maritime push and significant infrastructure investments are being initiated by the government. This is likely to substantially boost maritime trade and consequent noise in the Indian Ocean Region (IOR). The IOR has also gained strategic relevance due to multiple geo-political and geo-economic factors making it a major transit route for global trade and also presence of extra-regional powers to safeguard their strategic interest. We have recently witnessed repeated stranding of big whales in the west coast of India. An RTI application reveals that over 80 marine mammal stranding have been reported on the Maharashtra coast over the last two years alone. The trend is of steady rise. This indicates a serious ecological concern largely attributable to acoustic habitat degradation.

The gloom is real and serious, however, the awareness among the practitioners and the policy makers is abysmally low, making it an even bigger cause of concern. The conservation initiative led by the marine biologist ignores the acoustic component and only mentions it in the passing without serious investigation. The IOR due to its geo-political dispensation demands that India plays a leading role and our recent posturing in the global forum in terms of diplomacy and power play does demand that we present ourselves as a progressive nation with sound technical understanding, real know-how and policy framework.

The gloom is real and serious, however, the awareness among the practitioners and the policy makers is abysmally low, making it an even bigger cause of concern

The Underwater Domain Awareness (UDA) in the IOR is a concept that deserves national priority particularly for an India of the 21st century. UDA in its basic construct means our understanding of the Underwater Domain that translates to monitoring developments and ensuring interventions to prevent events. The four stakeholders of UDA are the National Security Apparatus like Navy, Coast Guard, Marine Police and more, the Blue Economic entities like the Offshore, Shipping, Fisheries and many more, then we have the Environmental Regulators and Disaster Management Authorities and lastly the Science and



Technology providers both in the government and the private sector. The independent and isolated approach of each of the stakeholders so far has meant lack of resources and also turf wars resulting in attempts to block each other's efforts. The UDA is a highly resource intensive concept and only pooling of resources by the stakeholders can provide a comprehensive way ahead for a Safe, Secure, Sustainable Growth for India in the 21st century.

The so called "Gloom", can be a big opportunity as well for a nation with so called demographic dividend, where the greatest national challenge in the near future is going to be jobs for the young generation. The late recognition by our policy makers that we are a maritime nation with over 7,500 km coastline has ensured sea blindness on multiple fronts. The effective UDA can provide massive opportunities in terms of sustainable entrepreneurship in the technology sector and services sector as well in addition to innumerable career prospects in multiple blue economy sectors. The strategic position of India in the IOR encourages us to take the lead and work on a regional regulatory framework, very vital for any maritime initiative. We take pride in our Defence Public Sector Undertakings (DPSUs) contributing to the indigenous shipbuilding for the Navy and the Coast Guard. This could be taken to the next level, supported by regulatory provision for the merchant ships to adopt stealth features for a sustainable acoustic habitat. The global regulatory efforts are aggressively pushing for quiet ships and if we in India do not keep pace with the global trends, the ongoing big maritime project may find itself outdated. A UDA based Indian Maritime Strategy framework is the way to go.

Arnab Das is Director, Maritime Research Centre and Praful Talera is Managing Director, Dynamic Logistics

"Over the next ten years, 50% of the workforce in India should comprise women."

Shobhana Bhartia

"In the next ten years, if wealth creators (billionaires) could target to give 50% of their wealth back to building the nation by addressing social causes, we could win many battles against big problems faced by our country."

Amit Chandra

"India needs to set a target of doubling its mortgage to GDP ratio to 18% within the next decade."

Renu Sud Karnad

"In the next ten years, India should aim at developing world class contemporary Art Museums and Art Galleries across major cities in the country."

Paresh Maity

"For the next ten years, can we set the target as to how many 'successful' people will consciously walk away from 'ambition' at a set age, say 60 years, and focus on generosity and enabling future leaders?"

Devdutt Pattanaik

"The public expenditure on healthcare should be increased to at least 2.5% in the next decade from the current 1.4%."

Zahabiya Khorakiwala

"Targets of quality and not just scale are important to create a more robust educational system."

Roshni Nadar Malhotra

"India to become a global air transit hub; and for that to happen we need to bolster our policies to double down our efforts in powering India's economy through tourism."

Deep Kalra