quality india

INNOVATION

SUCCESS

CREATIVITY

'100 SMART CITIES
VISION

New government
better governance

Quality for National Well-being

Dr. R. P. Singh
Secretary General
Quality Council of India

Dear stakeholders,

I am happy to present to you the focus and activities of the Quality Council of India. You may be aware that we have turned a new leaf in the growth of QCI with a new Chairman nominated by the Hon'ble Prime Minister. Adil Zainulbhai, former Managing Director, McKinsey India and presently Senior Adviser there, took over as Chairman from Amitabh Kant, IAS, Secretary of Department of Industrial Policy and Promotion, Ministry of Commerce and Industry.

I am humbled by the responsibility and trust reposed in me by appointing me as the new Secretary General of QCI. Ever since Chairman and I have taken over, we have been meeting stakeholders who are actively involved in the process of quality assurance in various sectors. The overall mood in the country towards building a new India as a brand is so overwhelming! We feel that this not only gives us an opportunity to scale up our activities but also puts us under the tremendous burden of delivery within a short time. Time is the essence in this journey and proactive measures need to be taken to improve the quality of 'human life' through products, processes and services conforming to standards which are comparable to the best in the world.

QCI during the past, has done exceedingly well in sectors such as education, training, healthcare, environment impact assessment, etc. and in building a infrastructure for conformity assessment and accreditation through international acceptance and cooperation with bodies that bring mutual recognition between countries. We have also started playing proactive role in mentoring our neighbours to build their own infrastructure of quality assurance mechanisms. This is no mean achievement since no cooperation can be accomplished without 'trust'. We shall strive to build this trust within all our stakeholders by working with them, working for them at times and working towards making Quality a demand driven rather than supply driven commodity for the citizens of this global society.

I invite you to join our hands in capacity building. When the work ahead is so daunting and the time available is so little, everyone must join this mission of making quality the focus. We are geared to take the Zero Defect, Zero Effect challenge in manufacturing sector and plan to work with SMEs towards making them competitive in the Make in India regime. We also have discussed and made 'Timely delivery of Public Services' as our agenda for the future. We shall work with every government department, every corporate and every individual who delivers services, whether in or outside India. We must ensure that we deliver what we promise and no one feels that we have been short-changed for quality.

I am sure with your help, participation and constructive criticism you shall keep us grounded and help us in achieving what we were set out to achieve.

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"Men acquire a particular quality by constantly acting a particular way... you become just by performing just actions, temperate by performing temperate actions, brave by performing brave actions."

— Aristotle

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Taking strides towards ensuring
Quality Healthcare

With over 1900 beds (including 525 ICU beds) and 11 top hospitals in Delhi-NCR, Punjab and Uttarakhand, 2100 world-class doctors and 9300 support staff, Max Healthcare is one of the leading chains of hospitals in India.

We at Max Healthcare are proud to have a very strong focus, commitment and passion towards 'quality'.

By focusing on 'quality', the organization has brought about a considerable change in the delivery of medical care to its patients.

At Max Healthcare, we are always bench-marking and adopting practices in line with national and international guidelines.

Max Healthcare can be proud of a number of accomplishments in the field of 'quality' which are our strengths both internally in the system & externally to the outside world. They are:

- Strong Vision and Commitment of the Board and Top Management
- Existence of a strong set of best practices, protocols, guidelines and standards in place.
- Presence of a large set of clinical safety data that helps in bench-marking with international best practices and results in publications both for internal & external displays.
- Our brand image of medical excellence in the healthcare community and public is very strong
- NABH Accreditation – 9 of our centres are already NABH accredited and the remaining 2 are in process.

We were amongst the first few hospitals in the country to get NABH accreditation and we still continue to hold good deployment of the standards in our network of hospitals. NABH strengthens the deployment of patient care and support processes.

We have a number of Centers of Excellence in Max Saket (Clinical Departments) that we can be proud of. These centers demonstrate the cutting edge of the specialties.

We can proudly state that we are ahead of the market in "institutionalizing quality".

Quality is incorporated in the culture of our organization which is very evident by the way it functions. An atmosphere of continuous improvement exists and objective criteria are in place to provide evidence of high quality of care to patients.

Assessment criteria's are developed to cover all aspects of patient care, with particular emphasis on patient rights, safety, infection control, and clinical protocols. Audits are conducted at definite frequencies (and also adhoc) to monitor the effectiveness of the protocols formed.

Goalpost always in sight:

Our goals to establish Max Healthcare's clinical and safety outcomes at the highest level comparable to the best known institutions of the globe are:

- **Best Patient Care Outcomes:**
  - Procedures/diseases
  - Low Mortality Rates
  - Highest Patient Satisfaction
- **Ensure Safe and Clean Care:**
  - Low Adverse Events
  - Low Infection Rates
  - Low Needle Stick Injuries
  - Zero Sentinel events
- **Continuous Improvement & QA:**
  - Clinical Dashboard
  - Quality Improvement Projects
  - Accreditation's, Audits

How to make Zero Defects-Zero effect manufacturing possible in Indian MSMEs

Population of the country has doubled in the last five decades; however our agricultural land and natural resources have either been at constant level or have decreased in many areas. The only way possible to maintain a high growth rate, say in two digits, of Indian economy in such a situation, is to enhance productivity both in manufacturing and service sectors.

By | **Ramesh K. Pandey**

Since the back bone of Indian manufacturing is the MSME sector with its significant contribution of more than 40 per cent of total manufacturing and 45 per cent of the total export of the country, it is now strategically important to create an ecosystem of productivity enhancement, competitiveness and quality manufacturing in the country including in the MSME sector, for achieving the desired economic growth.

If we see the ecosystem of quality process and products and high productivity in MSMEs, we find various agencies working in different verticals particularly in the areas of quality, productivity and energy efficiency. For quality certification and accreditation there are procedures and systems through which an industry has to go through for obtaining required certificates. However, many of the certifications particularly ISO 9001 has lost its relevance due to dilution in process rigor and lack of continuous monitoring systems in place. In many cases small enterprises obtain certifications either to get subsidy or to attract foreign buyers, which is not renewed in later years. The certification system at present does not have any grading system which in turn fails to encourage industries to consistently improve upon and obtain higher grades with growth of the industry.

Whereas, so far as productivity enhancement particularly through adoption of lean manufacturing techniques in MSMEs is concerned, less concrete was done till 2009 when the Ministry of MSME started a Lean Manufacturing Competitiveness Programme (LMCS) for reducing wastage and enhancing productivity in industries by adopting techniques such as 5S, Six Sigma, Visual Control, Just in Time, Poka-Yoke, Kanban and Kaizan. The results in the pilot phase of the scheme were very encouraging wherein industries could enhance their productivity for up to 30 per cent by adopting lean techniques across the sectors. The Ministry has further scaled this scheme up, which is being implemented in more than 500 clusters throughout the country. Nevertheless, some OEMs especially in the automobile sector were running lean manufacturing techniques in their tier II and III companies for the past few years. However, no system of recognition or certification for lean manufacturing has been adopted so far in the country. Besides this, the mandates to look into quality certification and productivity in manufacturing are with two different institutions
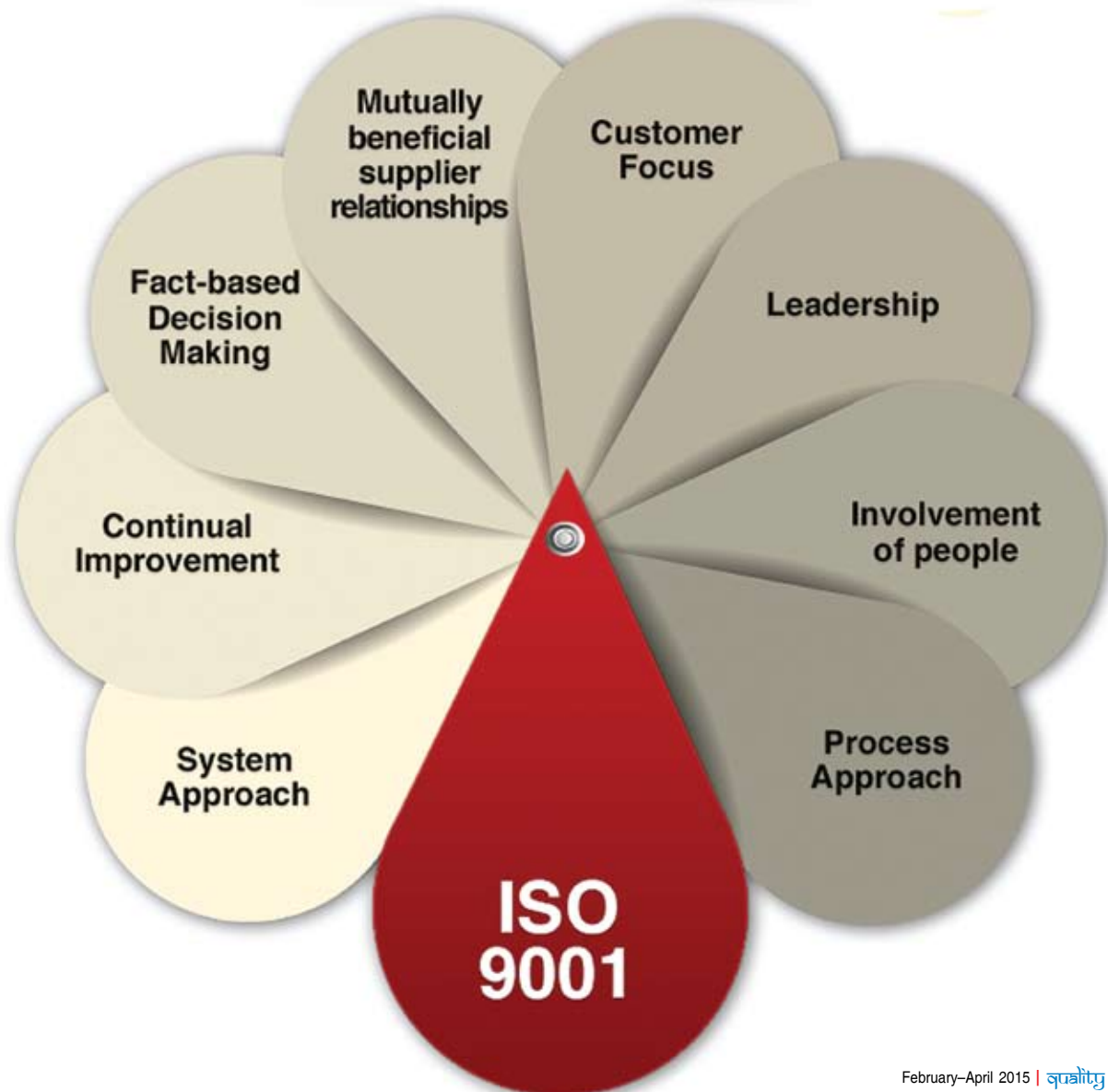
viz. Quality Council of India (QCI) and National Productivity Council (NPC) respectively.

Similarly, in energy guzzling sectors efforts are being made by agencies for easy absorption of energy efficient technologies, without taking productivity or quality issues in to consideration. In addition a system for recognising innovations in the field of energy efficiency and populating proven energy efficient technologies also lack completely. Moreover developing viable financial models and transforming the market for adopting clean technologies have also to take off in the country.

> " *It is very clear that for having world beating manufacturing with high productivity and quality and high energy efficiency and low carbon footprints, an integrated approach; both by running specific programmes and schemes and creating an ecosystem of accreditation and certification to support and recognise such manufacturing is urgently needed in the country.*

Therefore, it is very clear that for having world beating manufacturing with high productivity and quality and high energy efficiency and low carbon footprints, an integrated approach; both by running specific programmes and schemes and creating an ecosystem of accreditation and certification to support and recognise such manufacturing is urgently needed in the country. The Prime Minister of India has already underlined this by announcing Zero Defects and Zero Effect manufacturing need in the country, but the question remains- how we can translate it into reality?

The answer lies in creating of an integrated and holistic Zed Certification System in the country, which can account for quality, productivity, energy efficiency, pollution mitigation, financial status, human resource and technological depth including design and IPR both in product and process of manufacturing. The certification may have both horizontal and vertical scoring system so that it gives a natural thrust for a continuous up-gradation till an industry attains the top scoring in the certification pyramid. At the same time

MAKE IN INDIA

schemes such as Quality Management System (QMS)/Quality Technology Tools (QTT) of Ministry of MSME may be tweaked and up-scaled to meet the financial requirements and technical support for the MSMEs in order to acquire Zed Certification in near future. This will also need to be buttressed with up-scaling of existing schemes of Ministry of MSME particularly Lean Manufacturing (LMCS), Design Clinic and Technology and Quality Up-gradation (TEQUP) schemes in support of creation of self propelling ecosystem of productivity enhancement and energy efficiency.

If we look at the initiatives in this direction, Ministry of MSME has already taken on board the agencies such as Quality Council of India (QCI), National Productivity Council (NPC), BEE, EESL, UNIDO, Industry Associations and Chambers of Commerce, related Ministries/ Departments and Academia both for policy formulation and implementation of schemes. The Quality Council of India (QCI) in consultation with Ministry of MSME is in the process of developing Zed matrix of parameters for accreditation and certification.

Another interesting question which most of the stakeholders ask is- what are the pull factors which an industry or an MSME will be attracted to, to adopt such practices or to go for acquiring such certification? If we see recent policy instruments and market interventions both in public and private spaces starting with the implementation of Public Procurement Policy for Micro and Small Enterprises, which mandates CPSUs to procure 20 per cent of their annual procurement from MSEs, FDI both in single and multi-brand retails and in various manufacturing sectors such as Railways and Defence, booming e-businesses with varying marketing mantras such as Flipkart and Snapdeal, dearth of Indian Offset Partners (IOP) and difficulties being faced in offloading offset in defence imports, emerging strong manufacturing sectors such as ESDM and aerospace and finally the opportunity to access global market with globally competitive products are enough multipliers and drivers which not only can take Zero defects and zero effect manufacturing   forward but also can support fast changing

marketing scenarios in the country. This will certainly be a win-win situation for all stakeholders in days to come.

Some highlights

- With Make in India, we will see foreign companies coming and establishing manufacturing in the country, who would have certain benchmark for quality. Therefore it is important that SMEs improve processes and systems in such a way that quality are assured and there is no rejection.
- Enterprises will be taken through a process from the present status to the ZED standard, which will mean that a particular company is at par with any international product unit. The process will involve manual skilling, technology upgrade and automation, among others.
- Companies will be assigned star ratings on a scale of 1 to 5 based on their levels of competence, technology and quality on 61 parameters.
- There will be categories for each parameter ranging from bronze to silver, gold and diamond. A bronze one star will be the lowest rating, and diamond five stars the highest. The parameters include infrastructure, quality of machines, waste disposal system, provisions to deal with smoke and fuel use.
- Enterprises will be encouraged and hand held to adopt clean technology to attain sustainable growth trajectory.
- There will be sector-specific parameters for each industry, such as food processing, textiles, leather, auto parts, etc., for assessment.
- While the Japan Plus team - a group set up by India to facilitate investment proposals from Japan - will be roped in for performance assessment of SMEs, the World Bank and the MSME ministry will likely to provide funding for the model.
- India has close to 35 million MSMEs with 95 per cent employing less than 10 people. The rest 5 per cent employs 10 to 100 people. Under the proposed programme, unemployed youth will be trained to become quality professionals.

(Ramesh K. Pandey is working as Joint Development Commissioner in the Ministry of MSME, Govt. of India, New Delhi and views expressed are personal. For further information please contact: rameshpandeyifs@gmail.com)

'Make in India' to covert India into a manufacturing hub

Host of initiatives and measures has been taken by the Ministry of MSME in order to improve the business climate and push the MSME growth agenda. The MSME sector of India has often been neglected despite of being the huge contributor to the economy. There is more in the store for this sector, Shri Kalraj Mishra, Union Minister for MSME shares more on the steps taken by the government to flourish this sector.
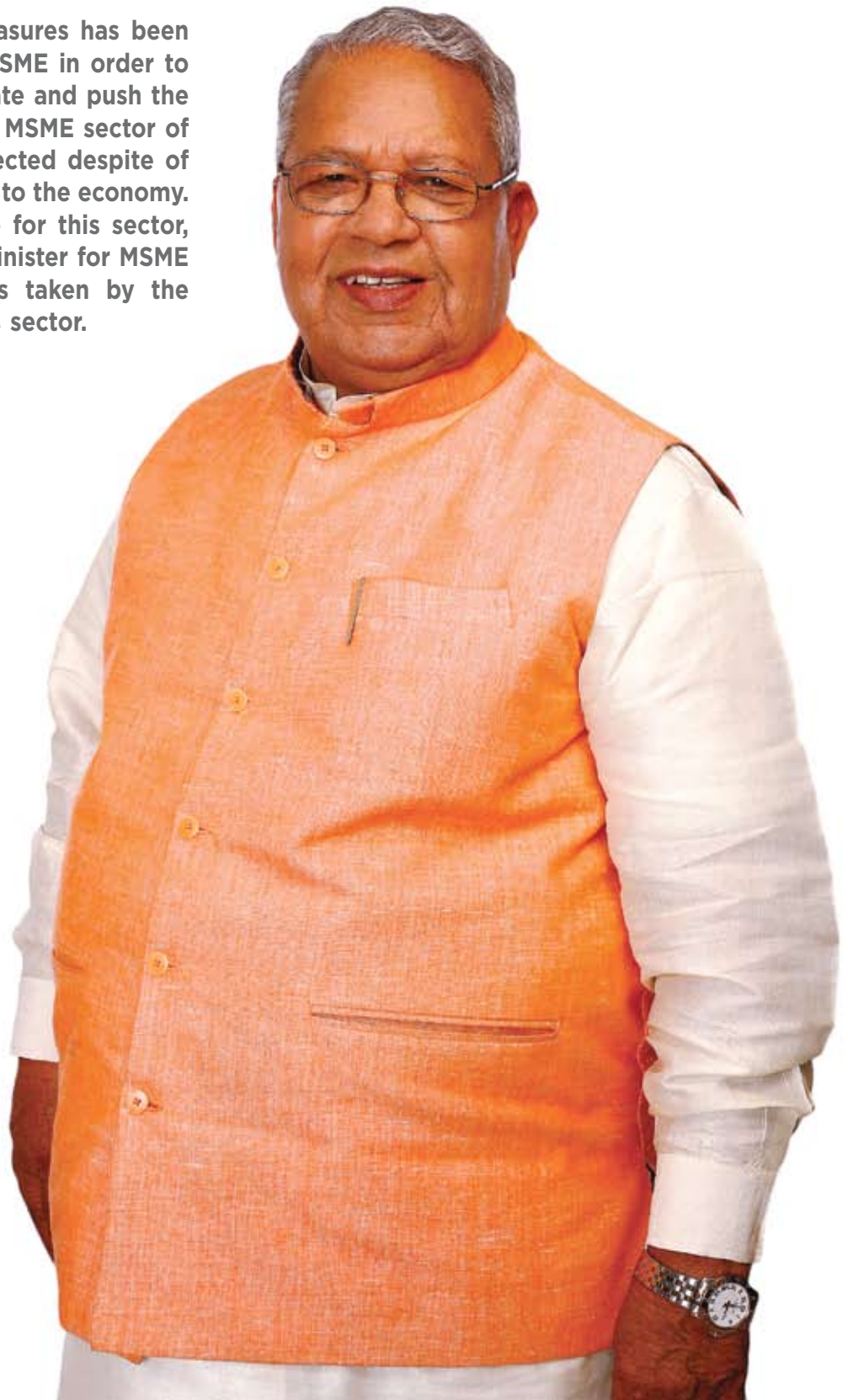
What according to you is the role MSME Sector's in the success of Make in India and what would be the Make in India policy for MSMEs?

Make in India campaign started by our Honourable Prime Minister is an initiative that offers a golden opportunity for small enterprises that not only helps in the development of the manufacturing sector based on the policy guidelines but also rectifying the existing lacunae with constant monitoring with an ultimate objective of encouraging 'value addition' across segments. Measures taken by the Ministry to facilitate growth of MSME are:-

(A) Canvassing and sensitising existing schemes of MSME in order to accelerate the improvement in their utility.

(B) Arranging technological back up to monitor the status of industry in the existing level and undertake a strategy for development of the indigenized sector in terms of technology, skill and management inputs skills and management inputs towards structured growth.

(C) Ensuring requisite and adequate finances are made available just in time.

Performance wise equation and particular stress and monitoring can guide us in the road map of priorities in the make in Indian campaign which should be attractive, appealing and thought provoking to the budding entrepreneurs in the existing framework of industry in India.

> " *The 'Make in India' strategy does not solely mean inviting the multinationals, but it urgently emphassises to get our house in order to convert India into a manufacturing hub. The ease of doing business in the country should be improved. To be attuned to the Make in India dreams on a long term basis, the government should encourage the building entrepreneurs to set up start -ups.*

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To be attuned to the Make in India dreams on a long term basis, the government should encourage the building entrepreneurs to set up start -ups. There are almost 16 lakh students passing out each year from the engineering, management and polytechnic set ups in India. In advanced countries, the conversation of engineers into entrepreneurs both in manufacturing as well as services sector is high.

What measures are being taken to improve MSMEs business in states such as UP, Bihar, Jharkhand, West Bengal, etc?

There are several measures that we are planning for the lesser developed states that have been named above. We are planning to set up a one stop web based platform that will take care of the concerns of MSMEs all over the country which include those in the lesser developed states too. The field offices of the Ministry of MSME will also play a new role in energising the MSME Sector in the lesser developed states.

What are the steps taken by the government to implement 'PPP' and 'Delayed Payment Act'?

The PPP i.e. Public Procurement Policy was announced by the Government came into effective from April 1, 2012. This policy was announced to enhance support to the Micro and Small Enterprises in participating in Government procurement. Under this policy 20 per cent of the total procurement of any Government Ministry/Department/Public Sector Enterprises, is compulsory to be procured from the Micro and Small Enterprises, compulsory after a period of three years. Again with a focus on inclusivity, the policy announces a separate target of 4 per cent of the total procurement from the Enterprises owned by persons from Scheduled Castes and Scheduled Tribes. Numbers of initiatives were taken by the government to avail the benefits of the policy to the Micro and Small Enterprises as well as to sensitise the procuring agencies.

In order to make the MSMEs aware about the requirements of the public sectors we keep conducting The Vendor Development Programmes all over India. We also organise stake holders meeting with the important purchasers in the public sector. We are supporting the MSEs in upscaling their quality standards and productivity under the 10 Schemes of National Manufacturing Competitiveness Programme (NMCP).

Under the MSME Development Act 2006, a well laid out frameworks has been set up to take care of the issues of delayed payments by setting up Facilitation Councils. Provision has also been made for inclusion of one or more representatives of MSE Associations in the Facilitation Council. To unblock the funds held in the receivables, appropriate penal action for delayed payment has already been introduced under the act, the Government has enacted Factoring Act 2011 to facilitate factoring of Bills. The period of payments to MSMEs by the buyers has been reduced to 45 days. Rate of interest on outstanding amount has been increased to three times the prevailing bank rate of RBI compounded on monthly basis.

Please brief us on the role of European countries and companies in the growth of micro, small and medium enterprise sector of India.

The European countries and companies play an essential role in the growth of Micro, Small and Medium Enterprises (MSME) sector of emerging countries such as India. If you take

a look on India's geographical diversity and its high reliance on agriculture, you will definitely agree that MSMEs are the life line of the economic development and growth in future. In the last few years, India has sought Europe to be a better destination for SMEs. As per finding of Repot of the Inter-Ministerial Committee for Boosting Exports from MSME sector, the share of total Indian exports to Europe was 18.7 per cent during April-November 2012-13. Therefore, countries and companies in the growth of MSME sector have been growing over the years.

Thrust towards organic/handmade/sustainable products fair-trades an opportunity for the Indian MSME sector or a threat. Please comment

India has rich segment of handmade products such as textiles and handlooms, handicrafts, gems and jewellery. There has been increasing awareness among producers to undertake sustainable development practices. On the other hand you cannot ignore that the environment friendly technologies are expensive and its quiet difficult for MSMEs to afford the same. But this problem can be overcome to a great extent by following a cluster based model. The Ministry of MSME has adopted the cluster development approach as a key strategy for enhancing the productivity and competitiveness as well as capacity building of Micro & Small Enterprises (MSEs) and their collectives in the country. A comprehensive MSE-CDP is being administered by the office of Development Commissioner (MSME), the Ministry of MSME.

What are the steps being taken to ease availability of finance for MSME by NDA government?

The MSME ministry has been improving the access and timeliness of loans through the implementation of Credit Guarantee Fund Scheme for micro and small enterprises which provides guarantee cover for collateral free credit extended to micro and small enterprises for loans up to Rs 100 lakh. The Reserve Bank of India has also issues guidelines to all scheduled commercial banks on lending to micro, small and medium enterprises (MSME) sector which, inter alia, provide for a time frame for disposal of loan application and loan limit for dispensing and collateral requirements for MSEs. As per RBI guidelines, it is mandatory to acknowledge all loan applications submitted by MSME borrowers and to be disposed-off the same in a time bound manner. Further, RBI has advised the

banks to achieve a 20 per cent year-on-year growth in credit to micro and small enterprises. The ministry is addressing high cost of loans by implementing Performance and Credit Rating Scheme for Micro and Small Enterprises which provides financial support to MSMEs for getting rated and consequently obtains loans at concessionary rate of interest.

What has been the proposed change in the definition of MSMEs and what is the status of the proposal?

Consultation process on the issue is going on and we have sought the views of State Governments, Financial Institutions and Industry Associations on the same. A view will be taken soon on this matter.

What are the major initiatives, actions, decisions and implementations of the MSME ministry since you took the charge?

The MSME sector in India is diverse in terms of its size, levels of technology employed and range of products and service produced. MSMEs have shown constant growth rate of over 10 per cent in recent years much ahead of the large-scale corporate sector. This sector contributes 8 per cent of the country's GDP, 45 per cent of the manufactured output and 40 per cent of its exports. The MSMEs provide employment to over 80 million persons through over 36 million enterprises producing over six thousand products. India is one amongst very few countries which has an overarching legal framework for the MSME Sector in the form of MSMED Act 2006 which has established provisions under which issues such as public procurement and delayed payments are addressed.

Ministry's top priority in further reviving high potential MSME sector are based on comparing its demand and potentiality, sector wise in the states of India and prioritizing focused value addition in each of the finished products. Furthermore, we are trying to move from a predominantly subsidy regime to a promotional regime. Subsidy regime for promoting an industry may be acceptable. However, subsidy regime which encourages bifurcation and multiplication of companies to access the subsidy regime is undesirable. The lack of networks and information hinders the effective deployment of technology as well as collaboration worth other firms. The promotional regime would try to cover this loophole. The promotional regime is to have a distinct Knowledge and Innovation Framework which has been missing till now in our proggrammes and policies. For firms who no longer are infant industry, and are ready for take-off, there would be a framework.

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Measuring Service Quality of Indian Railways

Indian Railways (IR) is the third largest rail network under single management. With its network spanning more than 65,000 kilometers, IR connects all the states and communities across the country. Various studies have indicated that rail consumes 75 to 90 per cent less energy for freight traffic and about 5 to 21 per cent less energy for passenger traffic. Here's more

By | Sachinder M Sharma & Mohita G Sharma

Environmentally rail is greener mode of transport as it emits 17 grams CO_2 per PKM as compared to 84 grams by road. IR has a very good safety record and it is estimated that for passenger transport road accident costs are 45 times higher than those for rail. Even the unit cost of transportation is lower than road transport by about ₹2 per Net Tonne Kilometer (NTKM) and rupees 1.6 per passenger kilometer (PKM). It thus delivers competitive and environmentally friendly transport services and acts as an engine for socio-economic development. It also ensures individual mobility and promotes social cohesion and practically addresses the problem of congestion and efficient land use.

Presently its 13.1 million workforce runs 19,000 train a day transporting 23 million passengers and 3 million tonnes of freight daily (Railways, Indian;, 2014). This transforms to only 14 per cent of the passenger and 34 per cent of the freight traffic. It responds to the transportation needs of the customers by providing additional train services every year. In 2012-13 it introduced 236 new non suburban trains, extended the run of 99 existing trains and increased the frequency of 38 trains. It also added 157 suburban services. These are not sufficient to meet the un-satiated need of the public as demand is always more than the supply.

IR serves the rich and the poor alike with a wide range of services. Whereas the poor get the Izzat pass or the pass to dignity, students get free monthly passes and the suburban travellers the monthly season tickets. It provides services for the ladies through Matribhumi suburban services, Karambhoomi with only unreserved general coaches for the poor, for the unemployed youth it runs the yuva trains and for creating awareness on social issues such as HIV/

Parameter	Good practice world over	What IR does	What IR can do
Availability	Percentage of rolling stock available Coach kilometers between failures Peak headway(minimum interval between trains)	Ineffective %age of rolling stock Kilometers earned per failure Capacity utilisation of the section	Number of loaded freight trains and empty ones Empty haulage wagon kms Revenue seat kms to total seat kms
Accessibility	% of escalators and elevators available for service % of ticket vending machines available across the network Target 96 per cent of the passengers should not get stuck in elevator for greater than 15 minutes	Availability of minimum facilities as per the class of stations	No. of escalators and elevators per station (for big stations) Quality of the facilities and their usefulness for the public Number of ticket counters and vending machine per passenger footfall at the station Number of unauthorised people caught at stations/ unmanned exits
Information	Availability of dynamic passenger information in stations and trains Mystery surveys to evaluate the quality of information % of passengers that have access to real time travel information during service disruption % of staff interactions that offer correct ticketing and route information	Availability of passenger information system at stations as per the laid down yardsticks	Downtime of the information system Surveys to find whether passengers are satisfied with the quality of the information Training of staff at the counters on dealing with customers and standardising the message similar to that in the airlines
Time	% age of trains operated on time % of passenger journeys on time Excess journey time Lost customer time Passenger affected ratio	Punctuality monitoring of trains cause-wise at different levels Asset failure monitoring	Remove manual reporting of punctuality by connecting ICMS and COA software Monitor intermediate punctuality of trains to ascertain bad runners Link punctuality to the number of passengers delayed Display publicly the figures for satisfaction of the passengers

Parameter	Good practice world over	What IR does	What IR can do
Customer care	Ratio of complaints/passengers Passenger enquiry response time-X% of complaints addressed within y number of days General perceived quality index	Lodging of complaints online or through mobile Monitoring the complaints and the redressed system Monitoring the claims by the passengers against the railways Training of staff in customer care institute	Survey of passengers and generation of a quality index based on practices across the world Linking training and complaints against the staff by the passengers with their promotions
Comfort	Crowding density-average number of passengers standing per square meter Perceived cleanliness rating of stations (surveys)	Creation of standard facilities at stations as per the footfall	Surveys to ascertain the comfort level of stations (can be independent or third party ones) Monitoring the quality of the facilities and the access to these services such as waiting rooms, etc

AIDS trains such as the red ribbon express. This way IR delivers reliable, affordable and attractive services. It has attracted customers by providing different variety of services and this also stimulates a lot of support for rail and lays the foundation for further investments.

(Moretti,M;Arendt,F;Malm,G;Garrod,T;Gilbert,T;Coart,F;Doppelbaeur,J;Choumert,D;Lehmann,E;Depledge,A;Pepy,G;, 2013).

However, the basic attributes such as network size, frequency of trains, price, etc, are not the only factors which contribute to the demand for services. Whereas some trains are highly patronised there are others which go half empty and so there is disconnect between the requirements of the customers and the services offered. Therefore the train service needs to be available to take the passengers where they want to go and when they want to travel as per their convenience. Eight attributes of service quality are availability, accessibility, information, time, customer care, comfort, security and environmental impact. Thus convenience for the passengers starts from planning the arrival to reaching the destination (Anderson, Condry, Findlay, Brage-Ardo, and Li, 2013). Success for service delivery is consistently satisfying the customer's needs. Since what gets measured gets done, it is important to measure convenience.

The above indicates that the focus has to shift from what can be easily measured to what the passenger requires. The focus has to be from the point of view of the customer. As an example the focus shifts to the customer if instead of measuring on time arrival at destination we start measuring passenger hour's delay per passenger journey, etc.

Indian Railways can also use the concept of incentive regulation by using rewards and penalties to encourage improved performance towards delivering good quality service. To begin with it can employ performance based contracting in areas where the service is delivered through a contractor. IR could come up with an index for benchmarking the service delivery and convenience to passengers at major station for having a common base for comparison. For doing so the different service attributes of convenience would need to be valued using common units such as time or money. This will also help to ascertain the relative impacts of the different parameters on the public's demand for transportation. It is essential to increase the convenience to the passenger by improving the parameter which can bring the maximum results with least efforts/investments. This will enable IR in meeting the wider socio-economic goals.

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Intertek goes beyond, testing, inspecting and certifying products

Manfred Klepaz, Executive Vice President, Cargo & Analytical Assessment, Indian Sub-continent, Intertek is a dynamic leader who joined Intertek in 2014. He is responsible for the Global Cargo and Analytical Assessment business line and Indian Sub-Continent. Manfred comes with a long international career in the chemicals and industrial products sectors and was most recently Chief Executive of Al Rajhi Industrial holdings based in Saudi Arabia. Here he shares his views and plan of action for the India market wtih QCI.

By | Sudipta Saha

Quality or quantity

Quality is very important not just for us but for everyone. Quality for me is the kind of link between so many different aspects because it is not just the word quality itself, from product development to right to the consumer; I think quality really plays a very important role. With policies happening in India the 'Made in India' campaign started by the Honourable PM of India is an example of quality initiative and is link to quality in the manufacturing industry in India. If you want to be successful either in your domestic market or international market you need to have a quality product. Particularly, I think in India you have evolving middle class people who are use to buy quality products. Company like Intertek has a global reach and can be very supportive to the local manufacturing industry to redevelop the product that meets quality.

Plans to generate employment

We have more than 2000 employees in India already. It's not just employees that we hire but we also offer internships and try providing lots of job opportunities for local people. From our perspective the first and foremost aspect is the technical engineering professional qualification as you know certain testing and parameters are required. We have a slogan at Intertek that 'Catch them Young'. So we go to the universities and pick up the fresh mind and catch them young. Our aim is on that side of the target audience that the professional qualification should not get waste. a) We catch them young and when we catch them young our business model is such that for the brands which we work on even if they have presence in rural somehow the action and the

centre point where their customer is based at the metro's. Our focused is to catch them young. For Intertek, India is one of the highest quality areas. We see a lot of good things happenings such Made in India Initiatives' started by Honourable Prime Minister Shri Modi.

Quality measures for labs

Labs in India follow a certain norms so the local accreditation body which means something is the NABL. The first is like training the trainer. There are certain standards that we have to follow and there is a governing body that we have to adhere to. Choose between quality and quantity: it has to be quality. In our parlance of things it has to be quality. Quantity doesn't exist in our brand, it has to be quality. For us its quality, quality and quality. Quality is important vicinity for any company to expand its business. Many small exporters are going for a quality check to improve the quality of their product and expand its reach in terms of selling the products. Intertek being a global player in quality testing and certification gives a platform to all kinds of Industries, small or big, to get their products tested and expand their reach.

Plans for 2015

We are definitely expanding. We have set very challenging growth plans for ourselves. 2015 I would call it is a year in transition were we are preparing the whole organisation to identify which is the priorities which is a certain backbone of business which we have to certainly maintain. But there are so many opportunities and Intertek as a global organisation has so many different activities, so we need to set priorities. In

Our Heritage

Intertek
Valued Quality. Delivered.

1885	1896	1911	1973	1989	2011	Today
Caleb Brett founds a marine surveying business	Thomas Edison establishes what is later renamed as the Electrical Testing Laboratories (ETL)	Virginius Daniel Moody establishes Moody Engineering for construction and electrical engineering projects	Labtest establishes the first commercial consumer goods testing facility in Hong Kong	Labtest establishes the first commercial testing laboratory in China	Intertek and Moody International join forces	Intertek Today: **Valued Quality. Delivered.**

2015 we keep our focus on growth, but we will also focus on strategies, meanings. We will identify the areas where we want to grow either organically (we may set up another land in different cities or expand our own capabilities) or may grow through acquisition which we think is a faster way. Realising India's true potential, Intertek plans to grow four-fold i.e grow by four times in four years as per its current presence.

Expectation from India market

The general outlook for the industry is very supportive to manufacturing, to quality oriented production base. To grow the industry for domestic market for suppliers for exports you need quality and I guess this is really encouraging. The market is directed towards quality. The scenario in India is actually helping us to open up new activities, sustainability. India is a preferred location for business as it is a huge growing market. There is a lot of scope to expand business in India as quality testing is required in several industries, ultimately benefitting companies in expanding their reach. With India evolving as a manufacturing hub, the companies need to ensure the quality production meeting the International quality standards for the success of Make in India campaign. Quality testing and control will help unleash India's true manufacturing potential.

Any other information

At Intertek, we go beyond, testing, inspecting and certifying products. We help consumers improve performance, gain efficiencies in manufacturing and logistics, overcome market constraints, and reduce risks. We work in a wide variety of

> *With India evolving as a manufacturing hub, the companies need to ensure the quality production meeting the international quality standards for the success of 'Make in India' campaign. Quality testing and control will help unleash India's true manufacturing potential.*

industries from aerospace and automotives to food and agriculture, from IT and building products to pharma, mineral and textiles as well as textiles, toys, games and hardlines.

Corporate Social Responsibility

Businesses are moving towards merging their CSR initiatives with sustainability initiatives. In addition to empower businesses showcase their profiles and good practices, these initiatives can also improve material efficiency through sustainable environmental practices, social responsibility concerning security and workplace conditions, and ensure that the organisation meet the requirements of tomorrow's employees, communities, investors and customers. Few of the solutions that the organisations should consider are Sustainability Reporting Assurance, Global Supplier Management, Think Green Initiative, Supplier Qualification Program, Workplace Conditions Assessment, Social Accountability 8000 Program. Along with all these standards, organisations are taking training and education initiatives on these topics seriously. Service providers and industry thought leaders such as Intertek have their educational programs range from one-hour introductory webinars about management systems, to customised in-house training events and five-day International Register of Certificated Auditors (IRCA)-registered courses for those responsible for system implementation and auditing. All courses are taught by practicing auditors and qualified tutors and are designed to keep companies fully informed about the latest industry requirements and best practices.

QUALITY MANAGEMENT:
THE DO'S AND MUST DO'S FOR THE INDUSTRY

With the manufacturing industry gaining momentum through new policies and advancements in the country, it becomes even more important to ensure and optimise quality for the benefit of consumers as well as manufacturers.

While quality of a product can be subjective and the definition can vary depending on perceptions, a few regulations have been created to ensure uniformity. A few regulations are compulsory and many more are voluntary, as it becomes important to know the standards and their importance. More importantly, select the partners who can understand your business, the challenges and can help you in taking corrective measures.

While the ocean of standards is too huge, we have tried to bring to you the most important standards for the industries in current day.

ISO 50001: 2011 ENERGY MANAGEMENT SYSTEMS

By implementing the ISO 50001 Standard, you can help improve your organisation's energy efficiency, use, and consumption by taking a management systems approach.

An international energy management standard, ISO 50001, was published in June 2011. ISO 50001 establishes a framework for industrial plants, commercial facilities,

or entire organisations to manage energy. According to ISO, the standard could influence up to 60 per cent of the world's energy use, with broad applicability across national economic sectors.

When an organisation practices good energy management, top management and employees become more aware of how energy is used, the actual cost of energy, and the methods and equipment can be used to control and reduce energy waste.

> "An industry that is driven by the consumer, quality cannot be a choice, every product or service needs to achieve the optimal level of quality to get attention. Knowing the right tools and selecting the right vendors who can become your quality assurance partners is the key to ensure this."
>
> **Rajesh Saigal,** *Regional Managing Director, Intertek, South Asia.*

KEY BENEFITS:

- Reduces energy costs and environmental impacts
- Better use of existing energy-consuming assets
- Creates transparency and facilitates communication on the management of energy resources
- Promotes energy management best practices and reinforces good energy management behaviors
- Provides a framework for promoting energy efficiency throughout the supply chain
- Facilitates energy management improvements in the context of GHG (greenhouse gas) emission reduction projects

GLOBAL SUPPLIER MANAGEMENT

The Global Supplier Management platform maximises supply chain visibility for both buyers and suppliers through supply chain management, evaluation and improvement. Global Supplier Management

platform involves four core steps:

- Collection and cleansing of supplier information
- Business profile completion
- Risk-based analysis and reporting
- Verification services
- Identity and credential verification
- Onsite verification
- Audit services (social, environmental, quality and security) As a result, verified supplier profiles are created, including financial information, company profile, product quality and safety, security, sustainability and social responsibility, allowing companies to evaluate and improve supplier performance in these areas. This provides the enhanced supply chain transparency and traceability necessary to make informed global business decisions.

ISO TS 16949 CERTIFICATION – FOR AUTOMOTIVE INDUSTRY

Your management system's certification to ISO/TS 16949 will help you reduce the complexity and overhead required to administer separate proprietary programs for individual customers. But that increased efficiency doesn't have to stop when you get your certificate.

The internal audit process for ISO/TS 16949:2002 includes additional requirements that must be addressed when you make the transition from QS-9000. Not only is a system audit required, but process audits and product audits are required as well. The organisation's annual audit schedule should show all three types of audits. The frequency of audits should be based on the status and importance of the area to be audited. Audits must cover all management related processes, activities and shifts.

The system audit is an audit of the organisation's effective compliance of the requirements of ISO/TS 16949 along with any applicable customer specificr equirements.

A process audit is an audit of each manufacturing process (i.e. stamping, molding, assembly, painting, etc.) to determine effectiveness. A control plan is often used during process audits. A separate checklist should be used for process audits; typical items covered during process audits may include verification of:

- Control plan requirements being complied with

> "This is the time when everyone is speaking about the quality, there are so many regulations and standards. The most important aspects becomes the selection of standards that cover you for the regulations while ensuring optimal quality."
>
> **Sandeep Vig,** *Regional Director, Business Assurance, Intertek*

- Operator instructions available and complied with
- Records being completed as required for inspections and tests performed
- Set-up and first piece requirements established and complied with
- Process parameters established and complied with or are deviations documented and approved
- Final inspection and packaging requirements established and complied with

A product audit is required for final packaged product (delivery) and auditing of products throughout the manufacturing process (i.e. stamping, molding, assembly, paint, etc.) to verify conformity to specified requirements, such as product dimensions, functionality, packaging and labeling. Requirements for these audits have been enhanced from the QS-9000 dock audit. Product audits must be performed at a defined frequency.

Re-inventing India as a major economic power

The moment Shri Narendra Modi won a thumping majority in India's elections in May last year many hopes puffed up with a belief that the new government would adopt economic reforms and take steps that would stabilise its finances and take it forward. The priority of this government was to lift hundreds and millions of people from poverty and create jobs for India's young and unemployed population. Here are glimpses of the major steps the Union Government has taken in a short span of time.

By | Sudipta Saha

Shri Narendra Modi, the honourable Prime Minister of India is undoubtedly a powerful speaker who can draw huge crowds with his encouraging words. He is possibly considered as the most powerful prime minister of India after Lt Smt Indira Gandhi. His vision is to make India a developed nation through all inclusive growth, technology, innovation, good governance and people's participation. He also aims to hasten progress and prosperity through programmers such as Skill India, Digital India, Make in India: to make India a Global Manufacturing Hub. Besides, he also aims to change India's face:- Clean India by 2019, Houses for all by 2022, 24x7 electricity for all. He also intends to achieve a knowledge based society and energised economy to protect environment, clean technologies, renewable energy and projecting India's culture strength.

The Key Strategy: Insistence on Administrative Efficiency

- Focus on changing the work culture, making it responsive, pro-active and efficient
- ISO and Kaizen practice introduced in PM's Office
- Ministers asked to do away with old, confusing and clashing rules, procedures and regulations
- Fast tracking development and inclusive growth; Promoting Private Participation

India shines bright on global

- From UNO and USA to small island countries of the Asia Pacific: it's a renewed relationship
- Many agreements in important sectors with a number of countries during PM's foreign visits
- Global political, business leader and CEOs commit for social and economic engagement with India
- Investments worth $ 50 Bn from USA and $ 35 Bn from Japan
- India stands out in the UNO as well as BRICS, G-20, ASEAN, EAS and SAARC summits
- International recognition for Yoga
- US President was the chief guest at the Republic Day Celebrations in January 2015
- World Bank President and UN Secretary General coming to support India's growth story
- PIO and OCI policies being merged

Boosting the economy 'Second Wave of Reforms'

- Prioritising the 'Ease if Doing Business in India' online processing for regulatory requirements.
- Procedures in industrial licensing, labour regulation and defence production simplified
- PSU's certain PSUs disinvested; six brought out of sickness; six closed down
- Diesel prices deregulated
- 49 per cent FDI allowed in insurance sector
- Legal framework further refined

Progressive legislations introduced

- Goods and Services Tax (GST) towards implementation
- Amendment in Factories Act, 1948 to allow night shift for women, increased hours of overtime and compounding of offences
- Legislations for efficient utilisation of coal and other natural resources including auctions and commercial mining
- Obsolete laws being scrapped
- Electricity Act being further refined

Encouraging entrepreneurship

- Single window in Hub-Spoke model being made a reality between the Union and State Governments
- Regular Project Monitoring by the PM's office
- Entry and exit regulation and EXIM regulations made simpler
- Procedures concerning small entrepreneurs such as EPFO, ESIS made easy
- Online filling of Entrepreneurs Memoranda started
- Labour laws amended to exempt certain industries from returns, labour registration, inspections etc
- Industries Licence / IME can be applied completely online, 24x7
- Validity of Industrial Licence extended from 2 years to 3 years
- Licensing on a number of defence products removed: 49 per cent FDI in defence production; FDI norms for Pharma (medical devices) further relaxed

Toward job creation and labour participation

- Skill India Creation of new Department for Skill Development; a massive programme being undertaken to harness India's youth power
- Apprentices Act, 1961 amended to make it more attractive to youth and industry
- Self- certification for non-hazardous/non-risk businesses
- Unified single web portal for labour law compliance
- Rationalisation of 'Returns and Register' requirements
- Evidence based inspections through Central Analysis and Intelligence Unit
- ESIC/EPFO registration made on line and real time, need for submission of hard copies removed

MAKE IN INDIA

Focus on infrastructure

- A number of road and rail projects inaugurated; approval given and foundation laid for several other such projects
- Metro rail projects and high speed rail system for Ahmedabad and Nagpur
- Regulatory hurdles eased out for infrastructure projects like roads, railways, mines, power, transmission lines etc
- Major projects see the light of the day: Narmada Project, a number or road projects, railways and others
- Industrial hubs and smart cities given a new push. Dholera Special Investment Region, and similar hubs in Rajasthan, Haryana given environmental clearance
- 100 per cent FDI in railways allowed; norms for FDI in construction sector eased
- Jagdishpur-Haldia gas pipeline cleared for implementation
- Norms for land availability further refined

Efforts paying off initial signs positive renewed vigour and confidence all around

- GDP growth up by one per cent; stability in prices; inflation under control
- OECD forecasts India as the only country among top economies to increase its pace of growth
- HSBC identifies India as world's largest exporter by 2030
- IMF says India will be the second fastest growing economy soon

Tourism promotion

- E-Visa facility launched and extended to 43 countries
- More than 16000 E-Visas already given
- E-ticketing for major monuments of tourist interest (presently Taj Mahal and Humayn's Tomb)
- Major pilgrimage places and river ghats being upgraded in terms of infrastructure and amenities
- Dedicated tourist trains started:
- Jyotirling Circuit
- Sukhmangal Circuit (Bengaluru- Mumbai)
- Dakshin Dham Circuit (Chandigarh-South India)
- Helpline if incredible India launched

'Make In India' a technologically driven society

- Mars Orbiter Mission: India's first interplanetary mission to planet Mars
- Digital India campaign launched to fast track the setting up of ICT infrastructure across the county.
- Broadband connectivity to all villages taken up aggressively
- Institutes of Information Technology given the status of Institutes of National importance; Wi-Fi in university campuses
- Jeevan Praman: digital life certificate for pensioners started
- Speed of trains and capacity of goods carriage being increased and online railway reservation made faster
- Electronic Toll Plazas on highways; scheme for electric vehicles launched

Major push to the energy sector

- Several major projects inaugurated and foundation laid for many others including new transmission grids, hydro gas based and thermal projects, etc
- Policies for coal linkages streamlined
- Countrywide strengthening of electricity systems: two new schemes for rural and urban areas structured and put in operation
- Two special schemes launched for the North-East

Emphasis on clean energy

- Solar energy generation to be enhanced to 1,000,00 MW in nest five years.
- 25 mega solar parks approved
- PSUs emphasised to generate solar energy in their premises
- Green Energy Transmission Corridor expedited
- Ethanol Policy revised to promote it as a fuel

Realising India's maritime strength

- To take advantage of its long coastline, various measures are being taken to promote ship building and ship breaking industry
- Lifetime licence for Indian ships now
- Indian ships allowed to flag out of country's waters

- Customs Duty reduced from 5 per cent to 2.5 per cent on scrap of ship breaking
- A new policy for ship building being framed
- Merchant shipping Act amended for better conditions of sea-farers
- Manufacturing of LNG ships started
- Port led development through Sagarmala Project

Full eco-system to 'Make In India'

- National Industrial Corridors Authority being set up for development of new industrial corridors
- Industrial clusters being modernised and equipped with the latest technologies and linkages
- The issues of inverted duties addressed – corrections in various inputs items
- Focus on incubation and innovation through Government, industry and institutes
- Supply of key inputs such as coal and minerals strengthened- respective laws amended
- New cities being promoted as Global Manufacturing Hubs
- Online platform provided for entry and exit issues.

Towards financial inclusion

- PM's Jan Dhan Yojana launched
- More than 90 million new bank accounts opened
- Indian debit card RuPay popularised ; Accounts and RuPay come with accidental insurance
- 25 co-operative banks assisted to come out of the red
- Better distribution of subsidies to the poor

Uniformity of development process

- PM visits North-East, vows to bring it at par with the rest of the country
- Visits J&K several times
- Rail and Power project in J&K, North-East inaugurated
- Increasing involvement of states in development process
- PM-CM Team becomes a reality- PM interacts with CMs for new face of Planning Commission
- Planning Commission reconstituted- NITI AYOG

Improving quality of life

- Swachh Bharat (Clean India) Mission launched nationwide on October 2, 2014
- Along with general cleanliness, priority being given to build toilets in all schools of the country
- Special schemes for heritage cities
- Cleaning of River ghats under taken

Emphasis on edution and health

- New IIMs, IITs. AIIMs, Medical colleges, Dental colleges being set up; medical seats being increased
- National Scheme on Teachers Training launched
- India Newborn Action plan launched; Four new vaccines approved
- First ever National Mental Health Policy launched
- Textile training and trade facilitation centre being set up at Varanasi
- 'Ishan Uday' and 'Ishan Vikas' – special scheme for North-Eastern students launched

Labour & Employment Ministry to create a safety net for the unorganised sector

Shri Shankar Aggarwal, Secretary (L&E) shares that labours and workers should be ready to face the change in laws. They will now have an improved social security and workers from unorganised sectors will now have an identity number so that all the schemes related to them are under one umbrella.. .

By | **Sudipta Saha**

What are the major initiatives your ministry is taking?

Our chief focus is that we should be able to ensure safety, security, health standard, hygiene and the social security for each and every worker whether in an organised and unorganised sector. So that the labours and workers are satisfied, if they are, they will be able to improve the productivity and will be able to give in their best for the production of goods and services.

On the other hand we have to see where our existing law, rules and regulations are becoming a stumbling block in setting up larger number of enterprises, small and medium especially. If there is a little bit of problem, so let us sort them out that mean we have to look into all labour law and wherever possible we have to treat them, so that people, and especially young boys and girls are able to set up their own enterprises in a very smooth and hassle free manner. In every walk of life we got to introduce and ensure accountability, transparency and responsibility at every level.

In all the three offices i.e. The Labour Commissioner's Office, EPL and ESIC, in all these we are introducing automation in a big way. It means all services will be made available 24X7 and people don't have to visit the offices to seek services or seek the availability of the services. Secondly, all the public information has to be in public domain so that

people will know what is happening and that will bring lots of transparency.

How do you plan to encourage employment amongst youth?

Youth today are very much eager in setting up their own enterprises. Now days, we can see lots of such example such as Snapdeal, Flipkart, etc. Lots of youth are doing wonderful job. But when they i.e. the young group of boys and girls find it very difficult to comply with the rules and regulations and even the labor law. Many times it becomes deterrent also, so we must ensure that every worker is safe and secure and is getting potential of social security. However, this law should not become a stumbling block in the economic development process.

What is your idea behind the recent labour law proposals?

Today, I must say we have a government which is stable enough, with incisive leadership. Workers in our country demands peace and prosperity at each and every level. The opourtunity for them should be available from top to bottom.

What do you have to say on the 'Implementation of Social Security Act' for the unorganised sector?

We have enacted this law so that we give the protection and security to each and every workers of the unorganised sector. In this country, we have got about 45-47 cr of people who constitute the unorganised sector. On the other hand, there are only handful, may be 3-4 cr, who are from the organised sector. Unfortunately, we don't have very structured rules and regulations in the laws to ensure social safety, health, hygiene and whole lots of other things for the members of unorganised sector. Therefore, we are thinking of introducing a universal card. This card will be like a smart card which will give identity to each and every worker of the unorgansied sector. This will also facilitate these members to get benefitted of the scheme which have been introduced by the government recently such as Prime Minister Suraksha Yojana, Prime Minister Jeevan Yojana, Atal Pension Yojana and whole lots of other. With the help of this card, this gentleman or woman will get an identity as an unorganised worker and they won't require any other kind of card. How will the changes to the Industrial Disputes Act help the workers?

As the economy is changing and expanding and we have a globalised economy, you are dependant on a whole lot of factors. In these situations, you require a different skill set. Globally, technology processes and requirements are changing

> *This will also facilitate these members to get benefitted of the scheme which have been introduced by the government recently such as Prime Minister Suraksha Yojana, Prime Minister Jeevan Yojana, Atal Pension Yojana and whole lots of other. With the help of this card, this gentleman or woman will get an identity as an unorganised worker and they won't require any other kind of card.*

very fast and you have to acquire new skills. We must streamline this process and migration should be easy if one wants to take up a different field. These people should either acquire the skills or we need to bring a different set of people. Similarly, let's say some product line is closed. What will the employer do? So, we have given adequate provisions for that. At present, workers get 15 days' wage for every year worked as remuneration. You can't sustain in that amount. Now, we have proposed to raise this to 45 days of wage per year worked. So, if someone has worked for five years, he will get more than seven months of salary as compensation.

It works both ways. The employer should facilitate acquisition of new skills and if that's not possible, the employer should make easy migration from one unit to another by way of giving enough compensation. From employee's perspective also, we should be ready (to move on) else the entire economy will come to a grinding halt and that's not what we want. It should be a win-win situation

How will the investments of Employees Provident Fund Organisation (EPFO)'s funds in equity instruments help?

The world over we have seen investment in equity has given the maximum return. It's a risk-based model. But if we carefully, intelligently and cautiously invest in equity, we will get a return higher than debt instruments. In 25 years, if we analyse all the instruments, equity gives the highest return. So, why are we losing that opportunity? Hence, we have decided to invest five per cent initially and when we gain confidence and knowledge, we will move forward.

Do you think Hannover 2015 was the perfect platform for India to showcase its ambitious plans for the country's future with its focus on 'Make in India'?

Yes, why not. Hannover was a beautiful platform and whole lot of people came here from other part of the world. It was an amazing platform to showcase our capabilities and requirements, what we can do for our country and our countrymen.

What will be your priorities going ahead?

We want to ensure members of the ESIC (Employee's State Insurance Corporation) are given decent medical cover. Second, we need to improve on the social security aspect. Third, we want to create a safety net for the unorganised sector. We will give them an Unorganised Workers Identification Number (UWIN) - an IT-based platform, so that all the schemes related to them are under one umbrella.

Role of leadership in modern enterprises

By | **S.Chattopadhyay**, Technical Manager, LRQA-Mumbai
Pulin Parsai, Assessor, LRQA-Mumbai

Looking at a modern enterprise from a systemic perspective, contribution towards organisational success, of factors such as leadership, employee development, customer service, performance improvement, change management, communication and transparency, employee engagement, strategic and operational planning, knowledge management and innovation, value and culture, organisation design and structure cannot be over emphasised.

Research shows that achieving success in business is dependent about 10 per cent on equipment, 40 per cent on technology, and as much as 50 per cent on competent people and the way they are managed.

Leadership, in this context, is characterised by:
- leadership team has a clear vision
- vision is known to all
- new leaders are being identified and groomed
- leaders articulate and live values
- leaders make themselves available to rank and file

Leadership also means that the top management team coherently cooperates together in assessing strategies, aims, and organisation's management system. Leaders establish unity of purpose and direction of the organisation. Leaders create and maintain the internal environment in which people can become fully involved in achieving the organisation's objectives.

A good leadership helps promote a culture within an organisation, characterised by:
- people who understand and are motivated towards the organisation's goals and objectives
- activities are evaluated, aligned and implemented in a unified way
- mis-communication between levels of an organisation will be minimised
- considering the needs of all interested parties including customers, owners, employees, suppliers, financiers, local communities, legal and technology and society as a whole
- establishing a clear vision of the organisation's future, setting challenging goals and targets
- creating and sustaining shared values, fairness and ethical role models at all levels of the organisation
- establishing trust and eliminating fear
- providing people with the required resources, training and freedom to act with responsibility and accountability
- inspiring, encouraging and recognising people's contributions

ISO/DIS 9001:2014

Considering such importance of 'leadership', the draft international standard (DIS) version of the next revision of ISO 9001 (ISO/DIS 9001:2014), the most widely used management system standard, focused on quality, includes significant focus on leadership. While maintaining requirements of top management commitment that were already included within the current version of ISO 9001 (ISO 9001:2008), the DIS now incorporates a numbers of additional requirements, along with a unique view of leadership.
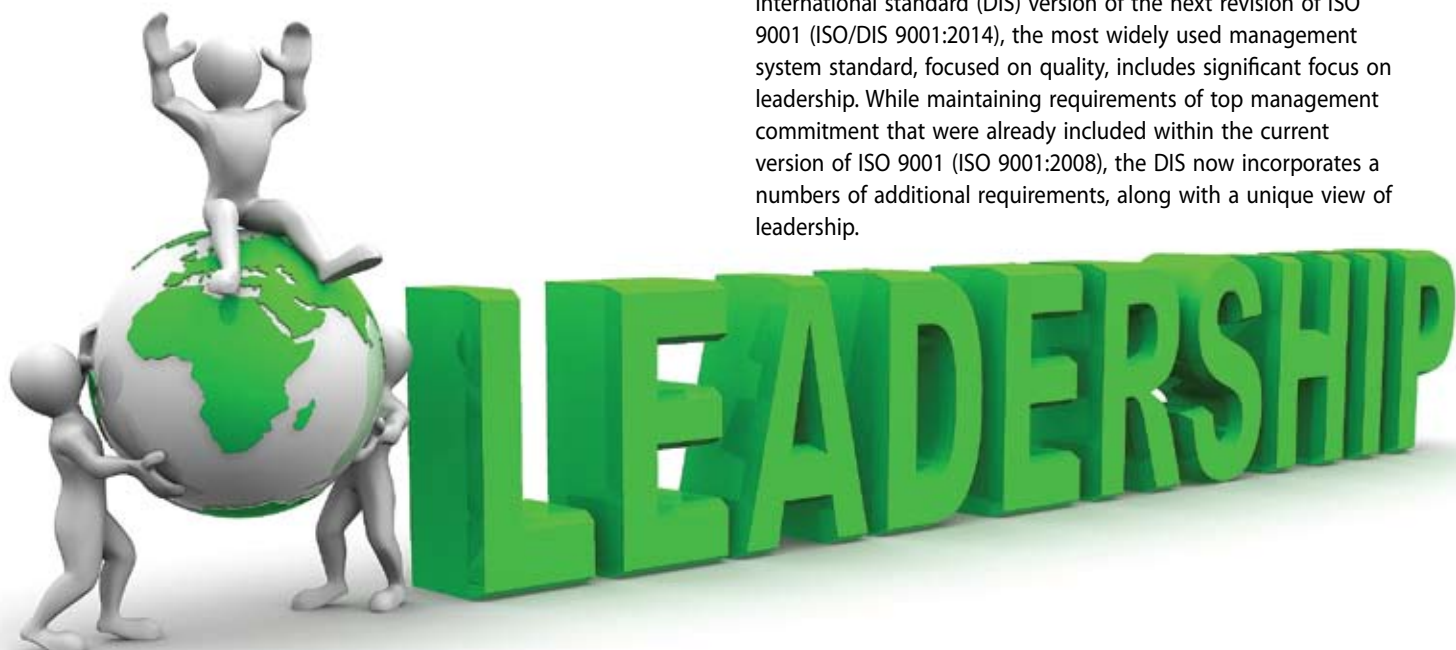
Firstly, leadership role is broken down into the aspects of 'leadership and commitment', 'quality policy' and 'organisational roles, responsibilities and authorities'. Further 'leadership and commitment' requires 'leadership and commitment for the quality management system', as well as 'customer focus'.

- taking accountability of the effectiveness of the quality management system
- ensuring that quality policy and quality objectives are compatible with the strategic direction and the context of the organisation
- ensuring that the quality policy is communicated, understood applied within the organisation
- ensuring the integration of the quality management system requirements into the organisation's business processes
- promoting awareness of the process approach
- communicating the importance of effective quality management and of conforming to the quality management system requirements
- ensuring that the quality management system achieves its intended results
- engaging, directing and supporting persons to contribute to the effectiveness of the quality management system
- promoting continual improvement
- supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility

In the context of 'customer focus', top management is now required to ensure that the risks and opportunities that can affect conformity of products and services and the ability to enhance customer satisfaction are determined and addressed. For quality policy, top management is required to establish a policy that is appropriate to the context of the organisation.

As regards organisational roles, responsibilities and authorities, it is now top management's direct responsibility to assign responsibility and authority for ensuring that the quality management system conforms to the requirements of the international standard (ISO 9001), as well as reporting on the need for change or innovation.

What an organisation needs to do?

In order to take full advantage of this focus on the aspect of 'leadership' within the DIS, top management involvement in design of the management system and their buy-in towards the causes of management system is essential.

To start with, the person responsible for the management system, could initiate a focus group discussion involving the top management.

In the focus group, structured discussions could include topics such as:
- internal and external environment of the organisation
- risks and opportunities arising out of such internal and external organisational context analysis
- purposes, objectives and strategic directions of the organisation and how they are relevant to the organisational context
- what attributes management system are required to have to be able to exploit the opportunities and mitigate the risks arising from the above analysis
- what are the benefits of integrating management system with main business processes

This approach could assist in obtaining top management buy-in towards the causes of management system. Further take an inventory of current management system practices to ascertain what additional actions need to be taken to address the requirements discussed above. It is also essential to set up a robust review mechanism, involving the top management that would provide regular and periodic feedback on how a healthy management system is contributing to the organisational success. Once top management sees the benefits, they will take active part in the affairs of the management system.

SMART CITY
A new form for Sustainable Urban Development

A city is a hub of urbanisation and made up of environment, infrastructure, public space and information network. For Smart City to be sustainable, monitoring of public services, multi-model transport system, effective use of information and communication technology and smart mobility have to be ensured also for enhanced quality of people living there. Obviously, well managed Smart City would able to attract tourism and businesses for its enhanced sustainability and quality of life to the people of the city. India has been consistently working towards achieving competitiveness while moving towards a more sustainable urban development. The Indian initiative of 'Smart Cities' development under Delhi-Mumbai Industrial Corridor (DMIC) project and Smart City-Kochi will thus be a set of focussed efforts comprising energy efficient land use planning, development of technology, transportation methods and urban utilities. Prem Narayan, Director (Foreign Procurement), Ministry of Railways, Government of India, tells us more...

Urbanisation is a science devoted to add value to the territory in the sectors including water, power, mobility and green spaces whereas a city is a hub of urbanisation and made up of environment, infrastructure, public space, nodes and information network. Rapid expansion, increasing citizen expectations, and the need to drive economic growth through cities are placing huge demands on city authorities to create reliable, cost-effective and sustainable infrastructure. Services such as water supplies and other utilities, transport, telecommunications, social requirements such as schools, housing, and healthcare are in ever greater demand. Due to these challenges and trends, the cities of future have already started working on managing the urban infrastructure and buildings the smart way. Cities in future have to become greener, safer, more competitive, more inclusive, more vibrant or easier to move in. To achieve that takes more than great engineering and determined leadership, yet this is what most models of 'smart cities' are built around. It requires trust and collaboration, the deliberate sharing of urban (hardware, software, informational) resources, open innovation ecosystems, empowerment policies.

Smart city:

The concept of smart city emphasises the idea that information technology and digital data will make city far more efficient. A smart city brings together parties in a platform with the aim of initiating projects and activities in the fields of living,

Prem Narayan,
Director (Foreign Procurement),
Ministry of Railways,
Government of India

working, mobility, public space and connectivity. Smart City offers the opportunities to test technologies, services, concept and products in living laboratories more specifically in European countries. Openness is key for the smart city. In other words, Smart city is a unique collaboration between the inhabitants, businesses, knowledge institutions and governments aimed at increasing sustainability and enhancing quality of life.

In smart cities, a network of sensors, cameras, wireless devices, data centres form the key infrastructure, which allows civic authorities to provide essential services in a faster and more efficient manner. Smart cities are also far more environmentally friendly as they use sustainable materials for building facilities and reduce energy consumption. Efficient use of technology helps create an efficient transport management system, improve healthcare facilities and develop a robust communication network to connect all businesses, people and beyond the relationships between central and sub-national levels of governments, there has been increasing acknowledgment that purely public intervention has its limits, and this has opened the way for greater co-operation between the public and the private sector. In fact, the involvement of private actors in the supply of so-called local public goods is nothing new (even if there has been a recent increase in the use of these methods in the fields of social welfare, environmental protection, etc.) and there are some who regard it as the key element in the definition of governance.

Essentials for a smart city:

A smart city capable of becoming both environmentally sustainable and attractive to citizens and businesses requires a new kind of intelligent infrastructure — an innovative, open platform based on smart technologies that can help forward-looking cities more predictably integrate a complex suite of services cost-effectively, at pace and at scale. In European cities, while many smart city technologies including smart electricity grids, smart meters and real-time transportation information are already in pilot programmes. Some of the major components of the Smart city as are follows:

Services

Services to the inhabitants in the smart city include hospitals for health, Schools for education, sports hall for sports, city hall for administration, police station for security, museum for cultural activities, shops for commercial uses and law courts for justice so that overall objective of complete infrastructural facilities is fulfilled. Moreover, infrastructure transforms resources belonging to nature in order to consume the later in cities and they construct the metabolic system of cities.

Use of sensor technology

A smart city can create an efficient and smart services delivery platform for public and municipal workers by installing sensors in the city and to create platforms that allow the share of information and give it for proper use to the public, city managers, businesses and professionals. The platform can have common data warehouse where different sensor system store their information.

Remote control network

An integrated control network which has a common data transmission infrastructure that monitors all the municipal and supply networks of the service companies involved in the project. The goal is to manage and find out about the ordinary consumption, incidents and eventualities in these networks, all of this independently from the municipal services. All the networks have alert devices and monitors consumptions, flows, intrusions, etc., making it possible to act in the event of leaks. The service network should include supply network, drainage network, rainwater network, public lighting, pneumatic waste collection, climatology, electrical energy and internal home comfort. The city (Project) should able to provide publicity subsidised homes in a short period of time.

Information and communication technology

Information and communication Technology (ICT) improves the way cities function and Communication flows increase the sustainability of cities as it gives people the appropriate

information to make well informed decisions. ICT manages cities in a more participative way and facilitates active participation of individuals and local communities as well as provides efficient feedback system and improves internal and external interaction. It creates an urban commons for cities collaborations around the world.

Smart mobility

It is extremely important to ensure availability of open public data for its analysis and onward distribution to its users for the use of colleagues and friends and public at large for smooth mobility. Further, provisions of alternatives such as multimodal approach and professional working at a smarter place result in the comfortable and easy work environment. Sharing of available resources as well as parking solutions in the city ensures use of resources in a smarter way. This also results into overall improved quality of life. Car running on green gas adds to sustainability and eco-friendly environment which cities should ensure.

Waste to energy

Wind, water and the sun are well known as sources of sustainable energy. Biomass, a source of sustainable energy from organic materials, is less well known sources of sustainable energy.

Adoption of bio-climatic principles

Applying bio-climatic principles in architectural design in a smart city is when we design a building based on and incorporating the micro climate conditions of a given site aiming to secure comfortable internal climatic conditions (thermal comfort, visual comfort and good quality of internal air) and to minimise energy consumption and utilise renewable energy sources, such as solar, wind, water or geothermal energy. The use of renewable energy sources in general in buildings together with bio-climatic measures, is a way leading to the concept of zero-energy buildings more popular term for zero energy houses.

India initiatives:

Smart cities already matter to India. India has been consistently working towards achieving competitiveness while moving towards a more sustainable urban development. In the process, the Indian Government has been working overtime to build smart cities and address institutional changes needed to enhance the capacity of urban governments, in partnership with civil society and the private sector.

Under the 'Smart Cities' project, innovative technologies and policy measures are being implemented in buildings, energy networks and transport. Under the smart cities programme, design options will be tested for zero energy buildings in different climatic zones. In the transport sector, alternative fuels will be tested from road public transport and municipal fleets to private passenger vehicles. Programmes will also be developed focusing on sustainable mobility including advanced smart public transport, intelligent traffic management and congestion avoidance, demand management, information and communication, freight distribution, walking and cycling.

The Indian initiative of Smart Cities' development will thus

be a set of focussed efforts comprising of energy efficient land use planning, development of technology, transportation methods, urban utilities, infrastructure for ICT (Information and Communication Technologies) as well induce habit of the Urban Dwellers to adopt smarter ways. It is necessary that Urban Managers be trained for developing and maintaining such urban settlements which provide opportunity to development and economic activities, which is a way larger challenge for the country.

The Government of India has taken bold steps towards meeting Urban Infrastructure and liveable cities through the JnNURM program. The Government of India would further look forward towards Smart City Development in the following areas;

- Development of Sustainable Mass Transit Systems with intelligent transport system (ITS);
- Use of Information, Communication & Technology (ICT) in Urban Planning;
- Energy management with demand based approach;
- Development of wind and solar energy;
- Zero Waste concept for municipalities;
- Compact city development; and
- Green Cities.

Conclusions

Smart city is an integration of technology to ensure a balance of competing goals of sustainability, citizen well-being and economic development. Smart city is an open platform and Smart living and smart working is possible by empowering people through three means – Inform, Inspire and involve. For the Smart City to be sustainable, it is essential that robust systems on infrastructure services monitoring as well as financial resources generation is in place. India is already looking towards this new form city development by using in-house strong ICT infrastructure. Moreover, many policies and independent projects have already been initiated by Government of India such as e-Governance projects; PPP based Public Transport systems, 24X7 water supply projects and SCADA technology in various utility services, Transit Oriented Development and waste to energy projects. Obviously, well managed Smart City would able to attract tourism and businesses for its enhanced sustainability and quality of life to the people of the city.

RADIO DESIGN-
solutions for wireless communication systems

Radio Design is an award-winning market leader in the provision of wireless infrastructure, sharing solutions and RF filter systems. With nearly 500 years of combined leading-edge, RF design, development and volume-manufacturing experience, Radio Design's pioneering team offers OEMs, operators and infrastructure companies the easiest, fastest and lowest-cost effective ways to roll out their networks. Gaurav Chauhan, Managing Director, Radio Design India shares more.

By | Sudipta Saha

Plans to set up strongly in India market

We have been operating in India market from last six years and the key has been how the telecom domain and the sharing are going to move. So if I talk till 2008, the sharing in India use to mean that the operators come on shim doubt. From 2008 till now (till 2012-13), everybody was thinking that the telecom network can be shared but that can be shared by coming on the same tower. There was no talk on sharing on antenna federals and this is what can be done by Radio Design. This is the potential that we see in this market. You can also say this is what we are doing and currently no operators who are doing this. All the telecom operators in India are in debts of around 31 per cent, so there is no money to roll out network. The government is talking about 3G, 4G, so how to roll out these networks. You can get a spectrum but then there is a roll out cost and that all can be overcome by these products that we are offering.

From the point of common people, if you talk about states such as Uttarakhand, North-east, were there is no connectivity they can have connectivity. Highways, rural India all can be connected without minimal investment and there would be less pressure on the government also. Currently, we operate in four countries such as the UK, China, Finland and India and we are planning to set up in the US. So that a plan going on.

Quality measure

Before 2008, the operators such as Idea, Vodafone, etc, use to set up their own towers. So it was like one company will set up their one tower and they will radiate. But what happened after 2008, tower companies came in. What these tower companies do, they set up one tower and on that

tower they ask the operators to come and put up their antenna, filter cable and base station, and then they radiate. This is how the structure is. What we will be doing is we are taking this initiative to next stage. On that same tower no need to bring so many antennas's and filters cable, just one antenna and one set of filter cable, and all can plug in through our products. This is what qualitative measure we are pushing from design point of view. There are many companies in the market who can combine telecom or mobile signals if they are in different bands. When I say bands, there are 900, 1800, 2100, and 2300. It is easy to combine two bands, like 900, 2100; 1800, 2100, but it is not easy to combine one operator, three companies in 1800.

How does Radio Design Work?

With an extensive product portfolio, including network-sharing filter combiners, interference mitigation filters, technology-sharing filter combiners and coverage/capacity enhancement solutions, Radio Design works alongside its network operator partners to help them roll out new networks faster, make their existing networks perform better and enable them to run all their networks at the lowest possible cost

Radio Design can call upon industry-leading talent and experience in all departments, a unique blend of entrepreneurial spirit, pioneering engineering skills and professional project/operations management. The company's success has been founded upon listening closely to customers' detailed requirements, working hand-in-hand with them to develop unique customised technical solutions and realising joint opportunities by rapidly implementing innovative volume manufacturing techniques and delivering on schedule

This combination of design expertise, project management skills, and a certified ISO9001 management system guarantees the building of strong customer relationships and effective deployment of rapidly expanding wireless communications systems. In addition, Radio Design's Hardware Services division is dedicated to providing a world class repair service for both OEMs and network operators, offering responsive international support, fast flexible turnaround times, reverse engineering expertise and reduced logistics costs.

Corporate Social Responsibility

We are fully committed to developing a reliable and sustainable business and recognise the importance of corporate social responsibility in achieving this. We are dedicated to delivering services that contribute to the well being of our staff, our clients, the communities in which we work and the environment in which we live. We commit to developing and maintaining our strong values throughout all activities of the company. To achieve this, we will consider our social responsibility through all levels of the supply chain. We will assess our suppliers' corporate social responsibility and ethics and will not knowingly award business to socially or environmentally irresponsible suppliers. We aim to employ and retain staffs of ability and integrity, which are committed to working together and supporting our principles.

To support local communities, we will select local businesses to supply us wherever possible. We will also consider the effects of our operations and the opinions of local residents, particularly in situations where there is a risk that noise, dust etc may pollute the local environment. We may further contribute by employing local staff as our company grows, by taking an active interest in local events and issues, and by completing projects that add value to the areas we are working in.

PMKVY creating an opportunity for the empowerment of youth

It won't be wrong to comment that youth is one of the strongest driving forces of economic growth. Skill and knowledge do help in the growth and development of any country but the primary focus should always be youth. The recently approved Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is a flagship scheme for imparting skill training to youth, focusing on improved curricular, better pedagogy and trained instructors. Read more....

By | Sudipta Saha

In the recent times, we have noticed a significant unemployment growth among youths and the rise in the number of unemployed youth was alarming and needed immediate attention from the new government. According to Labour Bureau's 'Third Annual Employment and Unemployment Survey 2012-13' released on November 29, 2013, unemployment rate amongst illiterate youth is lower than educated youth. A comparison with the earlier report by labour bureau shows that the unemployment level has increased during 2012-2013 over 2011-2012. While unemployment rate among illiterate youth is lowest with 3.7 per cent for the age group 15-29 years at all India level in 2012-2013, the unemployment rate in the same category was reported at 1.2 per cent in 2011-2012 report.

Similarly, the unemployment amongst the graduate youth that happened to be at 19.4 per cent in 2011-2012 increased to 32 per cent during 2012-2013. As stated in the report, the unemployment rate amongst the educated youths reportedly increased with increase in their education level. (Amongst all age group's viz. 15-24 years, 18-29 years and 15-29 years).

In a positive move, the new government has initiated a step towards skill development of youth. The cabinet has approved the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) on March 20, 2015, with an overall outlay of ₹1,500 crore. The scheme will be implemented by the Ministry of Skill

Development and Entrepreneurship through the National Skill Development Corporation (NSDC). Currently NSDC has 187 training partners that have over 2300 centres. In addition, Central / State Government affiliated training providers would also be used for training under the scheme. All training providers will have to undergo a due diligence before being eligible for participating under this scheme. Focus under the PMKVY would be on improved curricula, better pedagogy and better trained instructors. Training would include soft skills, personal grooming, behavioral change for cleanliness, good work ethics. Sector Skill Councils and the State Governments would closely monitor skill training that will happen under PMKVY.

Under this scheme the youth will be provided with skill training programme, including class 10 and 12 drop outs. The aim is to cover about 24 lakh people. Besides, a monetary reward is also set to be given to the trainees on on assessment and certification by third party assessment bodies. The average

monetary reward would be around ₹8,000 per trainee. Another highlight of the scheme is out of the total outlay of ₹1,500 crore, about ₹1,120 crore will be spent on skill training of 14 lakh youth.

Countries with higher level of skills fare better to cope with the challenges of emerging economies in the present day world. So, about ₹220 crore for special emphasis to recognition of prior learning, about ₹67 crore are allocated by the government in order to focus on awareness building and mobilisation. Besides this, an allocation of ₹150 crore has been made for training of youth from the North-East region. The aim is that the target for skilling would be associated with the recent programmes such as, Make in India, Digital India, Swachh Bharat Abhiyan and National Solar Mission.

The Pradhan Mantri Kaushal Vikas Yojana will offer training to the youth that will involve soft skills, personal grooming, behavioural change for cleanliness, good work ethics, etc. The PMKVY will be inspected by Sector Skill Councils and the State Governments. The skill training would be done on the basis of demand assessed and on the basis of recent skill gap studies conducted by the NSDC for the period 2013-17.

A new National Policy for Skill and Entrepreneurship Development has also emerged to cover the entire gamut of initiatives in this direction. The Policy is to lay a roadmap for boosting growth creating quality manpower. It has set a target for skilling 500 million people by the year 2022.

India has made its strong presence as one of the fastest growing countries Now it's time to make a position among the top three. With this initiative led by the new government and favourable demographic factors and sustained availability of quality workforce, India is undoubtedly poised to make its imprint on global economy.

Skill Development Management System (SDMS) would be put in place to verify and record details of all training centres on a

certain quality of training locations and courses. Biometric system and video recording of the training process would be put in place where feasible. All persons undergoing training would be required to give feed back at the time of assessment and this would become the key element of the evaluation framework to assess the effectiveness of the PMKVY scheme. A robust grievance redressal system would be put in place to address grievances relating to implementation of the scheme. An online citizen portal would be put in place to disseminate information about the scheme.

Features and benefits of PMKVY
- Objective is to train 24 lakh youths
- To create registry of skills
- Increasing the productivity of the skilled individuals which would be used for nation's development
- On an average trainee will get ₹8000 as a reward. This would be given by third party assessment body. However in order to receive the reward, trainee will have to appear for assessment test and based on the test results, reward would be given
- Training would be provided based on the National Skill Qualification Framework (NSQF) and industry led standards and it would be need based training
- Most of the skills do not require any educational qualification or experience
- Feedback would be collected by all the trainees who undergo assessment. This will help in calculating the effectiveness of Kaushal Vikas Scheme

Monitoring of the programme
- Sector Skill Councils and the State Governments would intently monitor ability coaching that may occur beneath the PMKVY
- Skill Development Management System (SDMS) can be put in place to confirm and document particulars of all coaching centres a definite caliber of coaching places and classes
- Biometric system and video recording of the coaching course of can be put in place the place possible
- All individuals present process coaching can be required to offer feed again on the time of evaluation and this may turn into the important thing factor of the analysis framework to evaluate the effectiveness of the scheme-

Facts and Stats
- The scheme is implemented via NSDC training partners
- NSDC currently has 187 training partners with over 2,300 centres
- Central/ state government affiliated trainers will also be used for imparting skills as part of this scheme
- Trainers will undergo a due diligence before being enrolled in the skills training programmes as instructors
- Focus under this scheme will be on improvement of curricula, skilled pedagogy and more well trained instructors
- Training imparted under this scheme includes good work ethics, soft skills, grooming etc
- Sector Skills Councils and state governments will also monitor training and skill development under PMKVY
- Skill Development Management System will verify and record details of training centres
- Biometric system as well as video recording of training process will also be in place
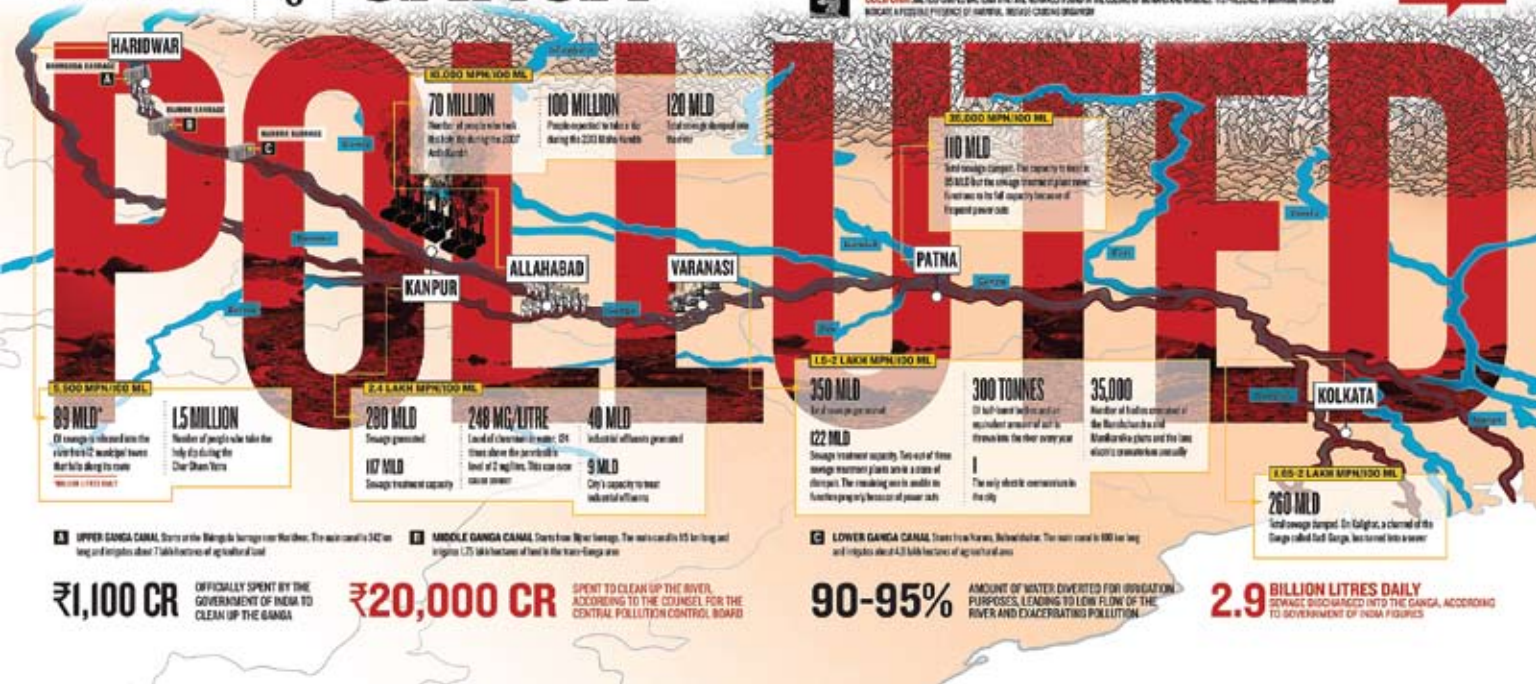- Robust grievance redressal system and online citizen portal also form part of this scheme

THE STANDARD PARAMETERS FOR COLIFORM* LEVELS IN RIVER WATER ARE
<50 MPN*/100 ML FOR DRINKING   <500 MPN / 100 ML FOR BATHING

POLLUTED

HARIDWAR

70 MILLION Number of people who took this holy dip during the 2007 Ardh Kumbh

100 MILLION People expected to take a dip during the 2013 Maha Kumbh

120 MLD Total sewage dumped into the river

110 MLD Total sewage dumped. The capacity to treat is 105 MLD. But the sewage treatment plant never functions to its full capacity because of frequent power cuts

KANPUR   ALLAHABAD   VARANASI   PATNA

89 MLD Of sewage is released into the river from 12 municipal towns that fall along its route

1.5 MILLION Number of people who take the holy dip during the Char Dham Yatra

280 MLD Sewage generated

107 MLD Sewage treatment capacity

248 MG/LITRE Level of chromium in water, 124 times above the permissible level of 2 mg/litre. This can cause cancer

40 MLD Industrial effluents generated

9 MLD City's capacity to treat industrial effluents

350 MLD Total sewage generated

122 MLD Sewage treatment capacity. Two out of three sewage treatment plants are in a state of disrepair. The remaining one is unable to function properly because of power cuts

300 TONNES Of half-burnt bodies and an equivalent amount of ash is thrown into the river every year

35,000 Number of bodies cremated at the Nimtala ghat and the Manikarnika ghats and the two electric crematoriums annually

KOLKATA

260 MLD Total sewage dumped. On Kalighat, a channel of the Ganga called Adi Ganga, has turned into a sewer

A UPPER GANGA CANAL Starts at the Bhimgoda barrage near Haridwar. The main canal is 342 km long and irrigates about 7 lakh hectares of agricultural land

B MIDDLE GANGA CANAL Starts from Bijnor barrage. The main canal is 155 km long and irrigates 1.75 lakh hectares of land in the trans-Ganga area

C LOWER GANGA CANAL Starts from Narora, Bulandshahar. The main canal is 600 km long and irrigates about 4.25 lakh hectares of agricultural area

₹1,100 CR OFFICIALLY SPENT BY THE GOVERNMENT OF INDIA TO CLEAN UP THE GANGA

₹20,000 CR SPENT TO CLEAN UP THE RIVER, ACCORDING TO THE COUNSEL FOR THE CENTRAL POLLUTION CONTROL BOARD

90-95% AMOUNT OF WATER DIVERTED FOR IRRIGATION PURPOSES, LEADING TO LOW FLOW OF THE RIVER AND EXACERBATING POLLUTION

2.9 BILLION LITRES DAILY SEWAGE DISCHARGED INTO THE GANGA, ACCORDING TO GOVERNMENT OF INDIA FIGURES

Namami Gange: Mission Ganga Rejuvenation

We Indians always feel proud in singing the famous song 'Hum us desh ke vasi hai jis desh mein ganga bahti hai'. We take dip in this holy river; we use it to worship and the utmost of all is we use it for moksa. Ganges River is India's largest river basin and has been used by millions as one of the major sources of water. But today, it has become one of the major hubs for wastage disposing, chemicals, garbages, etc. Seeing the rising river pollution the government has introduced National Mission for Clean Ganga. But despite programmes, funds and some attention, the Ganga still runs polluted.

By | Sudipta Saha

River Ganges passes through five states covering 26 per cent of the country's landmass. The river directly or indirectly affects the largest population of the country. Whether it's for food, water, bathing, agriculture or for the millions of pilgrims who take a holy dip, every one of us rely on it. Besides being a spiritual and cultural center for the people in India, the Ganga is a true lifeline for the people who inhabit her banks. There are over 30 cities, 70 towns and thousands of villages along the Ganga's banks. Within the plain of the river, more than 450 million people depend on the waters of Ganga for every aspect of their life.

But have we every thought on the reasons that are polluting this holy river. Its cleanliness and purity have become the need of the hour and huge funds have been allocated for it. Despite the enormous amounts of money spent on cleaning it, the river continues to run polluted. Worse, the pollution is increasing even in stretches that were earlier considered clean.

The Ganga Action Plan (GAP) was launched by the government in the year 1986 and again in August 2009, it was re-launched with a reconstituted National Ganga River Basin Authority. The objective of the plan was to improve the water quality of the river to acceptable standards (defined as bathing water quality standards) by preventing pollution from reaching it — in other words, intercepting the sewage and treating it before discharge into the river. In the past 30 years, the objective of the plan has remained the same. So, the question arises if keeping the Ganges has been the objective then why is Ganga still running polluted.

Under the Ganga Action Plan i.e. GAP I, 25 towns situated along the river in Uttar Pradesh, Bihar and West Bengal were selected. In the second phase i.e. in 1993, GAP II, the work continued but it was only focused on four tributaries of the river i.e. Yamuna, Gomti, Damodar and Mahanadi. The Ganga Action Plan with a reconstituted National Ganga River Basin Authority

GOING DOWN THE DRAIN

Over 100 drains across the country discharge effluents into river Ganga

UTTARAKHAND 450 km* 14 DRAINS

6,087 MLD (million litres a day) wastewater flowing into the river from drains

2,525 km Total length

KANPUR

UTTARPRADESH 1,000 km 45 DRAINS

UP'S MAJOR POLLUTERS: Fuldhera drain, Badaun sewage drain, Sisamu Nala, Wazidpur Nala, Permiya Nala at Kanpur, City Jail drain at Unnao, Rasulabad drain at Allahabad, Khandcha drain at Mirzapur and Varuna drain at Varanasi

*Length of the river in state

ALLAHABAD Permiya Nala

Varuna drain

VARANASI

BIHAR 405 km 25 DRAINS

8,61,404 sq km (26.4%) OF INDIA GANGA BASIN CATCHMENT AREA

PATNA Collectorate drain

110 km SHARING LENGTH BETWEEN UP & BIHAR

BIHAR POLLUTERS: Kurzi drain, Collectorate drain, Jamunia drain and ITC drain at Munger

JHARKHAND 40 km

WEST BENGAL 520 km 54 DRAINS

KOLKATA Tolly Nala

BENGAL POLLUTERS Tolly Nala, Dhankati drain & Nazer-ganj khal

138 drains across the country discharging wastewater into Ganga

HOLY NETWORK

MAIN TRIBUTARIES: Yamuna, Ramganga, Gomti, Ghaghara, Gandak, Damodar, Kosi & Kali-East
MAIN SUB-TRIBUTARIES: Chambal, Sindh, Betwa, Ken, Tons (beyond Five States), Sone & Kosi+Haldi
MAJOR CITIES LOCATED ON THE BANKS: Srinagar, Rishikesh, Hardwar, Roorkee (in Uttarakhand); Bijnor, Narora, Kannauj, Kanpur, Allahabad, Varanasi, Mirzapur (in Uttar Pradesh); Patna, Bhagalpur (in Bihar) and Bahrampur, Serampore, Howrah and Kolkata (in West Bengal).

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implementation of the work programme of National Ganga River Basin Authority (NGRBA), implement the World Bank supported National Ganga River Basin Project, coordinate and oversee the implementation of projects sanctioned by Government of India under NGRBA, undertake any additional work or functions as may be assigned by MoWR, RD and GJ in the area of conservation of river Ganga, make rules and regulations for the conduct of the affairs of the NMCG and add or amend, vary or rescind them

(NGRBA) was re-launched in August 2009. In the month of February in the same year, the government gave the river the status of a National river.

The objective was to ensure the abatement of pollution and conservation of the river. The key difference between the first Ganga Action Programme and now is the recognition that the entire basin of the river has to be the basis for planning and implementation. It is not enough to plan for one city's pollution, without considering the impact of the pollution on the downstream area. It is accepted that the plan for pollution control must take into account the need for adequate water in the river — its ecological flow.
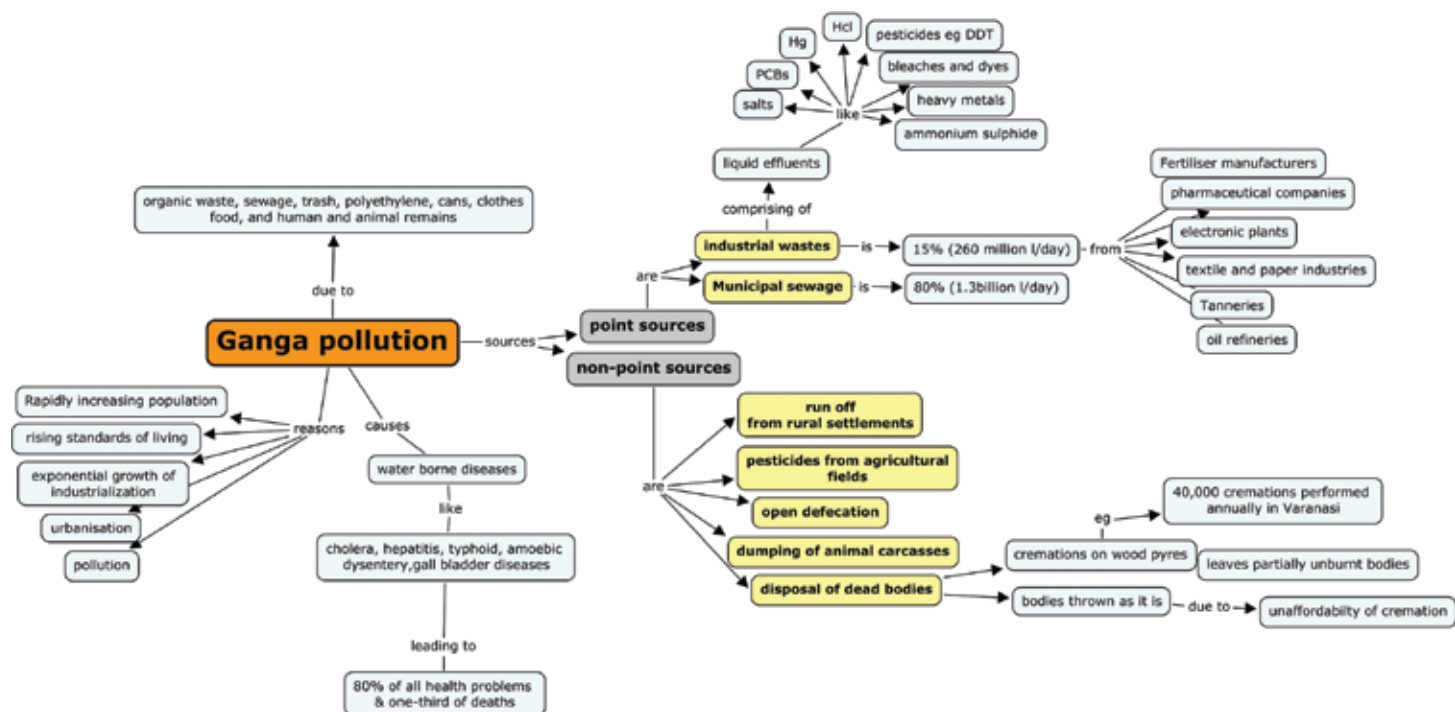
The challenge of pollution remains grim. According to July 2013 estimates of the Central Pollution Control Board (CPCB), fecal coliform levels in the mainstream of the river — some 2,500 km from Gangotri to Diamond Harbour — remain above the acceptable level in all stretches, other than its upper reaches.

National Mission for Clean Ganga (NMCG) is the implementation wing of National Ganga River Basin Authority (NGRBA). It is a registered society originally formed by Ministry of Environment, Forests and Climate Change (MoEFCC) on August 12, 2011 under the Societies Registration Act, 1860. As per the 306th amendment in the Government of India (Allocation of Business) Rules, 1961, both NGRBA and NMCG are allocated to the Ministry of Water Resources, River Development and Ganga Rejuvenation (MoWR, RD and GR). Accordingly the General Body of NMCG is being re-constituted.

The vision for Ganga Rejuvenation constitutes restoring the wholesomeness of the river defined in terms of ensuring 'Aviral Dhara' (Continuous Flow), 'Nirmal Dhara' (Unpolluted Flow), Geologic and ecological integrity. The key function areas are the

from time to time, accept or to provide any grant of money, loan securities or property of any kind and to undertake and accept the management of any endowment trust, fund or donation not inconsistent with the objectives of NMCG and take all such action and to enter all such actions as may appear necessary or incidental for the achievements of the objectives of the NGRBA.

Till now various projects have been sanctioned. National Ganga River Basin Authority (NGRBA) has so far sanctioned a total 72 projects in 47 towns in Ganga States costing ₹4607.82 crore under NGRBA Program including Externally Aided Projects (EAP) component with the assistance of Japan International Agency (JICA) and the World Bank of ₹2626.64 crore. These include projects of ₹1914.36 crore in Uttar Pradesh, of ₹1160.38 crore in Bihar, of ₹99.36 crore in Jharkhand, of ₹934.21 crore in West Bengal and of ₹251.21 crore in Uttarakhand for laying of sewage networks, treatment plants, development of river fronts, etc. These sanctioned projects also include three CPCB projects worth ₹198.48 crore on Pollution Inventorisation, Assessment and Surveillance (PIAS) on river Ganga Strengthening of Environmental Regulator (SER)-CPCB and a project of setting up the Ganga Knowledge Centre (GKC) in NMCG (₹48.54 crore) and Educating Schools and Communities for conserving habitant of Ganga River Dolphin of (₹1.28 crore). An amount of ₹838.76 crore

The diagram (concept map) reads:

- **Ganga pollution** — due to → organic waste, sewage, trash, polyethylene, cans, clothes food, and human and animal remains
- reasons → Rapidly increasing population; rising standards of living; exponential growth of industrialization; urbanisation; pollution
- causes → water borne diseases — like → cholera, hepatitis, typhoid, amoebic dysentery, gall bladder diseases — leading to → 80% of all health problems & one-third of deaths
- sources →
  - **point sources** — are → **industrial wastes** — is → 15% (260 million l/day) — from → Fertiliser manufacturers; pharmaceutical companies; electronic plants; textile and paper industries; Tanneries; oil refineries
  - **Municipal sewage** — is → 80% (1.3 billion l/day)
  - liquid effluents — comprising of — like → Hg; PCBs; salts; Hcl; pesticides eg DDT; bleaches and dyes; heavy metals; ammonium sulphide
  - **non-point sources** — are → **run off from rural settlements**; **pesticides from agricultural fields**; **open defecation**; **dumping of animal carcasses**; **disposal of dead bodies**
    - disposal of dead bodies → cremations on wood pyres — eg → 40,000 cremations performed annually in Varanasi; leaves partially unburnt bodies
    - bodies thrown as it is — due to → unaffordability of cremation

(as on March 31, 2014) has been released by both Centre and the States for implementation of the sanctioned projects.

Many initiatives are being taken up by the current government. Prime Minister Shri Narendra Modi visited Varanasi and showed a hope to clean the holy River Ganga during his election campaign. Cleaning of Ganga has also been mentioned in the manifesto of the Bharatiya Janata Party (BJP) under the cultural heritage sections. They made certain changes in the administration to perform the task. The Ganga Action Plan which was part of the Ministry of Environment and Forests (MoEF) has now been shifted under Water Resources Minister Uma Bharti.

It is imperative to keep natural resources pure as these sustain life and maintain ecological balance. Increased inflow of industrial waste, untreated sewage and reduced natural flow of the river are the major factors leading to water pollution. As per experts it is essential to bring back the ecological flow of the Ganga which is joined by 115 small rivers. Out of these seven small rivers have been restored and work has to be done on the remaining 108 to revive the ecological flow.

Finance Minister Arun Jaitely while presenting the 2014-15 Budget had proposed an Integrated Ganga Conservation Mission –'Namami Gange', and a sum of ₹2,037 crores was set aside for this purpose. In addition a sum of ₹100 crores was also allocated for developments of Ghats and beautification of River Fronts at Kedarnath, Haridwar, Kanpur, Varanasi, Allahabad, Patna and Delhi. Namami Gange approaches Ganga rejuvenation by consolidating the existing ongoing efforts and planning for a concrete action plan for future. The long-term vision will emanate from the Ganga River Basin Management Plan being prepared by the Consortium of seven IITs.

Looking at the past failures of the Ganga related projects, implemented by different state governments, it is necessary to have direct control of the Central government

over implementation of all Ganga projects to speed up the management.

Projects proposed to be taken up under Namami Gange:

i) Nirmal Dhara- ensuring sustainable municipal sewage management
ii) Nirmal Dhara- managing sewage from Rural Areas
iii) Nirmal Dhara- managing Industrial discharge
iv) Aviral Dhara
v) Ensuring ecological rejuvenation by conservation of aquatic life and biodiversity
vi) Promotion of Tourism and Shipping in a rational and sustainable manner
vii) Knowledge Management on Ganga through Ganga Knowledge Centre

However, to control the spread of pollution and to contain it in manageable limits certain interventions would be necessary in short term. Group of Secretaries under guidance of Hon'ble Ministers has identified following activities:

i) Scheme for rehabilitation and up-gradation of existing STPs along Ganga
ii) Ensuring 100 per cent sewerage infrastructure in identified town alongside Ganga
iii) In situ sewage treatment in open drains
iv) Support for preparation of DPRs
v) River Front Management for Ghat's developments in selected cities and towns
vi) Industrial pollution abatement at Kanpur on priority
vii) Action Plan for Char Dham Yatra –Public amenities, waste disposal and sanitation
viii) Capacity building of urban local bodies
ix) Afforestation – Conservation of Flora
x) Conservation of Aquatic life – special attention on Dolphin, Turtles and Ghariyals etc.
xi) Disposal of flowers and other puja material
xii) Ganga Vahini

xiii) GIS data and Spatial Analysis for Ganga basin
xiv) Study of communities depending on Ganga for their traditional livelihood
xv) National Ganga Monitoring Centre
xvi) Special guidelines for sand mining in Ganga
xvii) Assessment of Special Properties of Ganga Water
xviii) Communication and Public Outreach Activities

Facts on the River Ganges and its pollution:

- Total distance covered by the river is 400,000 square miles.
- The River covers 29 cities having a population of more than 100,000, flows through 23 cities having population between 50,000 and 100,000 and near about 48 towns.
- The Ganga is considered as the holiest river in India with massive spiritual, religious and ritual significance. Near about 40 per cent of Indian population survive on Ganga by using its water.
- The Ganges tolerates domestic waste such as defecation, untreated industrial waste, and pollution during religious events. Every day 1.7 billion litres of such waste run into the river. Near about 89 million litres of sewage is disposed off in the river daily.
- The Ganges is one of the most polluted rivers in India in which level of pollutants is more than 3000 times than the permissible limit defined by the WHO as 'safe'.
- As per studies carried out by the Uttarakhand Environment Conservation and Pollution Control Board, the Ganges water near Haridwar has Coliform bacteria at 5,500 level which is 100 times more than the permissible limit. Directly pouring human feces, urine and sewage into river is the major reason of this rise. Coliform bacteria are found human colons but become highly hazardous when found in water or food.
- Half-burned or unburned human dead bodies as well as animal carcasses are thrown into the river.
- Harmful pesticides and fertilizers in agriculture run-offs pollute the water. The water of this holy river has become unfit for drinking, bathing and not even safe for agriculture purposes.
- Mercury has also been found in the Ganga River water in the study conducted by the Environmental Biology Laboratory, Department of Zoology, Patna University. Though mercury contamination has not reached to an alarming level but its presence is still worrisome.
- In spite of all the plans, actions, schemes and funds, the River Ganga is still polluted.
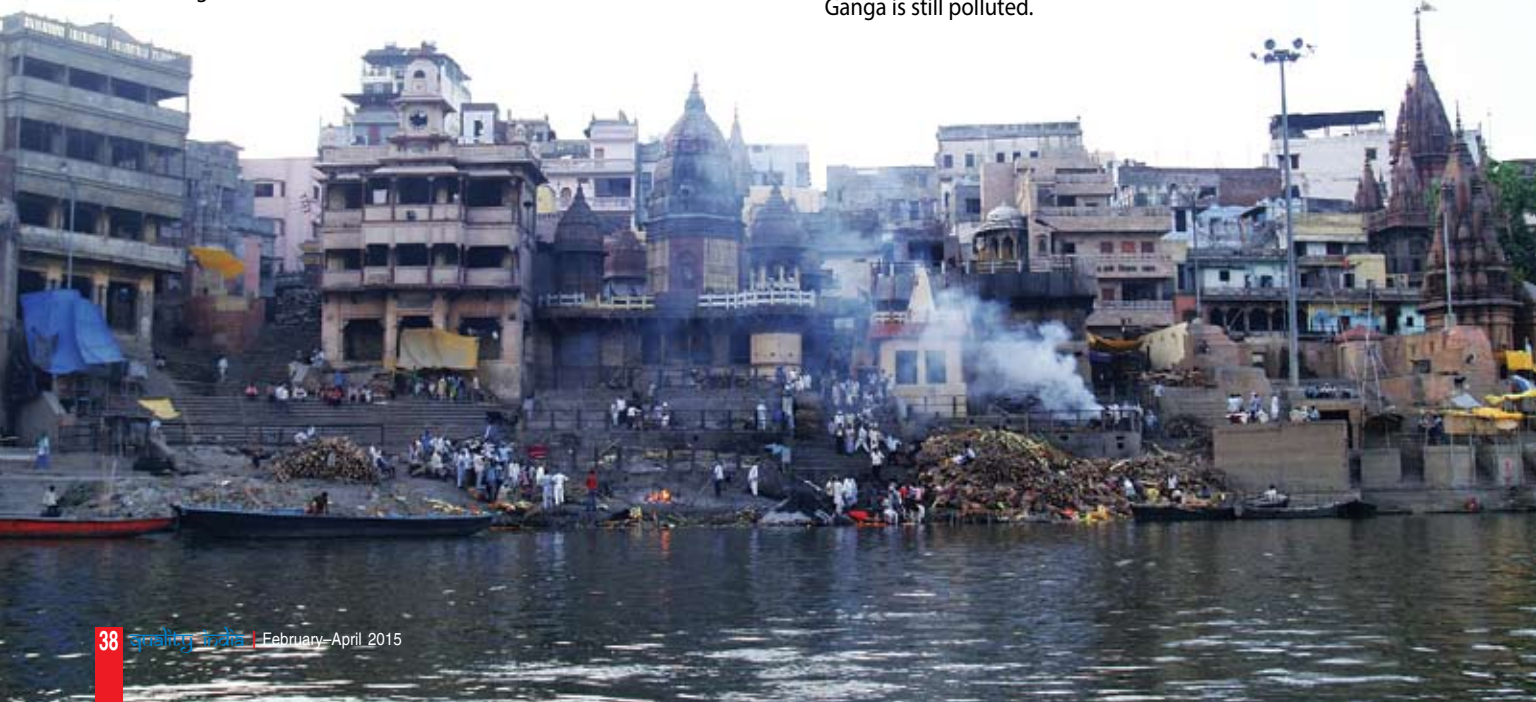
Building a better India for today & tomorrow

India today is standing on the threshold of growth and development. Our Honourable Prime Minister is moving with a dream of building a better India. With the recently introduced series of programmes, India has strengthened its position in world map. In an endeavour to facilitate millions of people of the country and make their living comfortable, various new Yojnas and Schemes have been launched. Here's a look.

By | Sudipta Saha

Sukanya Samridhi Yojna

Sukanya Samridhi Yojna is a small deposit scheme for girl child, as part of the 'Beti Bachao Beti Padhao' campaign, which would fetch an interest rate of 9.1 per cent and provide income tax rebate. 'Sukanya Samridhi Account' can be opened at any time from the birth of a girl child till she attains the age of 10 years, with a minimum deposit of ₹1000. A maximum of ₹1.5 lakh can be deposited during the financial year. The account can be opened in any post office or authorised branches of commercial banks. The scheme primarily ensures equitable share to a girl child in resources and savings of a family in which she is generally discriminated as against a male child.

In an effort to motivate parents to open an account in the name of a girl child and for her welfare to deposit maximum of their savings up to the prescribed limits, higher rates of interest at 9.1 per cent is proposed to be given on the deposits on annually compounded basis with income tax concession in this financial year.

The account will remain operative for 21 years from the date of opening of the account or marriage of the girl child after attaining 18 years of age. To meet the requirement of higher education expenses, partial withdrawal of 50 per cent of the balance would be allowed after the girl child has attended 18 years of age. Some of the key features are as follows:-

- This account can be opened on in the name of the girl child only.
- Parents or any legal guardian can open Sukanya Samriddhi Account on behalf of the girl child.

Prime Minister of India, Shri Narendra Modi launching Sukanya Samriddhi accounts by presenting passbook to girl child at Beti Bachao-Beti Padhao Programme along with brand ambassador of the Campaign Madhuri Dixit Nene and Haryana Chief Minister Shri Manohar Lal in Panipat on January 22, 2015. Union Minister for Women and Child Development Smt. Maneka Sanjay Gandhi

- The account can be opened on birth of a girl child till the age of 10 years.
- Minimum deposits is ₹1000 and then in the multiples of 100.
- Maximum deposit can be possible ₹1.5 lakh per financial year.
- There is no monthly recurring deposit require for this account. But if one forgets to pay the minimum yearly amount then he/she has to pay a penalty of ₹50 only.
- Interest rate for this year 2014-15 is 9.1 per cent. This is the maximum among all savings schemes. Interest rate is not fixed, will be deciding by Govt every year.
- The maturity period is 21 years from the age of the girl child.
- Premature withdrawal is possible only at the age of 18 year of the girl.
- In case of pre-mature withdrawal of Sukanya Samriddhi Account only 50 per cent of amount accumulated can be withdrawn.
- The deposit period is also fixed and that is till 14 years form start of the account.
- After deposit term end there is no scope of further deposit. Amount will earn compounded interest every year till maturity.
- Amount can be deposited to Sukanya Samriddhi Account by cash or demand draft. So far there is online facility to transfer money.
- One can open Sukanya Samriddhi Account in any post office or any public sector bank. On opening an account a passbook will be provided where all transaction details will be captured.
- One can transfer this account to any part of India in case the girl child is shifting her city.
- As per section 80C the amount deposited in Sukanya Samriddhi Account will be exempted for income tax benefit. This is recently announced.
- But the interest accumulated in Sukanya Samriddhi Account is taxable. This rule may change soon to make this scheme more useful.

Saansad Adarsh Gram Yojana

The Saansad Adarsh Gram Yojana, is a scheme that would open the door for good politics, and inviting all MPs to select a village to develop on a demand-driven, rather than a supply-driven model, with people's participation. The Saansad Adarsh Gram Yojana, would however have three distinct features – it would be (a) demand driven (b) inspired by society (c) based on people's participation. This scheme would inspire a movement towards good politics, with MPs acting as facilitators and catalytic agents. Some key features are:-

- A Member of Parliament must identify a village, other than his or her own village or that of the spouse, and turn it into a 'model village' by 2016 and two more villages two 2019. After 2019, the MP must develop five model villages till 2024 (each every year).
- MPs must identify villages from nearby rural areas not their urban constituencies.
- The scheme will put special focus on empowering the poor household to come out of poverty by developing a plan for every identified gram panchayat.
- The yojna aims at turning villages into model villages not only by infrastructure development but also by gender equality, dignity of women, social justice, community service, cleanliness, eco-friendliness, peace and harmony.
- Mutual-cooperation, self reliance, local self-government, transparency and accountability in public life will also be expected.
- Social mobilisation and a systematic environment will be created

in the model village led and guided by the MP him/herself.
- The District Collector will co-ordinated the planning process of the Gram Panchayat which will be a participatory exercise.

Jan Dhan Yojana

Pradhan Mantri Jan-Dhan Yojana (PMJDY) is National Mission

> *Trying to ease the process for migrant workers, RBI has allowed users to submit just one address (either current or permament) as proof. For people, who don't have valid documents, RBI has allowed opening of 'small accounts' through self-attestation. The small accounts, which will be valid for a year but can be extended for another year, have limitations on credits, withdrawals and balance.*

for Financial Inclusion to ensure access to financial services, namely, Banking/Savings and Deposit Accounts, Remittance, Credit, Insurance, Pension in an affordable manner. Account can be opened in any bank branch or Business Correspondent (Bank Mitr) outlet. PMJDY accounts are being opened with Zero balance. However, if the account-holder wishes to get cheque book, he/she will have to fulfill minimum balance criteria.

This is just not a bank account, but had other benefits including a RuPay debit card, ₹1 lakh accident insurance cover, and an additional ₹30,000 life insurance cover for those opening bank accounts before January 26, 2015. The account performance would be monitored and overdraft facility would be given. The Prime Minister had sent 7.25 lakh bank employees, exhorting them to help reach the target of 7.5 crore bank accounts, and bring freedom from financial untouchability. The scheme's objective was to eradicate poverty and eliminate the 'financial untouchability' that exists in the country.

Ahead of the launch, RBI also relaxed some KYC norms. Trying to ease the process for migrant workers, RBI has allowed users to submit just one address (either current or permament) as proof. For people, who don't have valid documents, RBI has allowed opening of 'small accounts' through self-attestation.

The small accounts, which will be valid for a year but can be extended for another year, have limitations on credits, withdrawals and balance.

Pradhan Mantri MUDRA Yojana

Supporting the small entrepreneurs of India is the biggest way to help the Indian economy grow and prosper. The Pradhan Mantri MUDRA (Micro Units Development and Refinance Agency) Yojana is ideally created for the small entrepreneurs. While there are a number of facilities provided for the large industries in India, there is a need to focus on these 5 crore 75 lakh self-employed people who use funds of ₹11 lakh crore, with an average per unit debt of merely ₹17,000 to employ 12 crore

Indians. MUDRA scheme is aimed at 'funding the unfunded'. The small entrepreneurs of India are used to exploitation at the hands of money lenders so far, but MUDRA will instill a new confidence in them that the country is ready to support them in their efforts that are contributing so heavily to the task of nation building.

PAHAL Yojana

'PAHAL Yojana' will bring an end to black-marketing and subsidies will reach people more effectively. PAHAL Yojana will bring an end to black-marketeering and subsidy will reach people more effectively. Its role in nation-building is important. The scheme aims to reduce diversion and eliminate duplicate or bogus LPG connections.

Shramev Jayate Yojana

Looking to create an environment conducive to industrial development while also ensuring transparency in the labour sector, Prime Minister Narendra Modi unveiled 'Shramev Jayate Yojana' to revamp labour reforms and ease the 'Make in India' call. The initiatives launched are a Unified Labour Portal or 'Shram Suvidha', a transparent and accountable Labour Inspection Scheme, and portability through Universal Account Number (UAN) for Employees' Provident Fund members. Also flagged off is an Apprentice Protsahan Yojana. Under the proposed reforms, labour inspectors will lose their power to decide which unit to visit and the number of forms related to compliance with labour laws that employers have to file will drop from 16 to 1. The revamped Rashtriya Swasthya Bima Yojana (RSBY) for workers in the unorganised sector was also launched on the occasion.

Soil Health Card Scheme

Prime Minister Narendra Modi on February 19, 2015 launched the nationwide Soil Health Card Scheme in Suratgarh town of Sriganganagar district, Rajasthan. The nationwide scheme will help farmers to scientifically analyse the soil of farms in the country.

The scheme aims at helping farmers in improving productivity by appropriate use of nutrients or fertilisers. The Soil Health Card

scheme was announced in the first budget presented by Union Finance Minister Arun Jaitley in July 2014. The finance minister allotted a budget of 100 crore rupees for issuing cards and an additional 56 crore rupees to set up 100 mobile soil testing laboratories across India. Under the plan, 14 crore Soil Health Cards will be issued to farmer of the country in a span of 3 years. Around 3 crore farmers will be covered under the project in financial year 2014-15. Some of its features are:-

- It would contain all basic information and crop-wise recommendations of nutrients or fertilizers required for farms of different soil types.
- It will carry crop-wise recommendation of fertilizers required for farm lands and other inputs to increase the productivity of individual farmer.
- Government's step to issue soil health cards to farmers will ensure that they are aware of the quality of soil and use right fertilisers. Also, the scheme will help in keeping a check on overuse of fertilisers on farm land and will be provided to over 14 crore farmers.
- Apart from this, the Prime Minister also gave a slogan Swasth Dharaa Khet Haraa (Healthy Earth Green Farm). He also asked states to set up high-powered expert committees on agriculture and asked farmers to take agricultural decisions after getting their soil tested under the Soil Health Card scheme.

Scheme for LED bulb distribution

Prime Minister Shri Narendra Modi described the LED bulb as a 'Prakash Path' – 'way to light', as he launched a scheme for LED bulb distribution under the domestic efficient lighting programme; and a National Programme for LED-based Home and Street Lighting. The initiative is part of the Government's efforts to spread the message of energy efficiency in the country. LED bulbs have a very long life, almost 50 times more than ordinary bulbs, and 8-10 times that of CFLs, and therefore provide both energy and cost savings in the medium term. LED bulbs shall be distributed in a phased manner from March 2015 onwards. The entire project of installing LED bulbs for domestic and street-lighting in 100 cities is targeted for completion by March 2016.

Perspectives on a Water Resource Policy for India

By | **S Vijay Kumar,** Distinguished Fellow, TERI and Girija K Bharat, Area Convenor, WRPM, TERI

India sustains nearly 17 per cent of the world's population but is endowed with just four per cent of global water resources. About 50 per cent of annual precipitation is received in just about 15 days in a year, which is not being brought to productive use due to limited storage capacity of 36 per cent of utilisable resources (252 BCM out of 690 BCM). Leakage and inefficiencies in the water supply system waste nearly 50 per cent of usable water. The ground water level is declining at the rate of 10 cm per year. Over 70 per cent of surface water and ground water resources are contaminated. All this is leading towards a water scarce situation in many parts of the country.

India has undertaken considerable investments for infrastructure development of large dams, storage structures, and canal networks to meet the country's water and agricultural needs, particularly in support of technology-based interventions to improve production of food grains, pulses, oilseeds, and vegetables. This is evident from the huge increase in budgetary allocation from the 11th Five-Year Plan compared to the 12th Five-Year Plan in irrigation including Watershed Development (from ₹243,497 crore to ₹504,371 crore) and Drinking Water and Sanitation sector (from ₹120,774 crore to ₹254,952 crore). This step has helped in achieving food and water security to a large extent, but in many areas of less plentiful surface water, the increasing use of water in agriculture and a growing population has led to higher and potentially unsustainable extraction of ground water for irrigation and domestic needs.

The estimated 'Water Gap' for India by the '2030 Water Resource Group' is an alarming 50 per cent. The water supply and demand gap in India in various river basins as percentage of demand in the year 2030. India is now in a situation where some tough decisions regarding competing uses of water need to be taken.

The country is also facing the potent threat of climate change, which may have complex implications on the pattern of availability of water resources including changes in pattern and intensity of rainfall and glacial melt resulting in altered river flows, changes in ground water recharge, more intense floods, severe droughts in many parts of the country, salt water intrusion in coastal aquifers, and a number of water quality issues. Water being vital for equitable growth and development of a country,

food security, livelihoods, and public health are at stake. Access to safe water has a direct bearing on productivity and health of human and animal populations. The public health implications of unsafe water are enormous and unacceptable.

Water has a clear linkage to all the three development dimensions: Environmental, Economic, and Social. The challenges necessitate the need for a sustainable policy regime that facilitates Integrated Water Resource Management (IWRM) for efficient use of what is going to become a scarcer resource globally. The matter is assuming greater urgency as the country rapidly urbanizes and undergoes industrial transformation, because the global pattern in such cases is that water for urban and industrial use goes up substantially and reallocation of water between urban and rural areas as a result has the potential to create social tensions and even conflicts. This Discussion paper highlights some of the important issues, which need to be addressed to efficiently manage the water resources in the country. While the paper draws substantially on the National Water Policy 2012, it highlights the implications of some of the policy directions and brings out the consequential steps to be able to give effect to a consistent and effective science-based policy.

Legal and Policy Framework for Water in India: An Overview

The current legal framework pertaining to water in India is spread across a variety of instruments, legislation, legal principles, both from the colonial and post-colonial times, as well as customary mechanisms, and a number of judicial precedents, not necessarily in harmony with each other.

Under the Constitution of India, water is a State subject, with the States' jurisdiction extending to 'water supplies, irrigation and canals, drainage and embankments, water storage, and water power'(Schedule VII, List II, Entry 17). These powers are, however, enjoyed subject to the authority of the Centre to regulate the development of inter-state rivers and settle inter-state water disputes (Schedule VII, List I, Entry 56). Since the river drainage systems across State boundaries and the major catchments are often in a State other than the one where major water usage may occur, the role of the Centre in ensuring the sustainable management of river systems extends to ensuring that the interests of all States to use natural resources for the States' development are reasonably protected and harmonised, and this often requires the Central government to take recourse to a number of other entries in List I and III, most notably the entry relating to Forests (Schedule VII, List III, Entry 17-A), to preserve and protect forest catchments. Emerging from this basic distribution of powers, there are a number of Central and State level legislations which address the subject of water or relate to institutions which are concerned with conservation and management of water in India. Of these, the most important perhaps, at least from the point of view of institutionalisation, is the State Panchayati Raj Act. Minor irrigation, water management, and watershed development are included in the list of subjects in the Eleventh Schedule, which can be transferred to Panchayats if the State Government so notifies in terms of the State legislation, as several States have done. Similarly, water supply, public health,

sanitation, and solid waste management are included in the list of subjects in the Twelfth Schedule which can be transferred to Urban Local Bodies (ULBs).

Water Law is closely linked with the Water Policy because of the mutual feedback and interlock. Under ideal conditions, the Water Law empowers Water Policy, which is influenced by the political and economic institutions and ideology of the time. Water Policy, in turn, provides a larger vision and purpose to the Water Law and enables fine tuning of the implementation based on difficulties faced on-ground. Taken together they provide a comprehensive framework.

The National Water Policy of India

The National Water Policy of the Government of India was first enunciated in 1987. The policy laid down an allocation prioritisation principle for water as follows:
- Drinking Water
- Irrigation
- Hydro-power
- Navigation
- Industrial and other uses

The National Water Policy (NWP 2002) was subsequently introduced in relation to the rapidly changing scenario in the domain of water to address the emerging issues and provide critical policy inputs. NWP 2002 gave emphasis for the first time to ecological and environmental aspects of water allocation.

The National Water Policy (NWP 2012) calls for a common integrated perspective to govern the planning and management of water resources. Such a perspective would consider local, regional, and national contexts and be environmentally sound. The Policy2 clearly states that water needs to be managed as a common pool community resource that is held by the State under the public trust doctrine to ensure equitable and sustainable development for all.

NWP 2012 has done away with water allocation prioritization mentioned in NWP 1987 and 2002, but has emphasized on treating water, over and above the pre-emptive need for safe drinking water and sanitation, as an economic good. NWP 2012 also emphasises the fact that the service provider role of the State has to be gradually shifted to that of a regulator of services and facilitator for strengthening the relevant institutions.

Issues and Concerns regarding Water Resource Management in India

The increasing scarcity and deterioration in quality of water resources and their management have highlighted several concerns, which will need to be addressed through the National Water Policy, and the State Water Policies there under, as well as by the Central and State legislations made in conformity with the policies. The important concerns to be addressed include the following:
- Poor management of water resources has led to a critical situation in many parts of the country. Poor or inequitable access to safe drinking water and sanitation continues to be a problem in many areas, creating conditions for social strife.
- The already wide temporal and spatial variations in availability

and quality of water may increase substantially due to impact of climate change, aggravating water crisis and more severe incidences of water-related disasters, such as floods, droughts, and high erosion.

- Ground water continues to be perceived as an individual property rather than a community resource. Its extraction and exploitation continues inequitably and without any consideration for its sustainability and without adequate understanding of the variations in underground water quality.
- The existing irrigation infrastructures are inadequately maintained and poorly managed, leading to wastage and under-utilisation of available resources. This has resulted in a widening gap between the irrigation potential created and utilised.
- In many parts of the country, large stretches of rivers are both heavily polluted by untreated industrial effluents as well as municipal sewage and devoid of flows to support aquatic ecology, cultural needs, and aesthetics. This is affecting the availability of safe water besides causing environmental risks and health hazards.
- There are a number of interstate disputes on river water sharing between States, which need to be expeditiously attended to by reexamining the existing institutional set up such as the Water Disputes Tribunal at the Centre.
- Holistic and inter-disciplinary approach to water as a resource and to water resource allocation related problems is missing.

State Water Policies

Water being a State subject, the State has jurisdiction extending to water supplies, irrigation and canals, drainage and embankments, water storage and water power as mentioned in Schedule VII, List II, Entry 17 of the Constitution. States and local governance institutions ultimately have to manage the proper use of local resources, and local communities and local governance institutions and Panchayats and Municipalities have to work in coordination with each other and the State departments concerned. State governments need to bring out clear and comprehensive policies in furtherance of the national policy. The Policy must:

- Set out State level priorities based on State level conditions, policies, and prospects of industrialisation, urbanisation, etc.
- Specify regulatory policies.
- Put in place State level and local planning regulatory systems to address issues of pricing, management, and good governance.
- Spell out the role for Panchayats, ULBs, User Associations, Community Institutions, and Civil Society Organisations and how their capacity can be enhanced.

Water law in India continues to remain non-uniform, inconsistent, and somewhat inadequate to deal with today's complex water situation characterised by scarcity and depletion of this renewable but limited resource, and increased demand. A business-as-usual (BAU) approach will not be able to plug the gap between water supply and demand. Good national water management requires a paradigm shift, comprising at least the following:

- Clear and comprehensive science-based Water Resource Policy at Central and State levels for integrated water resource management, which focuses on both supply- and demand-side dimensions of water use.

- A Water Framework Law at Central level laying out the architecture for planning and regulation and technical institutional support.
- Effective legislation at State level (based on the Central Model Law) for regulation of ground water and surface water providing an explicit and increasing role for Municipal and Panchayati Raj Bodies in planning, management, and regulation.
- Restructuring, strengthening, and empowerment of the existing institutions (Central, State, and local) involved in different aspects of service delivery so as to improve efficiency in management and sustainability of the resource.
- Shift in approach in water resource management from purely engineering works to systems that incorporate traditional practices, local materials and are manageable and maintainable by local communities. The Gram Panchayat as well as the local community needs to be involved at all stages of discussion, planning, implementation, management and maintenance.
- Funding for capacity-building and R&D to bring in resource use efficiency and sustainability.
- A Water Portal with full disclosure of all the data in usable formats, accessible to Government institutions, policy makers, society, and regulatory institutions.

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Accreditation Scheme for Laboratory Management system (LMS) training institutions

Accreditation of laboratories in India is assisting the Indian industry in all sectors in generating internationally accepted test data and in enhancing the quality and reliability of products both in the domestic and export markets, thereby, catalysing the growth of Indian economy. Earlier WTO has identified non-acceptance of test results and measurement data as Technical Barrier to Trade (TBT) and accreditation is considered to be the first essential step towards removing such technical barriers.

Laboratory accreditation through third-party assessment is formally recognising the technical competence of laboratories. The accreditation is granted by NABL to testing and calibration laboratories based on ISO/IEC 17025 and medical laboratories based on ISO 15189. NABL is signatory to Asia Pacific Laboratory Accreditation Cooperation (APLAC) and International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangements (MRAs) for Testing, Calibration and Medical laboratories. The test and measurement data produced by accredited laboratories are acceptable amongst other MRA signatory economies in the world.

Laboratory accreditations are being provided in all major fields of Science, Engineering and Medical testing laboratories. There are many accredited laboratories in India and in neighbouring countries and very large number of laboratories are in process or in planning for accreditation in near future.

Laboratories require its personnel to have appropriate understanding on the requirements of Laboratory Management System (LMS) for accreditation purpose and thus will need imparting necessary training on the relevant conformity assessment standard to its personnel.

The shortage of trained personnel having adequate understanding on the relevant laboratory management system and conformity assessment standard is being highlighted in conferences or in discussions in different forums. Some of the institutes and individuals are conducting such training programmes for laboratory personnel. The capability and competence to design and deliver such programs needs to be ascertained. The quality of such training programs will have a direct bearing on the quality of laboratory personnel and the work they do to achieve or maintain laboratory accreditation. An attempt is made to prepare uniform structure for designing and conducting such training programmes.

Therefore, there is a need for a well-designed accreditation scheme which defines the requirements for training providing institute on infrastructure, competence of human resources, course curriculum, trainee evaluation process, training quality assurance system, system oriented approach etc. This will facilitate in providing competent and resourceful accredited LMS training institutes for training the laboratory personnel. It will ultimately contribute towards improving and standardising the quality of LMS trainings and thus the competence in laboratories.

An outline of the scheme

NABET is proposing an accreditation Scheme for LMS training institutions. The scheme is aimed to create an independent, transparent and impartial accreditation system for institutions engaged in imparting specialized trainings pertaining to laboratories. Qualified and experienced laboratory staff(s) desirous of enhancing their knowledge and skills of laboratory management systems is going to be the main beneficiary of such training programmes by accredited training institutions. Trained manpower/quality manager/technical manager is required by laboratories (testing/diagnostic), industry, NGOs, law firms, financial institutions, research bodies, administrators, governments, ministries, Pollution Control Boards and all those concerned with testing of products, medical diagnostic labs etc. Scheme is dynamic in nature. Modifications and updation will take place from time to time, as it ought to be for continually improving the delivery and effectiveness of the training.

Objectives of the scheme

a. To provide accreditation to institution capable of providing short term specialised LMS training programmes for persons involved in/wishing to make a career in the field of laboratories. **b.** To encourage progressive improvement in LMS training course content, pedagogy, teaching methodology, experiential learning through case studies and other innovative mechanisms. **c.** To ensure quality and effectiveness of LMS courses and training delivery system by the accredited Institutions.

Accreditation criteria

Accreditation under this criterion will be completed in two phases: **1.** Phase I – On the basis of desktop assessment (DA), report by assessor(s) and satisfactory closure of NCs and observations, if any, the cases shall be compiled and circulated

to the Accreditation Committee (AC). On approval by the AC, a provisional accreditation shall be granted. Provisionally Accredited Training Institution (PATI) may announce training programme as per provisionally accredited scope and shall inform NABET the commencement date of the first programme to enable NABET to arrange the witness assessment by NABET assessor(s). The first training programme subsequent to provisional accreditation will be subjected to office and witness assessment by the assessor(s) deputed by NABET. Number and Duration of office and witness assessment depend upon the scope of the provisional accreditation and the nature of training programme. **2.** Phase II - Based on office and witness assessment report, NCs and observation, if any, shall be communicated to the AI for the compliance. AI shall submit evidence based compliance of NCs and observations at the earliest but not later than a month. If required additional office and witness assessment may be required for verification of closures. The case then shall be placed before AC for converting provisional accreditation into final accreditation. Accreditation period of three years will be counted from the date of provisional accreditation; however, this validity period is subject to satisfactory SA.

Assessment Process

Initial Assessment

a) **Application Completeness:** Submitted application shall be reviewed by NABET secretariat for its completeness. Inadequacies in application (if any) shall be informed to applicant institution. AI should submit complete response within 30 days. Only completed applications will be further processed.

Note1: If inadequacies are found in the response, the same will be communicated with an additional time of 30 days. If AI fails to submit satisfactory response even after additional time then the application is made inactive.

Note 2: The inactive period will be for 60 days. The AI may submit satisfactory response in the given time. If the response is not satisfactory then the application will be treated as closed and the AI has to re-apply with full fees.

b) **Desktop Assessment:** NABET assessor conducts adequacy assessment (application & technical assessments of documents submitted by AI). Observation(s) and NCs (if any) would be communicated by NABET secretariat. AI should submit complete response within 30 days. Decision regarding provisional accreditation would be communicated.

Note 3: Closure of NCs and observations submitted by AI will be verified by NABET assessor.

Note 1 & 2 given under **a)** will be followed for timelines.

c) **Office and Witness Assessment:** On-site office and witness assessment includes interaction with each faculty (in house and visiting)/quality manager, concerned administrative staff etc., verification of infrastructure, implementation of training quality assurance system, witness of course delivery and trainees feedback.

1. Assessment report [findings like observation(s) and NCs (if any)] would be reported by NABET assessors to NABET

secretariat and in turn communicated to AI. Corrective measures shall be submitted by AI within 30 days. Decision regarding grant/denial of accreditation would be communicated.
Note 4: Closure of NCs and observations submitted by AI will be verified by NABET assessor.

2. Surveillance Assessment–If there is no change in faculty, course curriculum, quality manual, infrastructure, scope etc. then ATI shall pay surveillance fee and inform NABET for due surveillance, ATI need not to submit new application.

If there is any change in faculty, course curriculum, quality manual, infrastructure, modification of scope etc. Then new application with updated details and applicable fee shall be submitted and same process as above will be followed. SA will be conducted with particular emphasis on performance, quality of training delivery, implementation of TQAS, compliance to conditions of accreditation.

SA to be carried out between 15-18 months from the date of provisional accreditation.

3. Re-Accreditation–Process will be similar as initial assessment, with particular emphasis on performance, feedback by trainees, continual improvement, TQAS etc. in three years from the date of provisional accreditation. RA application shall be submitted 3 months prior to RA due date.

Code of Conduct

All ATIs are obliged to improve the standing of the profession by rigorously observing the Code of Conduct. Failure to do so may result in the suspension or cancellation of accreditation. The ATI undertakes:

a. To act professionally, accurately and in an unbiased manner.
b. To be truthful, accurate and fair to the assigned work, without any fear or favour.
c. To judiciously use the information provided by or acquired from the applicant and to maintain the confidentiality of information received or acquired in connection with the assignment.
d. To avoid and/or declare any conflict of interest that may affect the work to be carried out.
e. Not to act in a manner detrimental to the reputation of any f the stakeholders including NABET and the trainee.
f. To co-operate fully in any formal enquiry procedure of NABET
g. No sharing of the contact details of Trainees with other laboratory/organisation/company.

Governance

QCI-NABET reserves the rights with respect to training modules development, implementation, coordination, management of these Training programmes through Training Institutions. QCI-NABET will have following functions (but not limited to):

a. Development and Implementation of Training Modules through Training Institutions
b. Changing/modifying the criteria/guidelines/fee structure
c. Suspension/cancelling of accreditation in case of violation of any clause of the Scheme
d. Surprise visits/extra witness assessments

QCI signs MOU with Russian accreditation body

The Quality Council of India, jointly on behalf of the National Accreditation Board for Certification Bodies (NABCB) and the National Accreditation Board for Testing and Calibration Laboratories (NABL), has signed a MoU with the Russian accreditation body, the Federal Accreditation Service, on December 11, 2014 during the 15th India-Russia Summit in Delhi. The MoU was signed by Mr. Adil Zainulbhai, Chairman, QCI and Mr. Savva Shipov, Head, FAS and the documents were exchanged in the presence of PM Modi and President Putin.

The MoU envisages among other things acceptance of India's conformity assessment by Russia and vice versa in a bid to minimise technical barriers to trade. This means that wherever the regulators are using accreditation as a means of accepting testing/inspection/certification, each country would accept the other's accreditation and conformity assessment. This would facilitate exports from India based on testing/inspection/certification in India itself

NABCB signs IAF MLA on GlobalGAP

NABCB has signed the multilateral recognition arrangement (MLA) of the International Accreditation Forum (IAF) for GlobalGAP – which means NABCB accreditation of certification bodies in India and certificate issued by such certification bodies would be acceptable worldwide.

NABCB is one of the 26 accreditation bodies worldwide who signed this MLA in Vancouver on October 13. It had already signed the IAF-GlobalGAP MoU in Aug, 2013 which gave it acceptance within GlobalGAP system.

GlobalGAP is now an endorsed scheme of IAF and hence in the IAF MLA, ABs can get the scope of GlobalGAP which we have achieved now. This would help farmers get GlobalGAP certification under Indian accreditation at lesser cost than they pay for certificates under foreign accreditation.

National GLP Compliance Monitoring Authority (NGCMA) enters into a MoU with Quality Council of India

The National GLP-compliance Monitoring Authority (NGCMA) established by the Department of Science & Technology, Government of India has entered into an MoU with Quality Council of India (QCI) partnering QCI for the effective implementation of GLP certification program. The Schemes which shall continue to be owned by NGCMA shall utilise the resources available with QCI for effective co-ordination of the activity towards operationalisation of GLP certification programme.

The principal objective of this Memorandum is to establish a mechanism wherein QCI shall support NGCMA for effective implementation of GLP certification program through a structured approach by managing the GLP certification programme. The focus of this partnership is to promote GLP in the identified sectors.

The sole focus of QCI will be to manage the audits, assessments utilizing the Inspectors/assessors approved by NGCMA. QCI shall also provide support for organising relevant and technical meetings needed to ensure/maintain competence of the Inspectors/assessors. Apart from the above activities, QCI will partner NGCMA in organising various Training courses/Capacity building programmes such as:

- Training courses for GLP inspectors (Basic/Advanced/Refresher Courses).
- Training Courses for Test facility personnel (Study Directors, Quality Assurance personnel) etc.
- Brainstorming Meeting with Test Facility Managements-Sensitisation/Awareness workshops on GLP.

International Forum on Quality and Safety in Healthcare: Asia, Hong Kong from September 28-30, 2015

The programme for International Forum: Asia, 'Improve, Innovate, Inspire' is launched. The conference programme features keynote speakers from the US, UK and Asian countries and will showcase the very best of international and regional thinking and practice in quality and safety in healthcare. Pre-Conference full day courses include best practices from other industries and visits to key Hong Kong healthcare sites to get direct insight. You may also hone your practical knowledge with the Quality Improvement Toolkit and Measurement full day courses. Over two days there are 24 conference sessions to choose from in seven learning Streams.

Quality at Grass root through Gram Panchayats (GPs)

QCI project has been launched to recognise Quality at the grass root level in the largest democracy in the world, with a view to empower common man. This is seen as a major step towards 'Quality for National Well Being'

This project is aimed at evaluating objectively the implementation and recognising 'Panchayat Raj Achievements and Governance' and is termed as 'PRAGATHI'. This is basically a third party evaluation based on seven basic quality components. These are: Shikshana (Education), Samparks (communication), Suchitva (Environmental cleanliness and sanitation), Samana (Equality), Soulaby (facilities), Suraksha health and (protection), Samvrudi (Production and prosperity).

Simple check list comprising of 55-questions covering all the above indicated 7-S components is being made available to country wide distributed 2,65,000 GP's by the Quality Council of India. The first state in the country to initiate this Scheme happens to be Karnataka, which under pilot project has selected 148 GP's for Quality Tag.

GP' Quality tag is undertaken at three levels

Sensitising the GP representatives on the program module and the assessment procedure apart from what is expected based on objective evaluation by expert assessors.

1. Training assessors for the GP's
2. Training the trainers
3. Actual on site assessment

After the assessment 10 per cent of GP's are given recognition through the award of Quality tag with varying scale to encourage them to make efforts to excel in subsequent assessments.

This will ensure healthy competition apart from increasing their self esteem. Finally through this initiative, common man at grass root level will begin driving and demanding for quality.

This has potential to become world's largest effort in empowering people at grass root level. Now with the success seen in phase I in Karnataka in the next immediate phase GOK have come forward with additional 1000b GP's. Efforts are being made to reach out to other states across the county.

RE Invest 2015 Creates Renewables Buzz; Government Launching Air Quality Index

World Bank agrees $8 million aid to India for climate change mitigation. India on Friday signed an agreement with World Bank for assistance of $8 million to take up various adaptation measures in rural areas to deal with the threat of climate change. The money will be used to implement special projects to improve adaptive capacity of the rural poor, engaged in farm-based livelihoods, to climate change in Bihar and Madhya Pradesh. The assistance fund, under Sustainable Livelihoods and Adaptation to Climate Change (SLACC), will be for projects that will help community institutions of the rural poor, particularly women farmers, to foster improved resilience in the production system in collaboration with government programs such as MGNREGS.

10th National Quality Conclave to be organised on August 7-8, 2015

The 10th National Quality Conclave, the annual flagship event of Quality Council of India will be an exceptional event that will bring latest topics on Quality Movement, with special focus on MSME category for various sectors such as Manufacturing, Services, Pharma, Healthcare, Education and Public Services. This is an an event attended by 1000+ quality professionals. An opportunity to learn from experts on real life solutions for real life problems. It is a forum to understand how organizations are using quality tools for improving performance and an occasion to network with Quality Champions and Professionals

India launches air quality index to give pollution information

India has launched its first air quality index, to provide real time information about pollution levels. The index, announced by Prime Minister Narendra Modi, will initially monitor air quality in 10 cities. Last year the Environmental Preference Index ranked India 174 out of 178 countries for air quality. The rising and health-endangering pollution has been mainly blamed on a huge increase in vehicles, particularly diesel-driven cars, on Indian roads. Polluting industries, open burning of refuse and leaves, massive quantities of construction waste and substantial loss of forests have also led to high pollution levels in cities. A World Health Organisation (WHO) survey last year found that 13 of the most polluted 20 cities in the world were in India. The capital, Delhi, was the most polluted city in the world, the survey said. It is a leading cause of premature death in India, with about 620,000 people dying every year from pollution-related diseases, says the WHO.

Qualities of a Good Leader

How often have you heard the comment, "He or she is a born leader?" There are certain characteristics found in some people that seem to naturally put them in a position where they're looked up to as a leader.

Whether in fact a person is born a leader or develops skills and abilities to become a leader is open for debate. There are some clear characteristics that are found in good leaders. These qualities can be developed or may be naturally part of their personality. Let us explore them further.

Six Personal Qualities Found in a Good Leader:

- A good leader has an exemplary character. It is of utmost importance that a leader is trustworthy to lead others. A leader needs to be trusted and be known to live their life with honestly and integrity. A good leader "walks the talk" and in doing so earns the right to have responsibility for others. True authority is born from respect for the good character and trustworthiness of the person who leads.

- A good leader is enthusiastic about their work or cause and also about their role as leader. People will respond more openly to a person of passion and dedication. Leaders need to be able to be a source of inspiration, and be a motivator towards the required action or cause. Although the responsibilities and roles of a leader may be different, the leader needs to be seen to be part of the team working towards the goal. This kind of leader will not be afraid to roll up their sleeves and get dirty.

- A good leader is confident. In order to lead and set direction a leader needs to appear confident as a person and in the leadership role. Such a person inspires confidence in others and draws out the trust and best efforts of the team to complete the task well. A leader who conveys confidence towards the proposed objective inspires the best effort from team members.

- A leader also needs to function in an orderly and purposeful manner in situations of uncertainty. People look to the leader during times of uncertainty and unfamiliarity and find reassurance and security when the leader portrays confidence and a positive demeanor.

- Good leaders are tolerant of ambiguity and remain calm, composed and steadfast to the main purpose. Storms, emotions, and crises come and go and a good leader takes these as part of the journey and keeps a cool head.

- A good leader as well as keeping the main goal in focus is able to think analytically. Not only does a good leader view a situation as a whole, but is able to break it down into sub parts for closer inspection. Not only is the goal in view but a good leader can break it down into manageable steps and make progress towards it.