COAL QUALITY TESTING

Leading Change With Quality, Innovation And Technology 24
RQC - Bengaluru

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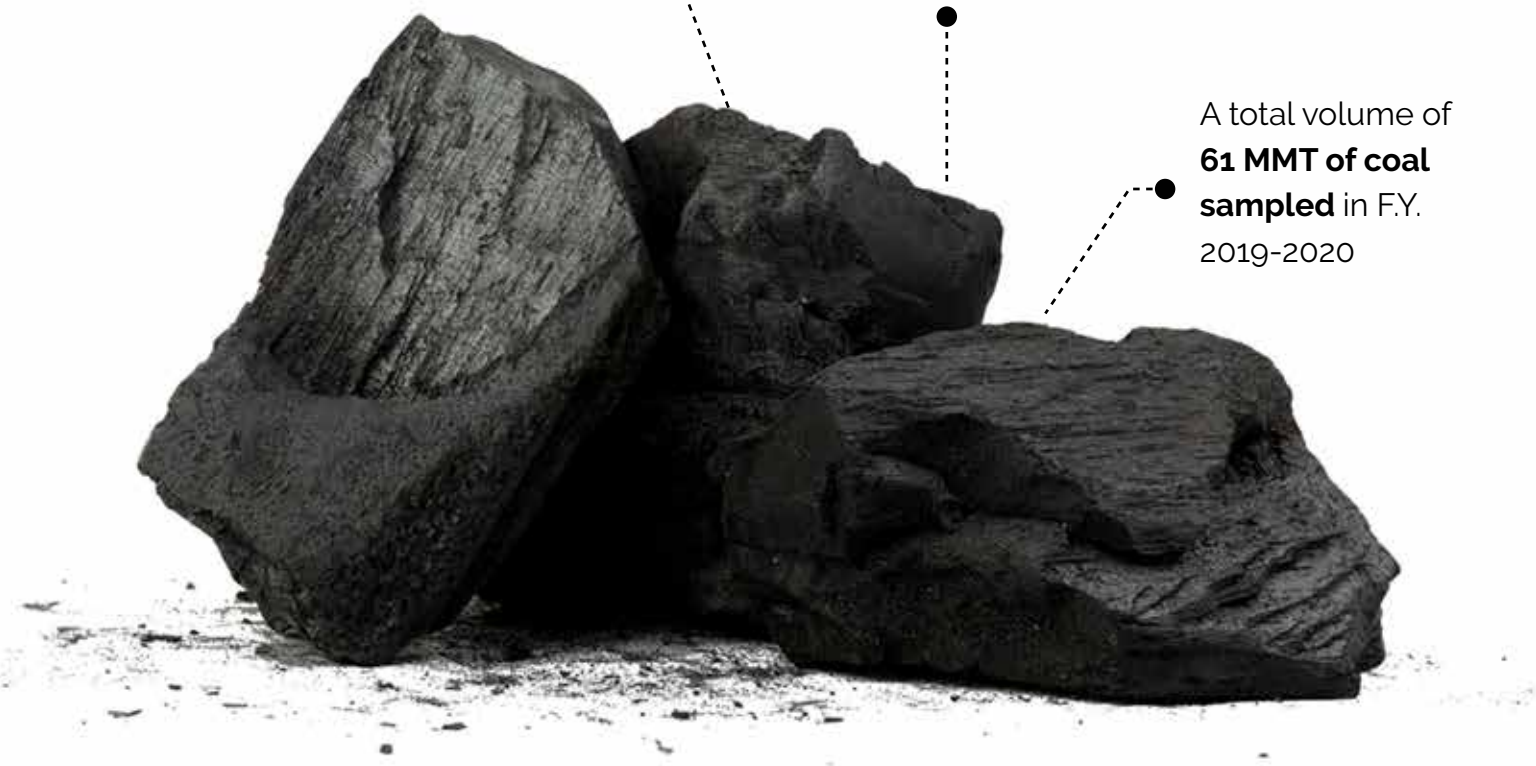
QCI has commenced **third-party sampling** quality assessment across all 8 subsidiaries of Coal India Limited (CIL)

Tripartite agreements for volume of 136 Million Metric Tonnes (MMT) have been signed

A total volume of **61 MMT of coal sampled** in F.Y. 2019-2020



QUALITY INDIA
A QCI PUBLICATION | *October - December 2019*

QUALITY COUNCIL OF INDIA
QCI Creating an Ecosystem for Quality

EDITOR'S NOTE

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

Dear Friends

It is a matter of pride that many efforts of QCI have yielded results and also allowed the government to make certain policy push.

As per the instructions of Ministry of Commerce and Industry and Department for Promotion of Industry and Internal Trade (DPIIT), we carried out the mystery shopping testing survey in the markets of Delhi and NCR and found that nearly 67 per cent of imported toys failed the test, and only 33.10 per cent passed all the tests.

As many as 121 different varieties were procured and submitted to NABL accredited laboratories to carry out all the tests on these toys as per the Indian standards. Due to our efforts, DGFT revised their notification allowing sampling of every consignment coming to India.

QCI has made giant strides in assessing the Vendors for Government e-Marketplace and has successfully completed 500+ virtual assessments in India. The young professionals of QCI have also taken up a first of its kind perception survey for the Delhi Police and are gathering the feedback through telephone and in-person interviews. Atal Innovation Mission (AIM) under NITI Aayog has asked QCI to conduct an independent assessment of Atal Incubation Centers and Atal Tinkering Labs to ensure the government's endeavors to promote a culture of innovation and entrepreneurship among students. We are also in discussion to map Ganga water bodies among other important work.

QCI is also carrying out a third-party quality assessment to check the presence of added Formaldehyde in fish and fishery products being consumed in Goa. At various stages in the distribution cycle of fish, ranging from procurement of

fish to its retail consumption, QCI conducts sample checks for detection of added Formaldehyde in fish.

The quality samples are being collected and tested by QCI at various nodal points such as inter- state roadway entry-points, domestic imports through waterways, major mandis, etc. As an outcome of the exercise, a compulsory product certification through third-party monitoring in fish/ fishery products is being put in place.

During this quarter we hosted four Regional Quality Conclaves (8th, 9th , 10th and 11th) on different themes namely, “Leading change with quality, innovation and technology,” “Quality enablers for manufacturing competitiveness & trade,” “Quality & manufacturing excellence for sustainable growth” and “Advance manufacturing with quality, innovation & technology interventions” jointly with ASQ, FICCI, FOSMI and PHDCCIP at Bengaluru, Ahmedabad, Kolkata and Rudrapur respectively.

Some of the best minds engaged in creating a Quality Culture, Product Innovations, Industry 4.0 and Predictive Maintenance congregated at the Conclaves to lead the discussion and evolve the road map for the next engineering revolution in India. These Conclaves were important steps to sensitize Industry in the states of Karnataka, Gujarat, West Bengal and Uttarakhand on the aspects of quality consciousness of production process and importance of quality through adoption of a quality culture.

I am sure that you are continuously engaged with us. Keep letting us know about how to make every effort possible to improve the quality life of the citizens of the country.

I look forward to a wonderful 2020, and wish all of you a Happy and Prosperous and Impactful New Year!

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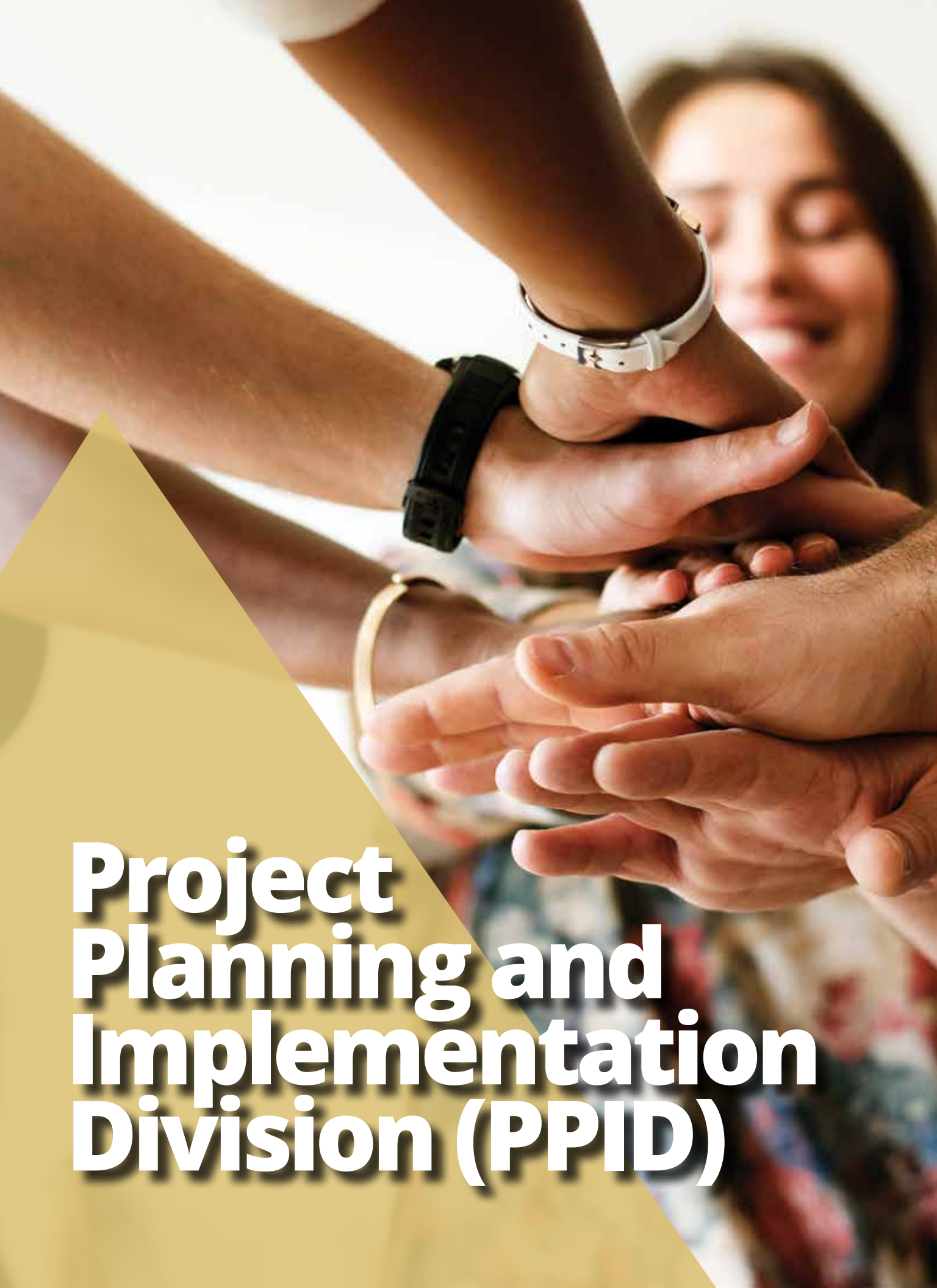
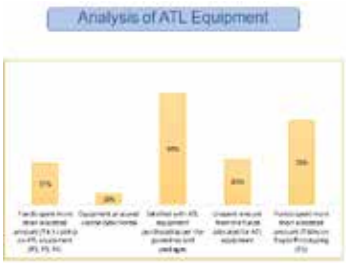


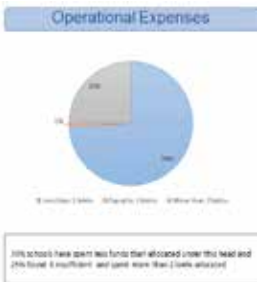
Project Planning and Implementation Division (PPID)

Third-Party Assessment of Atal Incubation Centers and Atal Tinkering Labs

Atal Innovation Mission (AIM) under NITI Aayog, including Self-Employment and Talent Utilization (SETU), is the Government of India's endeavor to promote a culture of innovation and entrepreneurship. Its objective is to serve as a platform for the promotion of world-class Innovation Hubs, Grand Challenges, Start-up businesses, and other self-employment activities, particularly in technology-driven areas.

QCI conducted an independent assessment of Atal Incubation Centers and Atal Tinkering Labs as a three-part assessment based on AIM guidelines, performance measurement of an input-output survey of the incubator managers/supervisors and feedback collected from various stakeholders. To finalize the framework and the questionnaire the team conducted three pilot inspections at Atal Incubation Centers and five at Atal Tinkering Labs. All the pilot assessments contributed a lot to the improvement of the questionnaire.





Six assessors were deployed for an on-ground assessment of Incubation Centers which was completed in 6 weeks.

The assessment of 285 Atal Tinkering Labs was completed in 10 weeks with 50 assessors deployed on-ground. The data dump and individual reports of all the 18 Incubation Centers along with a consolidated report of Incubation Centers and 285 Atal Tinkering Labs would be shared with NITI Aayog.

Public Perception Survey of Delhi Police

The Public Perception Survey undertaken by QCI is for the most efficient and swift Police Force of the nation, the Delhi Police. It is the first time that a Police Force in India is getting its services assessed by an independent body. The Delhi Police was established under the Delhi Police Establishment Act 1946 which delegates its control to the Ministry of Home Affairs. Being one of the largest metropolitan police forces in the world, Delhi Police is spread across 6 ranges, 14 districts, and 184 police stations.

The objective of the survey is to collate information on unreported crimes, actions taken on reported crimes and to determine the perception of the public towards the police in terms of ability to solve the cases in a time-bound manner and subsequently to take the stock of the satisfaction levels of the populace. It also attempts to bridge the gap between the quality of policing and people's expectations. The survey has been conducted in all the 14 districts of Delhi in 2 phases.

The survey comprises of the following 2 parts:

Household Surveys were conducted on-ground for the cases registered with the local police stations besides handpicking random households so as to gauge a holistic perspective.

1000 Victim Household Surveys were gathered for cases registered in Police Stations as FIRs.

1000 Random Household Surveys, equally mapped into 14 districts of Delhi were collected.

Telephonic responses via Call Center Survey were collected for both citizens who have dialed the helpline number '100' and random citizens of Delhi-NCR. The sample for the survey has been designed in such a way that it represents the unique demographic structure of Delhi {(1067 * 14 districts) ~15000 calls each}

A questionnaire comprising questions ranging from the perception of the police, co-operation, visibility, investigation, amongst other parameters was placed before the citizens. The survey also evaluates the perception in terms of impartiality, accessibility and timely response to grievances of the common people. A list of crimes and their sub-categories has been prepared which ranges from petty crimes like pickpocketing to the most grievous ones like rape, murder, etc.

In the first phase of the survey, 25% of the target sample was covered and the remaining 75% was covered in the final phase. For the telephonic interviews, a call center was set up and calls were made to distress callers and random citizens.

The survey findings collected from both on-ground and telephonic interviews have been evaluated on a number of parameters such as impression, performance, safety and behavior of the Police force. Currently, the project is in the reporting phase and we shall soon present the compiled findings to the Delhi Police.

Ayushman Bharat Quality Certification of Hospitals empaneled under AB PMJAY

One of the biggest healthcare policy concerns in India today is the 'Quality' of health services offered. Keeping in mind the rising concern of the country's healthcare sector, National Health Authority (NHA) and Quality Council of India (QCI) has launched a joint initiative of digital certification for all the hospitals empaneled under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PMJAY) scheme.

A digital certification process called AB PMJAY Quality Certification program has been launched and it consists of three levels of certificates – Gold, Silver, and Bronze. As the name suggests, the Gold Quality Certification is the highest level of certification. Those hospitals with Joint Commission International (JCI) Gold Standard Certification or the National Accreditation Board for Hospitals and Healthcare Providers (NABH) Full Accreditation, can apply for Gold Certification. The Silver Quality Certification is the second level of certification where those hospitals with National Quality Assurance Standards (NQAS) and NABH Entry Level Certification can directly apply. Hospitals that do not hold any certification have a chance to apply for the Bronze Quality Certification by paying a nominal fee. More than 150 hospitals across the nation submitted the application within a month of its launch. We have already certified 14 hospitals with the Gold Quality Certification and 6 hospitals with the Silver Quality Certification. The growing number of applications shows the need for quality certification in today's scenario. This partnership aims to create a process to facilitate certification of at least 7,000 empaneled hospitals by December 2021 to build a network of quality healthcare providers in the country.

Swachh Bharat Mission- Open Defecation Free

Under the broad objective of the Swachh Bharat Mission, the Ministry of Housing and Urban Affairs (MoHUA) commissioned the Quality Council of India to verify 4376 cities of the country as Open Defecation Free (ODF). The objective of the project is to ensure the accessibility of clean and functional toilets to all its citizens and to make the country Open Defecation Free. The cities are verified and certified once every 6 months to ensure regular monitoring.

The SBM-ODF project started in 2016 with a vision to provide basic sanitation facilities and restore the dignity of every citizen of India. Since then, the country has worked towards attaining and sustaining its ODF status. In lieu of the growing success of ODF, MoHUA introduced ODF+ and ODF++ with an increased focus on the quality of infrastructure and Fecal Sludge Management in the country. Till now 4320 ULBs have declared themselves ODF and 4147 have been certified as ODF by QCI, 648 ULBs have been certified ODF+ and 270 ULBs have earned the ODF++ status. More than 250 assessors are working on-ground for the inspection.

Solid Waste Management

The Union Ministry of Environment, Forests and Climate Change (MoEF&CC) notified the new Solid Waste Management Rules (SWM) in the year 2016. The SWM Rules 2016

mandated the Urban Local Bodies in India to ensure the segregation of waste into wet and dry, before handing it over to the collector and channelizing the waste for reuse, recycling, and recovery. The Haryana Govt. engaged Quality Council of India to conduct a performance audit for monitoring the Solid Waste Management system in 18 ULBs (with more than 1 lakh population) as a third party to help ULBs in improving their existing solid waste management system.

The process audit was conducted in a three-fold approach, Direct Observation, Documentation and Citizens Feedback. This was based on 18 key parameters, including, door-to-door collection, cleanliness, waste segregation, waste treatment, proper and scientific disposal, street sweeping, elimination of garbage vulnerable points in the city, maintenance of MIS for tracking waste collection and transportation, among others.

The locations were sampled on a stratified random basis, and it was found that the best performing cities in Haryana was Karnal, followed by Hisar and Panchkula.

Department of Investment & Public Asset Management (DIPAM)

Quality Council of India has been engaged by Department of Investment & Public Asset Management (DIPAM), under Ministry of Finance to assist in the evaluation and execution of different proposals for "Disinvestment of Central Government's equity stake in Central Public Sector Undertakings (CPSEs)" through various methods (such as OFS, Buyback, IPOs, ETFs & Strategic Disinvestment) and "Monetization of non-core assets of CPSEs". QCI also assists DIPAM in the decision-making process in broad realms of strategy and economic policy.

QCI is helping DIPAM in carrying out and monitoring the various disinvestment transactions of CPSEs (including BPCL) in order to meet the Finance Ministry's annual budgeted target. The team provides research support, performs analysis on the feasibility of various ideas from a strategic-financial perspective, produces ready reports for senior officials' decision-making, tracks progress and conducts stakeholder follow-ups.

Additionally, the team is assisting DIPAM in the launch of India's first debt ETF which will create an additional source of funding to meet the borrowing needs of CPSEs, Public Finance Institutions, and other government organizations.

GeM Vendor Assessment

QCI has been mandated to carry out the Vendor Assessment for registered OEMs from June 1st 2019 as per GeM's new Vendor Validation Policy. QCI has designed a robust and holistic framework to validate vendors consisting of parameters such as production capacity and capability, quality, after-sales service, etc. Also, web & mobile-based platform was developed to carry out assessment leveraging technology. The assessment carried out in two stages, wherein the first stage Desktop Assessment includes authentication of a vendor profile, business experience, financial capacity, and production capacity and, the second stage constitutes complete validation of the manufacturing process through Video Assessment, which is conducted by an expert sitting at a remote location via video calling through a mobile-based

application. The captured photographs are geotagged and time-stamped along with inspection video which gets stored virtually (at the server) as evidence of the assessment.

As of now, GeM vendor assessment team has completed 600+ Desktop Assessment, 500+ Virtual Assessments (In India), 20+ Virtual Assessments (Outside India)

Kayakalp

Ministry of Health and Family Welfare (MoHFW) engaged the Quality Council of India in May 2019, under Swachh Bharat Abhiyan to promote cleanliness and enhance the quality of healthcare facilities in India. Conducted on a *Pro bono* basis, the purpose of the initiative was to appreciate and recognize the private healthcare organization's efforts in creating a healthy environment. The initiative promotes Cleanliness, Hygiene and Infection Control, creates and shares sustainable practices related to improved cleanliness in healthcare facilities linked to positive health outcomes.

653 hospitals PAN-India were assessed under this initiative, out of which 635 scored 70% or more and were considered as a compliant hospital for Kayakalp Certificate. 11 hospitals out of 635, scoring the highest amongst their respective zones, were awarded the certificate at the 'National Felicitation of KAYAKALP Awardees 2018-19' by Hon'ble Union Minister of Health & Family Welfare Dr. Harsh Vardhan on Oct 11, 2019.

Project Management Policy Framework

Given the vision of the government to move towards a $5 trillion economy with an investment plan of INR 100 lakh crores in infrastructure in the next five years, NITI Aayog has tasked the Quality Council of India to formulate a dedicated policy for Project Management in India to improve levels of efficiency of public-private partnerships and public sector projects. This was by order of the Task Force on Program/ Project Management led by NITI Aayog to develop the policy framework to promote, integrate and institutionalize Project Management by setting up a National Institute for Chartered Project Professionals to act as the nodal agency for the profession.

Additionally, the policy framework requires recommendations to embed project management principles and set it as a discipline for government project delivery as well as provide impetus to the project management ecosystem by formalizing, propagating and regulating the profession in the country. The recommendations as per the policy framework to ensure efficient project delivery span different sectors and components of infrastructure development such as addressing challenges to project finance, contract management, build capacity and propagate the profession for a cultural shift in project management practices. To this end, our team has to engage with NITI Aayog, consult with all the relevant ministries, industry experts from the banking arena, law, technology, education, and dedicated premier project management institutes.

The team is currently engaged in facilitating the process to constitute a Steering Committee to set up the National Institute for Chartered Project Professionals. The team has drafted a national policy framework for project professionals and thereby engaging experts and stakeholders for their inputs and industry knowledge for further finetuning.

High-End Cleanliness Assessment At Eight Yatradhams Across Gujarat

Gujarat Pavitra Yatradham Vikas Board (GPYVB) engaged the Quality Council of India in October 2017 to conduct

monthly cleanliness assessments of their famous eight yatradhams that attract the highest tourist footfall in Gujarat.

GPYVB has engaged four cleaning agencies (with two locations allotted to each) to maintain 24x7 cleanliness in and around the temple areas at the following eight locations - Ambaji, Shamlaji, Somnath, Dwarka, Palitana, Girnar-Junagadh, Dakor, and Pavagadh. GPYVB has also engaged a local monitoring agency to supervise the work being done by these cleaning agencies at all locations on a daily basis.

indexes, analysis, comparison with previous months, etc. is furnished by the team and published every month to keep GPYVB informed of the work being done at the locations.

This high impact project has brought about major changes in terms of sanitation across different tourist locations, engaged the local population in a more cohesive manner and has also led to increased employment bringing about large-scale change in local dynamics. This project directly replicates the motto of Swachh Bharat which is in unison with our PM's vision of a clean and better India.

Each location is assessed once a month which includes surprise checks, assessing the knowledge of supervisors and taking public feedback from the local stakeholders and visitors on the basis of which a monthly report comprising - performance scorecards, cleanliness

As a direct result of efforts taken by the cleaning agencies and scrutiny and inspection done by the team at QCI, Somnath Temple received the Swachh Iconic Temple Award in 2019.

High-End Cleanliness Assessment At Statue Of Unity

In the wake of the work being done in the Gujarat Yatradham project by QCI, Tourism Corporation of Gujarat Limited awarded the contract for conducting High-end cleanliness assessments in and around the world's tallest statue, Statue of Unity.

Some key performance indicators (e.g. knowledge of scope of work, staff presentation, and uniform, manpower deployment, garbage collection and disposal, overall cleanliness efficacy, IEC activities on Swachhta, etc.) were developed and performance-monitoring scorecards have been prepared respectively to grade the work being done at the location by both the cleaning agency and TPI.

QCI is conducting assessments at the location twice a month, and furnishing a monthly report to TCGL portraying a true picture in terms of scores and percentages by gauging the work in respect to the cleanliness standards of a national level monument.

The last report was submitted in September 2019 and we have proposed for a renewal of the work order. With more than two years of fruitful association with the client and content with the ongoing assessments and recommendations given by us, the project has been extended for another year till September 2020.

Cleanliness Assessment At 47 Locations Across Gujarat

Tourism Corporation of Gujarat Limited (TCGL) engaged the Quality Council of India as a third-party-inspection (TPI) agency for conducting assessment and evaluation of the cleanliness work being undertaken at 47 identified tourist locations in Gujarat.

Four cleaning agencies were engaged by TCGL to carry out 24x7 cleanliness work on various locations consisting of different area types including the temple's surrounding area, market area, parking area, beach area, ghat area, etc. TCGL also involved two local monitoring agencies to supervise the work being done by these cleaning agencies at all locations on a daily basis. Each location was assessed twice or thrice in a quarter for 1 or 2 days depending upon the tier-1 or tier-2 tourist locations and areas as provided by TCGL respectively.

The project was completed successfully giving direct effect to improved sanitation and cleanliness in Gujarat. The public feedback collected through the assessments done by QCI generated a positive impact and helped spread the message of Swachh India far and wide. This meticulously planned project, generating employment for hundreds of locals, should be replicated in other states as well.

National Commission for Scheduled Tribes

NCST has commissioned QCI to undertake a study on the issues of:

1. **Land Alienation/ Transfer of Scheduled Tribe Land:** Examining the factors causing alienation of Scheduled Tribes (STs) from their land as a result of the illegal transfer to non-ST actors or acquisition.

2. **Development Induced Displacement:** A study of the issues related to the displacement of Scheduled Tribes (STs) due to development projects

3. **Financial Inclusion of Scheduled Tribes:** The levels to which Scheduled Tribes are engaged with services and structures of the formal economy

The QCI team undertook the case studies in 9 districts in the states of Andhra Pradesh, Chhattisgarh, Gujarat, Maharashtra, and Odisha. Since this project was one-of-its-kind, the team spent time perfecting the research tools for this project. The team collected primary data in the form of surveys, focus group discussion and stakeholder interviews. The team also undertook a massive exercise of performing archival research of the available literature/ documentaries on tribals, laws and multiple meetings with the domain experts. Other than the geographical distance and the language barriers, the team encountered various unexpected challenges like flooding. The flooding in Godavari river submerged the roads completely for many weeks which delayed the assessment. At last, the team used boats to travel on the flooded river. In Sundergarh and Raigarh districts the team encountered hostile situations that stopped the work until a compromise could be reached.

The draft report prepared is a synthesis of the on-ground data, archival research, and expert guidance. The

report contains data-driven policy recommendations that will be presented to the Parliament. The project has been a moving and eye-opening experience. The end of the project brings satisfaction of putting the grievances of the tribal community forward in the form of a report.

Lateral Entry Training Programme: 30th September, 2019 – 4th October, 2019

The Union Public Service Commission (UPSC) has appointed eight private sector professionals as Joint Secretaries in Government of India. Their training was conducted by the Department of Personnel and Training (DoPT) through Indian Institute of Public Administration (IIPA). In addition to the 1-week training program run by IIPA, Quality Council of India (QCI) was asked by DoPT - specifically the Prime Minister's Office (PMO), to jointly host four days of the training programme from 30th September to 4th October 2019. The sessions were centred around the idea that interactions with speakers across various domains will help the incoming Joint Secretaries break down common myths, what to learn and unlearn, create a roadmap for their respective ministries and also help them make a transition into the governmental setting. The sessions were designed to cover multiple facets from use of Technology in Governance, Programme Management (Planning & Strategy) to covering specific case studies of bringing change at scale – Swachh Bharat, Sarva Shiksha Abhiyan among others. Question & Answer Session designed after every talk enabled the incoming Joint Secretaries to remove doubts, perceptions and goal-setting in their respective domains. It included speakers such as Nandan Nilekani, N. K. Singh, T. V. Somanathan, Amitabh Kant, Parameswaran Iyer, Arundhati Bhattacharya, Sanjeev Sanyal, Bhaskar Khulbe (and others). Given the small size of the group, the sessions were highly interactive. The Joint Secretaries can be grouped again for a day or two after 6 months to discuss action points achieved and have an early appraisal of the work being done through peer review and interaction with ministry officials.

QUEST™
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Fullfils the Quest for Learning

Quality Council of India has launched an e-learning certification platform in line with the Government of India's Digital India campaign to bridge the existing skill gap. eQuest is equipped with a unique model of blended learning with courses designed and prepared by industry recognised experts.

eQuest has several courses in the domains of Quality, Technology, Management, Environment, Healthcare, Agriculture, Laboratories and Food sector covering topics like Total Quality Management (TQM), Total Productive Maintenance (TPM), Good Agricultural Practices (GAP), Blockchain, Project Management etc.

The Ecosystem of eQuest

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To strengthen skill and knowledge in line with emerging requirements to enhance employability

Entrepreneurs

Learn best practices in line with emerging trends of market

Assessors and Consultants

Reskilling or upgrading of existing skill set

Third-Party Sampling, Testing and Analysis of Coal

Coal India Limited (CIL) is striving to bring in transparency and accountability in the entire production and sale process of coal for all stakeholders including citizens of India. Third-party Sampling provides transparent mechanism to scrutinise the coal quality of the coal dispatched to customers and to curb disputes among all its stakeholders. Also, coal grade assessment plays an important role in revisiting mine grades.

Why QCI

To improve the quality of coal, following a large number of complaints from power generation companies regarding poor quality of coal, The Ministry of Coal, Central Electricity Authority and national / state power producers decided that a panel of reputed third-party agencies shall be engaged to determine the quality of coal being dispatched to various consumers from subsidiaries of CIL. As per the procedure, an independent third-party agency was appointed by Central Institute of Mining and Fuel Research (CIMFR) through an independent and transparent process for undertaking the work of sampling and analysis of coal at loading end on behalf of both power producer and coal company. However, the mandate provided to CIMFR covered only 70% of the total dispatch. The scope excluded provision of Third-Party Sampling (TPS) to Non-Power Consumers and e-auction Scheme(s) for Power & Non-Power Consumers. QCI being an organisation of national repute for assessment and accreditation in quality ecosystem. CIL nominated QCI for providing third-party sampling testing and analysis of coal for various non-power consumers under long term linkage auctions. In august 2017, QCI commenced its journey in coal quality assessment.

About Project

For availing third-party sampling, consumers have to sign a tripartite agreement with coal company and a third-party agency of their choice.

The Producer, Consumer and QCI signed a tri-party agreement called Tripartite Agreement. This agreement on Third-Party Sampling (TPS) is meant for Coal Quality monitoring at the loading end. The agreement mentions about the type of coal auction and other relevant conditions such as term of agreement, dispute resolution and SOP under which the third-party sampling is to be done.

CIL nominated QCI for Third-Party Sampling, Testing and Analysis of coal supplied through special forward e-auction for power consumer/s and linkage auction for non-power consumer/s. Further, the scope of work has been extended to spot e-auction/ special spot e-auction/ Shakti Scheme. The scope of work includes:

Sampling Methodology

The step-by-step methodology of third-party sampling and analysis is as below –

Sample Collection by Road

Coal is dispatched from trucks at loading points. The collection of samples is carried out as per collection methodology stated below:

a. Samples of coal are collected at the loading point round the clock for the coal dispatch from road mode

b. The first sample of coal is collected randomly by QCI from the first eight trucks at the entry point. Once a sample is collected from the first truck as stipulated above, samples of coal are collected from every 8th truck after the truck from which the first sample has been collected

c. In the event such 8th truck does not belong to the contracted quantity, then the next truck belonging to contracted quantity is be deemed as the 8th truck and a sample is collected from such truck. The same process is repeated for every 8th truck thereafter

d. The spot at the top of the truck is levelled and at least 25 cm of coal surface is removed/ scrapped from the top and the place is levelled for an area of 50 cm by 50 cm for collection of samples

e. About 30 kg of the sample is collected from each truck by drawing 6 increments of approx. 5 kg each with the help of shovel/scoop

f. All the samples collected from every truck in accordance with paragraph (b) above is mixed together to form a single gross sample

g. Daywise single gross sample is formed for samples collected round the clock from 00:00 hours to 23:59 hours

Collection of samples from the Railway Siding:

a. In case of dispatch by rail each rake of coal supplied to the purchaser from the delivery point is considered as a lot for the purpose of sampling

b. Each rake is divided into approximately equal sub-lots as under:

No. of wagons in the rake	Number of sub-lots
Up to 30 wagons	4
>30 wagons up to 50 wagons	5
>50 wagons and above	6

c. From each of the sub-lots, one wagon is selected as per a random table in BIS Standards (IS: 436 (Part I/Section I) 1964) or its latest version for collection of increments

d. In each wagon selected for sampling, the sample is drawn from the spot in a manner so that if in one wagon the sample is collected at one end, in the next wagon the spot is in the middle of the wagon and in the third wagon at the other end and this sampling procedure is repeated for subsequent wagons

e. Before collecting the samples, the spot is levelled and at least 25 cm of coal surface is removed/scrapped from the top and the place is levelled for an area of 50 cm by 50 cm

f. About 50 kg of the sample is collected from each selected wagon in the rake by drawing 10 increments of approx. 5 kg each with the help of shovel/scoop

g. Samples collected from all the selected wagons in a rake is mixed to form a gross sample. h. Item (d) to (f) is applicable for coal supplied in all types of wagons

h. In case of the rake having live overhead traction line, the power supply in the overhead traction is switched off to facilitate collection of samples from the wagons pursuant to points (d) to (f) above

Sample Preparation

The preparation of sample is carried out as per BIS standards ((IS: 436 (part I/ Section I) – 1964))

The gross sample collected at the collection point by the QCI is divided into two portions. One portion (one fourth of the gross sample) called Part-1 is used for

analysis of total moisture and the other portion (three fourth of the gross sample) called Part-2 is used for determination of ash, moisture and GCV on equilibrated basis. QCI prepares laboratory samples (at the preparation Point) in the size of 12.5mm for total moisture and 212 microns IS Sieve for equilibrated analysis of Ash, Moisture and GCV. Precaution is taken so that before analysis in any National Accreditation Board for Testing and Calibration Laboratories (NABL) (Laboratory), further sieving or pulverizing is not required.

The part-2 sample of 2 kg is reduced into a laboratory sample on the date immediately following the date of collection. The final pulverized sample is divided into three parts viz. Set – I, set – II, set-III and set-IV as follows:

a. Set – I (500 gm) is taken by the QCI to a NABL accredited laboratory for analysis of ash, moisture and GCV as per BIS Standards (IS: 1350 Part 1-1984) or BIS Standards (IS: 1350 Part-II-1970), as applicable

b. Set-II (500 gm) of the sample is handed over by QCI to Coal Company

c. Set-III (500 gm) of the sample is handed over by QCI to Customer

d. Set-IV (500 gm) of the sample called referee sample is sealed jointly by the QCI and representatives of coal company, and is kept with the QCI at the coal company premises under proper and good quality lock and key arrangement provided by coal company.

The referee sample is retained in double sealed condition (duly signed by QCI and Coal Company) for 20 days from the date of sample collection.

Transportation of Sample

The transportation of samples from collection site to preparation lab is done by QCI. Also, QCI is responsible for transportation of laboratory samples to NABL accredited coal testing lab.

Testing of Coal Samples

The analysis of coal sample involves the following parameters:

a. Total Moisture Content

b. Moisture content (On equilibrium basis)

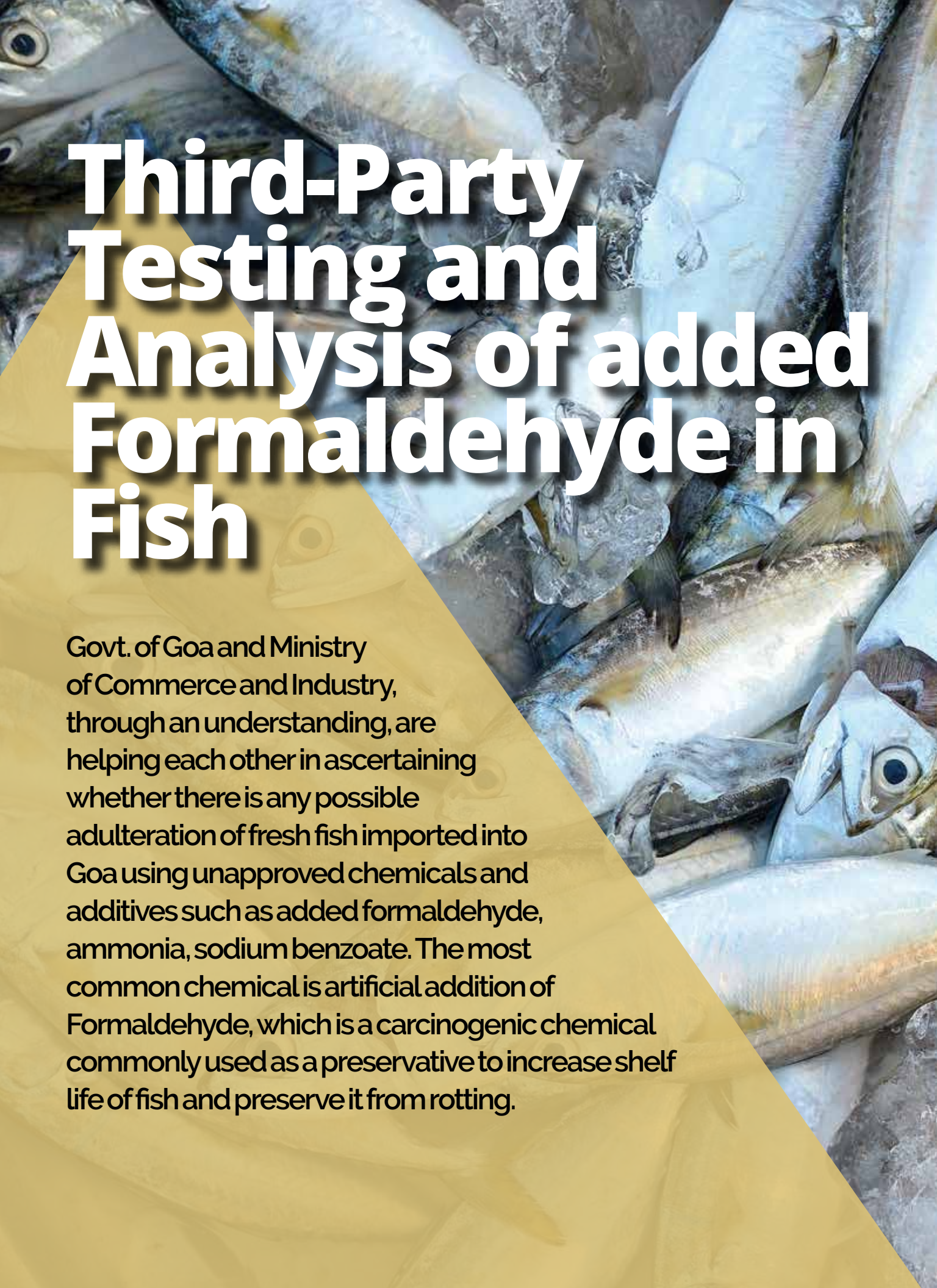
c. Test for Ash content (On equilibrium basis)

d. Gross Calorific Value (GCV) (On equilibrium basis)

Overall Update

QCI has commenced its operations in August'17 and within short period of 2 years, we have sailed some major milestones in terms of third-party assessment of coal

- QCI has commenced third-party sampling across all 8 subsidiaries of Coal India Limited (CIL)
- Tripartite agreements of volume worth of 126.39 million metric tonne have been signed for conducting the third-party sampling, testing and analysis
- A total volume of 136 MMT of coal is already being sampled from date of commencement. QCI has already sampled 61 Million Metric Tonnes in F/Y 2019-20
- In order to ensure double blinding of coal sample, QCI has developed QR Code based application to capture collection, preparation across all loading points of Coal India Limited (CIL). Currently, the application is being implemented at various locations where sampling is being carried out.
- QCI has deployed nearly 120+ on-ground representatives with 20 people deployed at central team to overlook entire operations



Third-Party Testing and Analysis of added Formaldehyde in Fish

Govt. of Goa and Ministry of Commerce and Industry, through an understanding, are helping each other in ascertaining whether there is any possible adulteration of fresh fish imported into Goa using unapproved chemicals and additives such as added formaldehyde, ammonia, sodium benzoate. The most common chemical is artificial addition of Formaldehyde, which is a carcinogenic chemical commonly used as a preservative to increase shelf life of fish and preserve it from rotting.

The presence of added Formaldehyde in fish is a serious threat to the health and safety of the consumers and requires immediate intervention by National Quality Assurance bodies. Hence, there exists an urgent need to introduce necessary reforms in the fisheries ecosystem to ensure quality products and to create an ecosystem through which such instances, if they occur, are detected and preventive measures are taken so that such contaminated food products are not consumed by Goans or the vast number of tourists who come to Goa as a favoured tourist destination.

Why QCI

The QCI has the mandate to provide credible third-party assessment and monitoring through various internationally accepted standards to create trust among public and stakeholders. The QCI is working through various Boards:

- NABCB, the national accreditation body works on ISO 17011 and is a member of the IAF (International Accreditation Forum) and PAC (Pacific Accreditation Cooperation). It has also signed MRAs which provide global acceptance to results of certification and inspection carried out by accredited agencies. NABCB accredits Certification and Inspection bodies through ISO 17021 and ISO 17020, the globally accepted standards for accrediting certification and inspection bodies. These organizations form an integral part of QCI quality infrastructure and work on behalf of QCI for product certification or inspection.
- NABL, the national accreditation body for testing and calibration laboratories, works on ISO17025 through which any laboratory if accredited by NABL, the test reports are treated at par around the world. Every consignment exported from India to any economy, is tested through NABL accredited labs and only then the consignment is not re-tested for acceptance.

Thus, QCI provides an internationally acclaimed system of certification, inspection and testing for any product or service.

Approach

QCI is carrying out a third-party quality assessment to check the presence of added Formaldehyde in fish and fishery products being consumed in Goa. At various stages in the distribution cycle, ranging from procurement to its retail consumption, QCI conducts sample checks for detection of added Formaldehyde.

The quality samples are being collected and tested by QCI at various nodal points such as inter- state roadway entry-points, domestic imports through waterways, major mandis, etc. As an outcome of the exercise, a compulsory product certification through third-party monitoring in fish/fishery products is put in place.

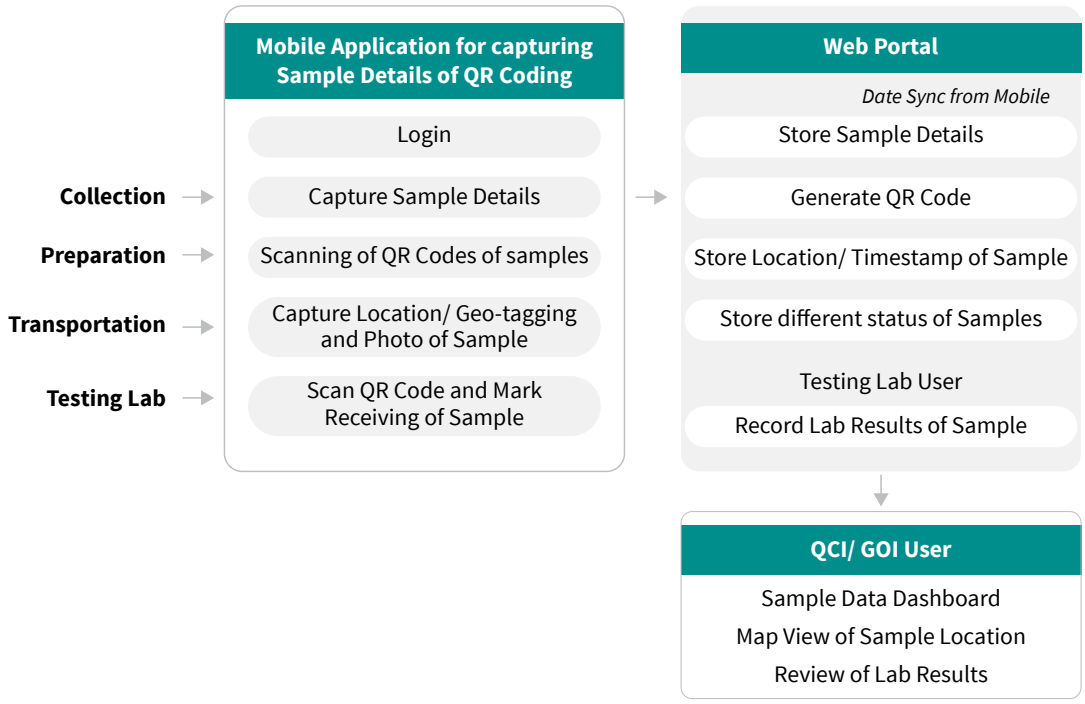
The QCI is following the given methodology for collection and testing of samples in Goa:

- Competent samplers from NABCB accredited Inspection Bodies are available at each entry point for trucks entering into Goa through roadways
- Samplers are also available at Madgaon, from where most of the fish is transported in and around Goa to various establishments
- Samplers collect samples of fish and seal it in a cold storage box with a unique seal and QR code
- The samples are transported to the nearest mobile lab to undergo the CIFT test to check the presence of added Formaldehyde and it is tracked through the QR code. A simple app is used to monitor the samples and the results are uploaded on the app itself
- The samples showing presence of added Formaldehyde are sent to NABL accredited laboratory for conformity test
- The app transmits the test result details to an online dashboard which has consolidated database of all such results
- The identity of the samples is double blinded through QR code and the result are uploaded against the QR code
- All officials and public at large can see the test results by accessing the dashboard. On the basis of the results the government can take punitive actions on vendors selling contaminated fish in Goa

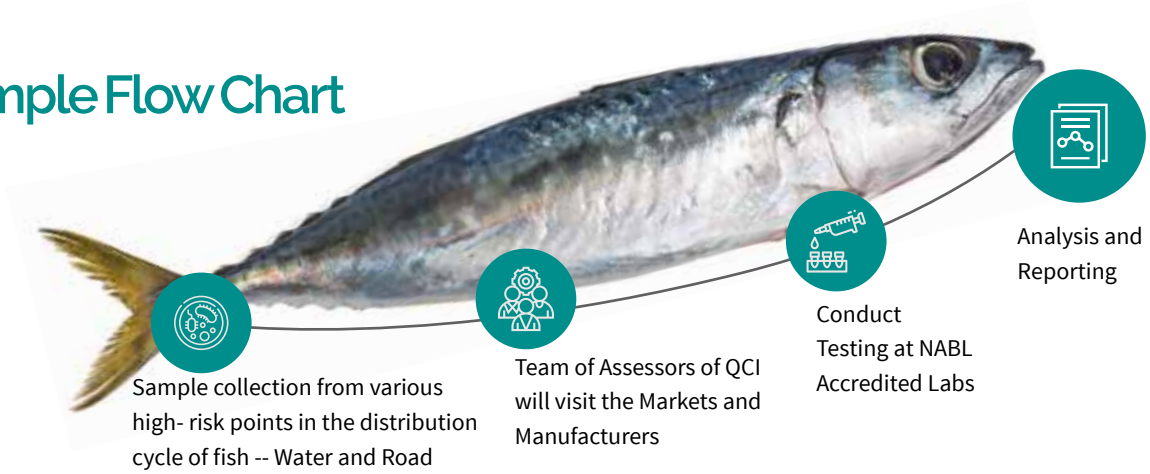
Eventually, Export Inspection Council (EIC) can establish a full-fledged lab in the state of Goa

QCI endeavours to envisage a methodology to take samples from loading point (places where the samples are being loaded and dispatched for consumption in Goa), in order to have detailed results of shipments as soon as they reach Goan border.

Methodology



Sample Flow Chart



Collection of Samples from High-Risk Zones

Across the distribution cycle of fish and fish products, sample amounts of fish are collected and tested for the presence of added Formaldehyde.

State Borders

Incoming fish-laden trucks at the state borders are at a high risk for adulteration by added Formaldehyde in the fish. Samples from trucks carrying fish from Kerala, Tamil Nadu, Odisha, Andhra Pradesh, and Karnataka are collected by the QCI team.

During transit from state border to Mandi

During the time of transportation of fish from the state border to the mandi, it may stop at several points. The trucks may stop to distribute fish to wholesalers or any other big vendors. At this stage, the fish is tested for the presence of added Formaldehyde.

Fish Market or Mandi

The fish markets or mandis are one of the major points at which off-loading of fish and fishery products takes place. At the time of off-loading, sample fish are checked for presence of added Formaldehyde. Further, it is plausible that the sellers present at the fish markets or the mandis also may be using additives or chemicals to preserve the fish for a longer duration. This is being checked on a sample basis during the visit.

Consolidated Report Summary (15th June 2019-31st January 2020)

S.No.	Daily Report Summary	Pollem	Patradevi
1	Shift	(06:00-06:00)	(06:00-06:00)
2	No. of fish vehicles which entered	8842	7259
3	How many vehicles were meant for export purpose	1327	1485
4	How many vehicles were meant for Domestic Consumption	4615	2965
5	How many pass-through Goa for other states	946	994
6	How many samples tested negative for CIFT kit test	4570	2972
7	Number of samples tested positive for CIFT kit test	0	0
8	Number of samples sent for Conformity Test to accredited lab	0	0
9	Number of Conformity test tested positive	0	0
10	Number of vehicles detained for conformity test	0	0
11	Number of vehicles sent back due to documentation	94	52
12	Number of empty trucks	1960	1804

LEADING CHANGE WITH QUALITY, INNOVATION AND TECHNOLOGY

OCTOBER 18, 2019 AT TAJ YESHWANTPUR, BENGALURU

NBQP and American Society for Quality (ASQ) jointly organized the 8th Regional Quality Conclave on the theme "Leading Change with Quality, Innovation and Technology" on October 18, 2019 at Taj Yeshwantpur, Bengaluru

The Conclave explored the tools and techniques that quality encompasses the rapid progression in technology and how disruption in innovation is filled with opportunity to expand the development of new approaches and best practices with special reference to the role start-ups play in bringing agility in manufacturing and the challenges these bring to India in meeting the expectation of the global customer.

The Conclave organized in the thriving city of start-ups and knowledge-based organizations saw 230 plus participants from top organizations, consultants, entrepreneurs, academicians as well as budding professionals from many colleges, mainly from the southern region.

INAUGURAL SESSION

Lighting of lamp by the Chief Guests

Mr. C K Biswas, CEO, NBQP

Mr. C K Biswas, CEO, NBQP welcomed all the guests, speakers and participants. He explained about the objective of Regional Quality Conclaves. He also related the importance of Quality, Innovation and Technology to the Prime Minister's Vision of creating 5 trillion economy by 2024. Mr. Biswas also touched on Industry 4.0 and SMART manufacturing in his speech.

Mr. K C Mehra, Advisor of Eminence, ASQ South Asia & Past Chairman NBQP,

Mr. K C Mehra, Advisor of Eminence, ASQ South Asia & Former Dy. MD TATA Steel and Past Chairman NBQP, shared Quality related anecdotes from his over 50 years of experience. He encouraged the audience not to be satisfied with 'just ok' quality and push for design, innovation, and technology for better quality. He stressed on the need for CEOs to understand Industry 4.0 and its components like Artificial Intelligence, IoT, and Cyber Physical Systems. He also stressed on the importance of countrywide movement for quality and technology like that of Japan and Germany. He appreciated efforts taken by organizations like QCI and ASQ to promote the importance of Quality and Industry 4.0 to make India ready for the Change.

Mr. Anindya Sarangi, Director & Head, ASQ South Asia

Mr. Anindya Sarangi, Director & Head, ASQ South Asia, shared few important points on how the theme for the event was selected after meeting several Industry leaders in the region. He explained the reason behind selection of "Role of Start-ups in Creating Agility in Manufacturing" as a topic. He shared the importance of Sustainability and Sustainable competitive advantage. He highlighted the importance of Cultural Transformation, Customer Centricity in driving change. He also shared activities of ASQ in India and around the world to create awareness about Quality and Leading Change.

Session – I

Role of Quality in Bringing Focus on Customer Centricity

The Session was moderated by Mr. Manikandan Murugesan, Head Supplier Quality, Rolls Royce Pvt. Ltd.

The Compere and Coordinator of the Session was P R Ramesh, Chair ASQ LMC Bengaluru & VP, Seven Steps Global

Ms. Ashu Bhatia, Scientist 'G' & Director (SQR), DRDO

Ms. Ashu Bhatia, Scientist 'G' & Director (SQR), DRDO, shared how Customer

Centricity is ensured in the entire Project Management Cycle. She shared her experience using 2 case studies. The interesting part was understanding Customer Voice from Defence perspective and meeting it.

Mr. Vinod Venkatesh, VP-Quality Management, Bosch Powertrain Solutions

Mr. Vinod Venkatesh, VP-Quality Management, Bosch Powertrain Solutions, spoke about customer focus. He explained how customers will judge us but fans will forgive. He encouraged the audience to focus on building fans. He stressed about the importance of Customer Centricity In the era of increasing online sales, where quality is even more important as customers check reviews before buying.

Mr. Prakash Venkatesan, MD, Essae Digitronics Pvt. Ltd.

Mr. Prakash Venkatesan, MD, Essae Digitronics Pvt. Ltd., shared a 4-level module to demonstrate how medium and small-scale enterprises should focus on quality. He connected 4 dots i.e. People, Process, Improvement of Customer Metrics & Business Results. He went on to explain that the path to a customer-driven organization is usually similar across companies. What is to be done should be simple and known.

Dr. Aravindan Raghavan, Head, Global Operational Excellence, Syngene International

Dr. Aravindan Raghavan, Head, Global Operational Excellence, Syngene International, shared CARE model used to achieve Customer Centricity. Capturing Voice of Customers, Analyzing the voices, React to the Voices and Encourage the Voices. He linked practices like Lean and Six Sigma to achieve Customer Centricity.

Session - 2

Role and Focus of Innovation in the Changing Business Scenario

The Moderator of the Session was Mr. Anish Cheriyan, Head of Quality, APAC Harman International

Mr. Ravi Arora, VP-Innovation, TATA Sons

Mr. Ravi Arora, VP-Innovation, TATA Sons explained models like Standardise, Improve, Innovate to emphasise on Innovation. He also presented PDCA model for Innovation i.e. plan–do–check–act or plan–do–check-adjust. He said failure is part a of Innovation. He explained the link between TATA Business Excellence Model and Innovation and shared various initiatives implemented in TATA; some of them are Innoverse, Innovista and Innometer. He encouraged the participants to take innovation challenges by visiting website *www.tatainnoverse.com.*

Mr. Shashi Bhushan, CTO, Business & Technology Solutions, TCS

Mr. Shashi Bhushan, CTO, Business & Technology Solutions, TCS, shared his thoughts in the framework Co-Innovating in a Business 4.0 world. He briefed about the Model "The TCS Co-Innovation Network (COIN TM)." He also shared his views about Digital Twin, Digital Thread – Computing meets Physical Sciences. He shared Innovation Case Studies of TCS from various Industry domains.

Mr. Blessen Philip, Sr. Design Manager, 3M

Mr. Blessen Philip, Sr. Design Manager, 3M, shared how 3M's Way of Innovation has been Driving Collaborative Creativity since last 117 years and has 51 technology platforms. He called it one Curious Culture. He shared few innovation Case studies of 3M, one of them was Indian Railways. He explained Innovation in Cultural context.

Session – 3

Being Future Ready: Adapting Technology for a Better Tomorrow

Mr. M V Manjunath, Head, Quality, Michell Bearings moderated the Session

Mr. Anil Kumar Varne, GM-Adajencies (Manufacturing)

Mr. Anil Kumar Varne, GM-Adajencies (Manufacturing), Britannia Industries, shared his views on the role of technology in FMCG industry. He also figured out how Increasing rural consumption, changing tastes of customers, increased sales through online platforms drive technology.

Mr. Manoj Jain, GM, Product Development & Innovation Centre, BEL

Mr. Manoj Jain, GM, Product Development & Innovation Centre, BEL proudly shared the spirit behind tagline of BEL – Quality, Technology and Innovation coined by the visionaries several decades ago. He explained how people development process at BEL led to technological developments. He shared various technology initiatives at BEL through its Product Development and Innovation Centre. He also shared steps taken by Govt. to promote adaption of Industry 4.0.

Mr. G Sundararaman, Sr. VP & Head-WIN Automation Solutions, Wipro

Mr. G Sundararaman, Sr. VP & Head-WIN Automation Solutions, Wipro, shared how Wipro has adapted smart factory concept in its own manufacturing setups – Lighting, Furniture, FMCG, Hydraulics, Aerospace, 3D printing and how Wipro is also helping other Industries in Industrial Automation and Smart Factory transformation using Industry 4.0 technologies. He explained his thoughts on technology using three concepts; Smart, Digitization and Automation.

Session – 4

Start-ups – Creating Agility in Manufacturing

The Session was moderated by Mr. Jemshid KK, CEO, Bytematic Technologies Pvt. Ltd.

Mr. Madhu Madhavan, Founder & CEO, Q-Sutra

Mr. Madhu Madhavan, Founder & CEO, Q-Sutra, shared his thoughts on how start-ups can support Manufacturing Industries. He touched upon effects of disruption, incubation of start-ups, benefits of start-ups and the entire eco system.

Mr. Christopher K Raj, Director, NTTF

Mr. Christopher K Raj, Director, NTTF, explained the relationship between OEE, profitability and role of start-ups. He shared the model which connects start-ups with needy Industries.

Mr. Achutha Jois, MD, Acliv Technologies Pvt. Ltd.

Mr. Achutha Jois, MD, Acliv Technologies Pvt. Ltd., shared the start-up Cycle – Form, Storm, Norm, Perform and Reinvent and explained the advantages of differentiating. He explained various models to demonstrate the advantages of Start-ups.

Mr. Gauravendra Shukla, Founder & CEO, Talent Bridge Technologies

Mr. Gauravendra Shukla, Founder & CEO, Talent Bridge Technologies, shared the relationship between 4 attributes i.e. Quality, Innovation, Technology and Agility. He gave examples of Toyota, Google, 3M and WhatsApp to explain the above four attributes. He touched upon the role of skill development and how start-ups can help bridge the skill gaps and thereby contribute to agility.

REGIONAL QUALITY CONCLAVE

QUALITY ENABLERS FOR MANUFACTURING COMPETITIVENESS & TRADE

NOVEMBER 8, 2019 AT CROWN PLAZA, AHMEDABAD

The primary objective of the Conclave was to discuss enablers of competitiveness and excellence in Manufacturing sector and enabling policy framework

The Conclave witnessed participation of over 130 delegates from various segments of the industry such as skill development centres, engineering consultancy, IT firms, pharmaceuticals, FMCG, etc.

Mr. C K Biswas, CEO, National Board for Quality Promotion (NBQP) briefed the audience. He said that QCI started coming up with Regional Quality Conclaves with the intent of reaching out to people instead of people reaching out to them. At the macro level, quality enablers refer to good leadership skills, good people management, effective policies & strategies and resource management which is vital for technologically advanced processes. Quality risk management system is a proactive approach for identifying and controlling risk throughout the entire product lifecycle.

Speaking at the occasion, **Mr. Deepak Mehta**, Chairman, FICCI Gujarat State Council,

INAUGURAL SESSION

Left to right: Mr. Pankaj Tibak, Head, FICCI Gujarat State Council; Mr. Shyam Bang, Chairman, FICCI Task Force on Manufacturing Excellence and NABCB; Mr. Deepak Mehta, Chairman, FICCI Gujarat State Council; Mr. C K Biswas, CEO, NBQP and Mr. Sunil Parekh, Co-Chairman, FICCI Gujarat State Council during the Inaugural Session

mentioned that if we look at China, they were able to improve the quality of their products because they focussed largely on export markets. Had they been looking solely at domestic markets, they would never have been able to up their quality game. The fact that export markets demand higher quality for the products demand to be sustainable, helped China to improve quality of its products. Hence focussing on quality is one way of making Indian products export capable. Also, according to him the product which has gone through higher quality standards in manufacturing has better life, better aesthetics, is much more durable and brings in a lot more competitiveness.

Mr. Shyam Bang, Chairman, FICCI Task Force on Manufacturing Excellence and NABCB, delivered the theme address and emphasised on the need of manufacturing quality products in India. Mr. Bang mentioned that manufacturing is a crucial sector for our economy as it provides employment to both skilled and unskilled labour force and therefore the theme chosen for the Conclave has a great relevance.

He stated that manufacturing industry must be supported by strong quality systems. According to him, the only way we can control our trade deficit is by increasing exports and for providing a push to exports, it is essential to manufacture quality products. He threw light on the increased share of Manufacturing in Gross Value Added (GVA) from almost 11% in 1950-51 to 17% in 2014-15 and the target to take it to 25% by 2022. He also stated that improving performance of a production process yields much greater returns than improving quality control systems.

Mr. Sunil Parekh, Co-Chairman, FICCI Gujarat State Council proposed The Vote of Thanks and stated that in the globalised world, there are global value chains functioning all across and each country can buy raw materials from anywhere at lowest prices and selling to the available markets at maximum possible prices. He also supported India's decision to move out of RCEP and mentioned that it was a good step to remain out of this deal. He also said that it might be the case that we are chasing wrong set of goals nationally. Talking about Ease Of Doing Business and global competitiveness, India has reached to 77th rank up by 53 positions in the EODB index created by World Economic Forum. He highlighted that when China became the largest manufacturing country in the world, its EODB index was 87 indicating that there is a direct disconnect between ease of doing business and reducing the cost of production. Looking at the countries which top the list of EODB Index such as Singapore, Hong Kong, etc there are no products manufactured in these countries that are globally competitive.

Session 1

Panel Discussion on "Enablers for Competitiveness, Innovation & Quality in Manufacturing"

The Session was chaired by Dr. Satya Ranjan Acharya, Associate Senior Faculty, Entrepreneurship Development Institute of India (EDII). The key speakers of the Session were Mr. Anupam Jalote, CEO, International Centre for Entrepreneurship and Technology (iCreate); Mr. Rajkumar Jagyasi, Chief Operating Officer (COO); Milacron and Mr. Nikunj Thakkar, Co-founder, DataOne Innovation Labs & Shoppr.ai.

Some of the key discussion areas of the Session were:

- The new business units that are coming up are more focused on aspects such as architectural restructuring where the system by design is smart enough and all the areas are designed in a way that they are interconnected to each other and this is how Industry 4.0 has come into the picture where it is all about digital conversions between the systems and the biological world
- If industry is open to collaborating with start-ups with openness to try new ideas, conducting pilot tests, proof of concepts, etc. it would be a big step in boosting innovation-based manufacturing in the country
- Government can play an important role in providing common facilities in the internal manufacturing systems in terms of R&D, quality assurance, measurement equipment, waste management control systems. This will ensure minimization of capex required by the industry and would improve their profitability
- Industries nowadays are facing huge challenges from innovation driven countries and government support in investing in R&D facilities is required for boosting exports from Indian Industries
- Given the steps being taken by the government in recent times, it can be deduced that government is clear about building an innovation ecosystem in the country. Talking about RBI, it has very few levers in its hands such as the interest rates and subsidiary decisions regarding amount of liquidity that a bank must maintain the biggest being the interest rates through which it can accelerate or decelerate the economy. Similarly, if a government wants to promote innovation in the country the simplest lever it has is to incentivise the outcomes
- Incentivising those companies who induct tech innovation in their mainstream by giving tax breaks can be one way the government might adopt to effectively intervene in the innovation dimension of the industry

Left to Right: Mr. Rajkumar Jagyasi, Chief Operating Officer (COO), Milacron; Dr. Satya Ranjan Acharya, Associate Senior Faculty, Entrepreneurship Development Institute Of India (EDII); Mr. Anupam Jalote, CEO, International Centre for Entrepreneurship and Technology (iCreate) and Mr. Nikunj Thakkar, Co-founder, DataOne Innovation Labs & Shoppr.ai

Session 2

Accreditation & Certification - Assuring Quality & Facilitating Trade

The Session was chaired by Mr. Shyam Bang and the key speakers of the Session were Mr. Rajesh Maheshwari, CEO, NABCB and Ms. Poonam Gupta, Assistant Director, NABCB.

The key discussion areas during the Session were:

- Conformity Assessment activities includes testing, calibration, inspection, certification of management systems, persons, products, processes and services, provision of proficiency testing, production of reference materials, validation and verification – ISO/IEC 17000
- Members shall ensure, whenever possible, that results of conformity assessment procedures in other Members are accepted, adequate and enduring technical competence of the relevant conformity assessment bodies in the exporting Member, so that confidence in the continued reliability of their conformity assessment results can exist; in this regard, verified compliance, for instance through accreditation, with relevant guides or recommendations issued by international standardizing bodies shall be taken into account as an indication of adequate technical competence
- NABCB and NABL together form part of international system of accreditation and equivalence operated under the aegis of the International Accreditation Forum (for Certification Bodies) and International Laboratory Accreditation Cooperation (for Inspection Bodies and Laboratories)
- The Session also highlighted some of the voluntary certification in various segments with respective ministries/departments such as Indian Certification for Medical Devices (ICMED) Scheme, India Good Agricultural Practices Certification Scheme, Certification Scheme for AYUSH Products, India Hazard Analysis Critical Control Points Certification Scheme, Voluntary Certification Scheme for Lead Safe Paints, etc.
- Such voluntary certifications ensure significant reduction in the trading of sub-standard products/devices of doubtful origins, enhanced consumer protection, brings down the substantial time and cost-run to obtain globally accepted quality certification for Indian companies

Left to right: Ms. Poonam Gupta, Assistant Director, NABCB; Mr. Shyam Bang, Chairman, NABCB and FICCI Task Force on Manufacturing Excellence and Mr. Rajesh Maheshwari, CEO, NABCB

Session 3

Measures for Achieving Manufacturing Excellence

This Session was conducted in two parts, chaired by Mr. Shyam Bang. Other distinguished speakers in the first set of presentations/discussions were Mr. M M Singh, Executive Advisor, Maruti Suzuki; Mr. Bhaskar Chhabra, Vice President & Operating Head - Honda Motorcycle & Scooter India Pvt Ltd.; Mr. Aviral Chopra, Head - HUL Manufacturing Operations and Mr. Nital Zaveri, CEO, Concept Business Excellence Pvt Ltd.

Some of the key recommendations/ discussion areas are as follows:

- The manufacturing sector of India is somewhere at Industry 4.0 stage where the industry is connected through cyber physical systems
- The right way of handling complexity is to select the right product at right place in the right time
- As per the industry, the biggest cause of quality issue is workers not adhering to designed processes followed by inexperienced new line workers thus highlighting the importance of trained workers at the production lines
- There is a need to understand that the biggest contradiction in the manufacturing sector is that the people are the most important as well as the most neglected aspect of the manufacturing sector. There is hence a need to empower people by providing appropriate skill set to them, by involving them in every activity of the organization, developing a sense of ownership in them and by treating everyone equal
- Some of the common mistakes in traditional training of the workers include spending meagre 5% budget on post training activities and focussing only on classroom training instead of on the job training
- Kata is a Japanese word meaning “form” which results in conditioning which in turn impacts the attitude and behaviour which eventually forms a healthy culture in a particular organization
- Robust quality management systems help organizations to be safeguarded against 4M changes which include material change, method change, manpower skill and mechanical breakdown
- One of the key processes to maintain quality in the long run is traceability which refers to the ability to trace & track the journey of each part in the manufacturing process. It calls for complete transparency in the supply chain, starting with the receiving of raw materials till the time finished goods are shipped and delivered to the customers. It ensures that product quality standards are met
- Traceability broadly falls under 2 categories: Part Traceability in which manufacturing history of all parts is recorded and Lot Traceability in which manufacturing history of a lot is recorded
- Traceability calls for giving a unique identity to components so that all Process and Quality data can be linked to the parts. A good traceability system helps us monitor the entire supply chain process - Upstream and Downstream

Left to Right: Mr. Bhaskar Chhabra, Vice President & Operating Head - Honda Motorcycle & Scooter India Pvt Ltd.; Mr. M M Singh, Executive Advisor, Maruti Suzuki; Mr. Shyam Bang, Chairman, NABCB; Mr. Aviral Chopra, Head - HUL Manufacturing Operations and Mr. Nital Zaveri, CEO, Concept Business Excellence Pvt Ltd.

Mr. Anoop Goel, Head – RPO & General Manager (Inspection), Engineers India Ltd.; Mr. Naveen Pilania, General Manager - Operational Excellence, Zydus Group and Mr. Virat Dhebar, Assistant Vice President (Academy Division), TUV SUD South Asia also expressed their views.

Some of the key recommendations/ discussion areas are as follows:

- Improvement in an organization is no longer solely driven by project-based approach with engagement of few. Instead, making small improvements with engagement of all is accepted as the mantra of success nowadays
- The continuous improvement is a blend of daily performance management and strategic improvement and can be achieved through effective deployment of strategy, performance management (structured problem solving required to bring back KPI to desired limit) and leadership
- Sustainability is the result of three aspects of the economy: Economic, Social & Environmental. The economic aspect calls for consistent profitable growth, effective risk management and sustainable shareholder returns. The social aspect covers dimensions such as equality, diversity, outreach programmes and respect for individuals. The environmental parameter of sustainability captures bio-diversity management, adhering to various permits & compliances and minimizing chemical discharges from factories
- A new high level structure known as Annex SL, sets out a smart structure having identical core text and common terminologies for all management systems (new and revisions made to existing standards). This framework has improved the alignment of clauses which can be grouped in relation to PDCA cycle. PDCA is now encapsulated in the standard in a structured way. Goal is to reduce documentation and deliver results to the organisation and clients rather than on producing documents
- Some of the supply chain and sector specific sustainability priorities include product quality, social accountability, data privacy, occupational & health safety, asset and energy management, etc.
- Quality plays a vital role in Project Execution as well. Mega projects require very detailed project quality plans such as definitions of key roles/ reference documents, responsibilities and authority of key personnel, procurement policies, price bid recommendation policy/ scope, inspection of material/ equipment
- Some of the challenges faced in ensuring quality in project execution are lack of contract review, Lack of technology-driven Manufacturing, existence of many items where there are not sufficient suppliers, sourcing of wrong raw material, etc.
- When Quality is integrated as a normal part of business, it contributes directly to manufacturing & growth and is an important tool to avoid hard times
- Quality is key to competitiveness. Each organization must develop tools like VRINE (Valuable, Rare, Inimitable, Non-substitutable, Exploitable) to asses a resource/ compatibility for sustainable quality competitiveness

Left to Right: Mr. Anoop Goel, Head – RPO & General Manager (Inspection), Engineers India Limited; Mr. Shyam Bang, Chairman, NABCB; Mr. Naveen Pilania, General Manager - Operational Excellence, Zydus Group and Mr. Virat Dhebar, Assistant Vice President (Academy Division), TUV SUD South Asia

10 REGIONAL QUALITY CONCLAVE

QUALITY & MANUFACTURING EXCELLENCE FOR SUSTAINABLE GROWTH

NOVEMBER 29, 2019 AT THE PARK, KOLKATA

The objective of the Conclave was to highlight the importance of best practices of Quality & Manufacturing in industries as critical change agents for sustainable growth

Quality & Manufacturing are two cardinal areas in a manufacturing industry developing a culture of continuous improvements. Both these functions are fundamental to increase customer satisfaction and potential business growth.

INAUGURAL SESSION

Mr. C. K. Biswas, CEO, NBQP, QCI

- Firm commitment for the welfare of the MSME industries through its all-round development at a time when emerging technologies are taking up most of the market share
- That manufacturing hub, besides enhancing business & trade, needs to focus on quality improvements, which can make the Indian products competitive in the globalized market

Mr. Biswanath Bhattacharya, President, FOSMI

- Manufacturing excellence should be an explicit goal of any organization as it is a measure of excellence in manufacturing
- More precisely excellence in the quality means establishing clear targets in terms of its contribution to profitability, reduction in cost of quality and developing new skills and to strive for perfection in critical processes
- Manufacturing excellence could be through sustainable, continuous improvement of operations to gain a competitive advantage, lower costs and increased profit

Shri Sadhan Pande, Minister-in-Charge, Consumer Affairs & Self Help Group, Govt. of West Bengal

- Expressed commitment of the Government of West Bengal for the improvement of MSME Sector and improving the quality of output to make them competitive in the market. He talked about schemes under self help groups i.e. the "Mukti Dhara" and "Jaago" Schemes dedicated to upskill the unemployed youth & women to ensure them a livelihood
- Committed to improve the condition of MSME Sector in the rural areas of the State by providing enough capital to start and pursue business in emerging technologies
- Priority agenda of State Govt. is the revival of MSMEs of Bengal by employing emerging technologies with the help of academia and also sought the guidance of QCI for taking up awareness training programs
- On behalf of State Government embodied 'people first' policy and also pledged to bring foreign technologies and FDIs in relevant domains to make the state a business hub

Vote of Thanks by Mr. Gautam Ray, Vice President, FOSMI

Technical Session - I

Leadership and quality impacting the profitability of an enterprise

Mr. Avik Mitra, Principal Advisor, QCI

Quality 4.0

- The Industry 1.0 relates with water and steam-powered machines, electricity became the primary source of power in Industry 2.0, Computing and Automation were the features of Industry 3.0 while Industry 4.0 is primarily based on Cyber-Physical Systems
- India should work on building a robust foundation of Industry 3.0 on which Industry 4.0 technology can be effectively utilized
- The time has now come for a Quality Management Revolution with Quality 4.0
- Quality 4.0 will ensure not only high level of automation but will eliminate all unnecessary waste
- It is necessary to sensitize the entrepreneurs about the importance of quality in the era of Industry 4.0
- Moreover, the competition for supremacy in the manufacturing centres across the world is quite high and hence the main focus of the policy must not only be on the implementation of emerging technologies but also on quality of the new products

Mr. Goutam Chakraborty, Lead Assessor & QCI/ NBQP Registered QMS Consultant, ZED Master Trainer

Cost of Poor Quality (COPQ)

- COPQ is associated with poor products or services due to non-conformance to the quality standard/customer requirement
- Cost of quality can be understood in terms of the economics of the end-product quality or in terms of the conformance to the standard
- COPQ or cost of non – conformance are of two types i.e. Internal Cost and External Cost
- Prevention costs are usually associated with design implementation and even the maintenance of the quality management system etc.
- COPQ most of the times remain hidden because, normally it is not quantified and recorded in the accounting system
- Industries need to capture the relevant data of pricing and analyze all these data comprehensively for taking suitable measures to improve quality
- MSME sector, where working capital is comparatively less, the practice of authentic cost calculation can help them increase their profit margins

Mr. C. R. Maitra, LEAN and ZED Consultant, Neogi Technologies & Research Pvt. Ltd.

ZED rated MSME

- Implementation of ZED by the industries is for the overall improvement of quality
- MSME industries should implement ZED in letter and spirit so that MSMEs can produce the good effects on their business as well as the environment and society
- Enhanced environment consciousness making the industries “Responsible Manufacturers”
- ZED enabled NTR to Improve Quality, Productivity & Reduce Environmental Impact simultaneously for profitable growth

Mr. Sanjay Bahety, MD, M/s. I & B Engineers Pvt. Ltd. –A ZED rated MSME

Case Study Presentation

- Since all the activities, from conceptualisation to supply, are under one roof, it helps in optimising cost, maintaining consistency in quality & ensuring on-time delivery
- Final products are rigorously checked with calibrated instruments, report generated and analyzed by experienced personnel
- In most of the cases, customers supplied Quality Assurance Procedure (QAP) is adhered to

Technical Session - II

Evolving Manufacturing Trends for Competitiveness

Mr. Aloke Mookherjea, Chairman, Howden Solyvent India Ltd., chaired the Session

Lean & Smart Manufacturing

- Essential to understand the importance of implementing completely lean manufacturing practices at a time when Industry 4.0 is knocking at the door
- Emphasized on the need of the new small-scale industries to focus on emerging technological parameters

Dr. Goutam Sengupta, Vice Chancellor, Techno India University

Lean Manufacturing

- Lean Manufacturing is attributed towards minimization of waste within a manufacturing system without affecting productivity
- A set of proven and time-tested techniques that helps in reducing cost and hence increase productivity and competitiveness
- SMEs have to strive for world class performance through implementation of Lean Manufacturing
- Total Lean Manufacturing practices could help manufacturing organizations to gain full benefits i.e. Stock Reduction, Quality Improvements, Productivity (direct labor), Lead / Cycle time reduction, On-time delivery, Smaller batches etc.

Dr. Arpan Pal, Principal Scientist and Head of Embedded Systems and Robotics, Tata Consultancy Services, Research and Innovation

Smart Manufacturing

- Need to demand for adoption of smart technologies in small-scale industries
- IOT, AI and Robotics were all evolving as the next drivers of business and our lives
- Robots and drones have come in next as pure sensor carrying devices
- It is essential for the research labs to pursue low cost innovations for deployment by the MSME sectors
- Augmented Reality (AR) is the technology that expands our physical world, adding layers of digital information onto it
- Industry and academia should work more closely so that small entrepreneurs could gain confidence and new generation businessmen could implement these technologies for precision manufacturing without any defect

Ms. Priyanka Bhattacharya, M/s. Auropol India Pvt. Ltd.

Case Study on Lean Manufacturing

- Capturing of data and analysing the same help in making the corrective measures
- Preventive maintenance enhances performance and reduces manufacturing lead time
- Plant safety should get top priority in manufacturing process
- Testing ensures maintenance of quality

Mr. Rajivlochan Sharma, Titan Company Ltd.

Case study on Smart Manufacturing

- Implementation of smart technologies is the need of the hour for getting production uniformity and enhancement of quality
- Smart technologies help decrease the losses due to human error
- Improvement in the working conditions can significantly improve the efficiency of the workers
- Industries are improving the lives of the small-scale entrepreneurs through cluster approach
- The human factor that is required in manufacturing should be taken care of
- Successful implementation of smart manufacturing will inspire the budding entrepreneurs to implement these technologies

Technical Session – III

Building a Culture of Continual Improvement

Mr. T. K. Mukherjee, Strategic Advisor Wacker Silicones, chaired the Session

- Outlined the gradual improvements required by the small scale industry so that they stay competitive in this disruptive environment. He also laid a firm belief that Indian Industries must take advantage of Industry 4.0

Mr. Ashish Agarwal, Chairman, Ori-Plast Ltd.

Customer Delight for Business Growth

- Customer delight simply means to create outstanding experiences for people in an effort to create and nurture lasting relationships
- Customer delight is to give more in quality in every respect than what is expected by the customer
- It is more than just the basics — order fulfilment, customer support, on-time delivery, after-sales service. A business has to achieve customer satisfaction in order to gain a lifelong relationship

Dr. N. C. Murmu, Senior Principal Scientist, CSIR-CMERI Durgapur, Fellow of Indian Academy of Engineering

Innovation and Technological Advancement

- Innovation is the future of this country as a result of which the government schemes are being carried out through the research institutions.
- Students pursuing career in basic sciences are attracted to work in an overt atmosphere with able scientists to innovate and develop new technologies which could be of utmost social utility
- Technological innovation contributes to higher levels of economic output and can deliver new goods and services that change human lives and capabilities
- There is growing interest in the relationship between technological innovation and entrepreneurship and how it can promote global growth and development
- CMERI promises to extend all co-operations to entrepreneurs towards Innovation and Technological Advancement

Prof. (Dr.) Surjya K Pal, Lord Kumar Bhattacharya Chair Professor, Department of Mechanical Engineering and Professor-in-Charge, DHI Centre of Excellence in Advanced Manufacturing Technology, IIT Kharagpur

Re-skilling for Advanced Manufacturing

- With the coming of automation and smart Technologies the work of manual labor is going to diminish a lot
- If capacity building is carried on with the youth, they will be well equipped to handle the disruptions that may happen in the future due to the emerging Technologies
- Presently, capacity building is the emerging trend in every field of manufacturing; therefore, implantation of Industry 4.0 is inevitable so that the Indian manufacturing small-scale industries become competitive throughout the world
- IIOT is the next big thing in manufacturing worldwide
- Scenario: India and manufacturing units;

ROBUST DEMAND: Huge domestic market with a rapidly increasing middle class and increasing population

POLICY SUPPORT: State Govt. and Central Govt. initiatives aim at making India a global manufacturing hub

INCREASING INVESTMENTS: Investment in manufacturing in India has been on the rise, both domestic & foreign

COMPETITIVE ADVANTAGE: India can achieve its full manufacturing potential as it looks to benefit from its demographic dividend and large workforce

Special Session
Accreditation and Training

Role of Institutional Training and its Accreditation -- Dr. Manish Jindal, CEO, NABET, QCI

Accreditation of Higher Education Institute - A new paradigm by Ms. VanitaYadav, Director, NABET, QCI

- The goal of accreditation is to ensure that education supplied through establishments of higher education meets acceptable ranges of quality
- Accreditation is important because it helps decide if an organization meets or exceeds minimum requirements of first-rate and creates desire for institutional self-improvement
- The responsibility of universities is no longer restrained to dispensation of knowledge. It consists of improvement of the entrepreneurial skills of individuals and groups through ideas and enterprise incubators
- Higher educational institutions must take up the burden of up skilling and capacity building of India's youth so that the small scale industries could be supplied with quality workers
- The key role of education in the evolution of a new paradigm for human development is the quality, content, technique and relevance of education are paramount for a new paradigm. Institutional training is the need of the hour
- That education is of paramount importance and it is only good quality education which can help India's dream to reach 5 trillion dollar economy and also improve the industrial output

Glimpses of

10th Regional Quality Conclave (RQC)

IONAL QUALITY CONCLAVE ON
RING EXCELLENCE FOR SUSTAINABLE GROWTH
10th Regional Quality Conclave

FOR SUSTAINABLE GROWTH
ENGINEERS
Rashmi

TOP ARTICLE 1

Manish Pande
Director and Head,
PAD Division

Tishya Mahajan
Analyst,
PAD Division

Voluntary Certification Scheme for Traditional Community Healthcare Providers – Providing Healthcare at the grassroots

Thousands convened for Samvaad 2019 – the Annual Tribal Conclave of Tata Steel – at Jamshedpur, Jharkhand on 17th November 2019

A vibrant gathering of tribal communities from across India, South Africa, Mexico, Uganda, Cameroon, Trinidad, and Tobago, and other nations which advocates for the empowerment of indigenous communities, organized this Conclave to encourage a healthy discourse to 'revive, preserve and promote tribal culture.'

One of the workshops in the event was on "Traditional and Modern Medicine – Coalition for Bridging Gaps in Universal Access to Healthcare," which saw a convergence of numerous traditional healthcare providers. Each of them keenly shared inspiring stories of putting the age-old traditional healthcare knowledge and skills into practice. One such story was of Kaali Amma, a female traditional healthcare provider from a village in Tamil Nadu, who shared how she accomplished the massive feat of reintroducing iron-rich ingredients in the daily diet of 36 severely anaemic women in her village, to increase their haemoglobin levels. Sampurna, another traditional healthcare provider from Andhra Pradesh, shared that she uses her homemade medicinal concoctions to treat Menorrhagia (excessive menstrual bleeding) in one go.

Women like Kaali Amma and Sampurna are unrecognized **champions of traditional health practices** and continue to make unflagging efforts to provide accessible and affordable healthcare services. India is home to nearly **a million** such TCHPs (Traditional Community Healthcare Providers), who use more than 6500 species of medicinal plants, around 300 species of animals and also dozens of metals and minerals, to provide primary healthcare to their communities. They are repositories of centuries of wisdom and evolving knowledge of health practices, transmitted through an incredibly effective system of oral transmission, either inherited through family lineage or acquired under the 'Guru-Shishya Parampara'

- through observation or apprenticeship. **It would indeed be a civilizational loss to lose this rich heritage of the rural communities of India.**

With this realization, a pilot project was conceived, formulated and implemented during the years 2010 – 2012 by the Indira Gandhi National Open University (IGNOU) with support from the Quality Council of India (QCI) and the Foundation for Revitalization of Local Health Traditions (FRLHT), under the mentorship of the Ministry of AYUSH. The objective was to create a uniform and standardized competence framework, perhaps for the first time in the world for Voluntary Certification of the TCHPs that manage various streams of health services (midwifery, herbal remedies, bone setting, ethno-veterinary care, skin and liver disorders and so on) based on their traditional knowledge, experience and expertise.

The framework for Third-Party Certification was designed broadly following the international norms as per ISO 17024 for Personnel Certification, after a series of deliberations with various stakeholders. Further, Minimum Standards of Competence (MSCs) were developed for jaundice, common ailments, poisonous bites, bone setting, arthritis and traditional birth attendants. Once the mother document for the MSCs was developed, it was translated into vernacular languages for ease of local understanding and information dissemination.

The successful implementation of the pilot project resulted in an astounding 517 TCHP certifications across 6 states, which laid the groundwork for QCI to operate a Voluntary Certification Scheme (VCS) for TCHPs based on a third-party personnel certification process. In 2016, QCI committed itself to not only certifications, but also towards creating a framework for accreditation of training providers, with the recognition that managing contemporary public health issues might require formal training. The process ensures a robust mechanism of assessment that includes the identification of medicinal plants, the rationale behind the formulations with respect to treating a specific ailment etc.

With 125+ TCHP certifications and counting, the Project Analysis and Documentation Division (PADD)/QCI is on a mission to integrate traditional health with mainstream healthcare by ensuring quality in personnel competence.

The VCS-TCHP assists TCHPs living in rural areas to get their skill set assessed against a MSC framework which has the flexibility to accommodate a diversity of knowledge and skills in various streams of traditional healthcare practices. This scheme also helps document and preserve and promote these traditions of healthcare practices. Certified TCHPs report an enhanced sense of self confidence to provide quality healthcare services.

The scheme contributes to all the three strategic sectors proposed for Member States in the WHO Traditional Medicine Strategy (2014-2023): *"(i) build a knowledge base..; (ii) strengthen the quality assurance..; (iii) promote universal health coverage..."* In line with this, VCS-TCHP certification can help formulate effective and efficient strategies to provide low cost primary healthcare to every villager, moving a step forward towards achieving Universal Health Coverage in the country. In the long term, the scheme also holds the potential to aid in laying down strong risk management strategies within India's health policy landscape to deal with epidemics.

Through numerous awareness meetings and sensitization workshops, involving State Biodiversity Boards, Academicians, Biodiversity Management Committees, Certification Bodies, Training Institutes, and the TCHPs themselves, we aim to create an ecosystem of quality in traditional healthcare services.

It is the unrelenting quest of QCI to preserve traditional ecological and healthcare knowledge by creating third-party assessment frameworks that are assessed by peer review systems. These steps help us reinforce our rich traditional and cultural heritage that are environment friendly and have been validated over generations by communities.

One runs the risk of eroding our traditional knowledge systems, if due credence is not extended to such healthcare practices in our rural communities.

If there's any heritage we must preserve for posterity, it is right here!

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TOP ARTICLE 2

Dr. Manish Jindal
Chief Executive Officer, NABET

Dr. S. K. Mishra
Head- Research Analysis and Capacity Building

Positioning Flash Memory and NVRAM Storage

In the category of next generation memory, Non-volatile Random - Access Memory (NVRAM) has occupied an important nomenclature

It retains the access characteristics of conventional RAM such as DRAM, FRAM, and SRAM and yet retains the non-volatile characteristics of secondary storage such as flash memory. NVRAM in its various forms, such as PRAM, FeRAM, and MRAM are under commercial exploitation by major semiconducting players like IBM, Samsung, Fujitsu, Texas Instrument, Motorola etc. In last few years, the semiconducting industries have grown competently and NVRAM has become a common component of embedded systems as well as commodity computers.

However, it is being advocated in scientific community whether flash memory discs can become a promising media in the storage hierarchy? In past decade, there was an exciting time for flash memory. The cost of the memory storage has fallen drastically due to efficient fabrication and technological addition in the process of quality assurance. With the advent of better manufacturing processes, this device has been placed and accepted in a wide array of applications.

The flash memory device has been widely expanded for cameras, thumb drives, laptops, phones. However, in the primary storage market the use of flash memory is limited. With the arrival of new process parameters adopted during fabrication and reduction in the cost of flash device, industries have anticipated its ubiquity for primary storage with some so bold as to predict the impending outgoing of rotating media like compact and digital versatile discs. But even with sincere efforts as made by manufacturing players, flash has not lived up to these high expectations. Efforts to upgrade flash to primary storage took the shape to bring media on the way of equivalence to solid state discs. Although prospects of flash are tantalizing, the challenge is to find uses for it that strike the right balance between cost

and performance. Flash can not be viewed as a replacement for existing storage but rather a means to enhance it. Conventional storage systems mix dynamic memory (DRAM) and hard drives, flash is interesting because it falls in a sweet spot between those components for both cost and performance in that flash is significantly faster than disc.

Properties of Flash Storage Memory

Flash has two distinct categories: NAND and NOR that refer to the way the flash cells are arranged. NOR flash allows for random access and is best suited for random access memory, while NAND must be treated as blocks and ideal for persistent storage. The rest of this article examines only NAND flash, the cheaper and more common their other types: single – level cell (SLC) and multilevel cell (MLC). SLC stores a single binary value in each memory cell. The binary value in distinguished by two threshold voltages. MLC supports four or, recently, eight distinct values per memory cell corresponding to two or three bits of storage. Because of its improved longevity and performance, the conventional wisdom is that SLC is best suited for enterprise solution. While completely accurate comparisons between flash, DRAM and hard drives are difficult because of differences in capacity and interfaces, it is fair to say that flash consumes significantly less power than those other systems components, especially on per gigabyte basis. Most flash devices are also capable of estimating their own remaining life time so system can anticipate failure and take prophylactic actions.

Flash as a Log Device

Flash memory discs or media is used as a stand-in for NVRAM that improves write performance as a log device. To that end you need a device that mimics the important properties of NVRAM (fast, persistent writes), while avoiding the downsides (cost, size, battery power). It is possible to build a flash based device that can service write operations very quickly by inserting a DRAM write cache and then treating that write cache as non-volatile by adding a super capacitor to provide the necessary power to flush outstanding data in the DRAM to flash in the case of power loss.

Many applications such as data bases can use a dedicated log device as a way of improve. The performance of write operation; for these applications, such a device can be dropped in easily. To bring the benefits of flash log device to primary storage, and therefore to wide array of applications, one needs similar functionality in a general-purpose file system.

The Impact of Flash

By combining the use of flash as an intent-log to reduce write latency with flash as a cache to reduce read latency, we can create a system that performs far better and consumes less power than other systems of similar cost. It is precisely to construct systems with flash for caching, DRAM, and cheap discs designed specifically to achieve the right balance of cost and performance for any given workload, with data automatically handled by the appropriate level of hierarchy.

(To be continued in next issue correlating nanotechnology and computer engineering)

TOP ARTICLE 3

Dharitreesh Tripathi
Project Associate
eQuest

Video-Based Training: The Virtual Classroom

In this technological era, where everyone seems to be inclined towards new inventions and technologically advanced gadgets, the challenge would be to transmit the information where people engage themselves in a way they desire

The expectations out of a training program is sometimes enormous since there is a lot to offer and choose from. So, the question arises: should we provide information graphics, handbooks or a classroom-based training? Looking at the current scenario, probably a video-based training is by far the most possible way of engaging learners.

What Are The Benefits?

Video-based training gives you more control over time

A Brandon Hall report on video-based trainings within corporations found that this style of learning typically requires 40-60% less employee time than learning in a traditional classroom-based training.

It's also important to note that video-based training generally allows learners to split the time they are investing in the course in whichever way it works for them. They don't need to dedicate considerable time to the course: it'll work just as well if they can set aside half an hour from their lunch break each day.

A cost-effective way of learning

Undoubtedly, the cost is a big factor affecting employers as well as an independent learner. In view of this, a video-based training program is more appealing and cost effective as it costs way lesser than other forms of training. For an example, a company having thousands of staff and multiple locations seeks an

advanced way of training where without incurring extra cost they can provide training to their employees at multiple locations.

A video-based training is a one-time cost for a company, and moreover, they can use it again and again based on their requirements. Similarly, an independent learner can purchase it and use it multiple times anytime anywhere.

Virtual trainings are engaging and visually advanced

If we compare other forms of training, the video-based trainings are more engaging. On a daily basis we come across a lot of documents and paper works and then, when given more documents to read from, one would not be very keen and motivated. Thus, it is more enjoyable and motivated in a video form. Besides, transmitting knowledge through virtual trainings is a better way as well.

Accessible anytime so that you can revisit and cement your concepts

Sometimes in other forms of trainings, due to the time factor and limitations a learner cannot note down some of the very important and critical parts of the training. But with the luxury of reading and revisiting the content in video-based training, one could easily breakdown any complex and important points. It is, in fact, a great tool to use to make processes and concepts easier to remember.

Quality Council of India provides a perfect e-learning platform with its eQuest Division

eQuest is an online e-learning platform by QCI designed to help Indian professionals to strengthen their skills and knowledge thereby enhancing their career prospects. eQuest runs a set of video-based courses in the domains of Quality Management, Manufacturing, Healthcare, Laboratories, Environment, Education, Agriculture, Project Management and many more. eQuest is working with SWAYAM (An eLearning Initiative of Ministry of Human Resource Development) for skill-based courses at the national level. Its Quality Management courses are running successfully in various leading institutions as Credit Programmes.

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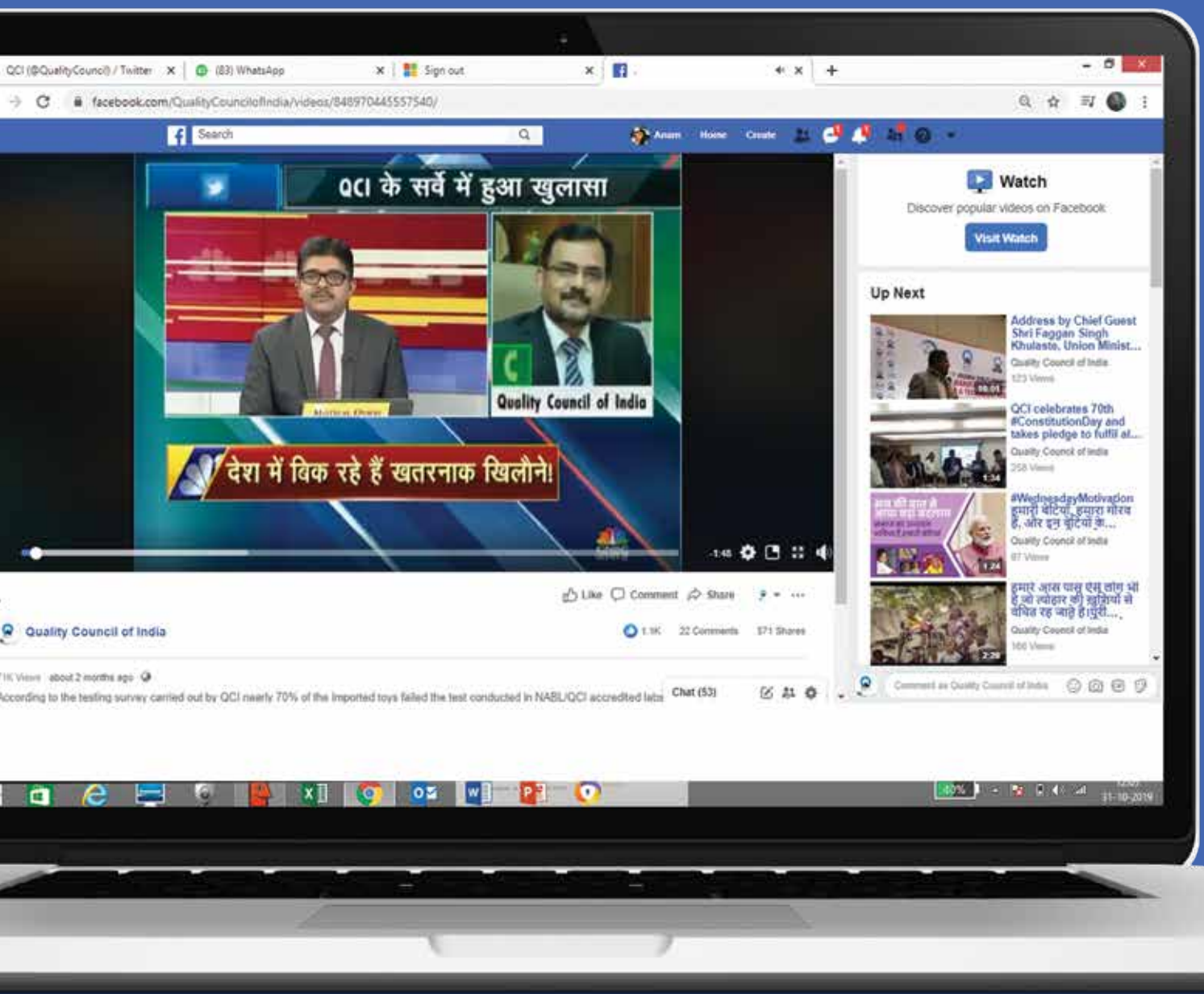
Our Social Media Presence



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Ayushman Bharat- PMJAY is the world's biggest #healthcare scheme, which aims to cover over 10.74 crore poor and vulnerable families.
In a first, Haryana-based hospital gets 'bronze quality certificate' under AB-PMJAY
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The abundance of raw produce, presence of mega food parks equi
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Proud to announce #NABH has successfully launched the 2nd edition of Medical Imaging Standards.
This would benefit patients and Clinical personnel responsible for the care of patients.
Celebrate your #health just as much you celebrate this #NewYear.
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Minister Faggan Singh Kulaste @FSKulaste of @SteelMinIndia graced the 11th #RegionalQualityConclave with his august presence and spoke about government's commitment in improving the quality of #Manufacturing Sector.
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CM @Naveen_Odisha sign MoU with QCI.
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QCI signed an MoU with @SAZstandards for capacity building for #accreditation #standardisation & #certification system on maturity model concept like @ZED_QCI in India.
The aim is to boost internal and external trade, with a specific focus on #SMEs.
youtu.be/SSwP5mThCdM
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QCI @QualityCouncil · 22/11/19
QCI in collaboration with @ccofch
organized a 1-Day workshop on Ris

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QCI @QualityCouncil · 14/11/19
Hospitals empaneled under #AyushmanBharat scheme can now apply for BRONZE Quality Certification.
This methodology of step-by-step upgradation will ensure that hospitals keep on increasing the quality of services provided by them.
Know more: pmjay.qcin.org
Minister of Commerce and Indu... and

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National Board for Quality Prom... and 6 others
QCI @QualityCouncil · 10/11/19
#Healthcare orgs. make the most out of AB #PMJAY Quality Certification Scheme!
#QualityHealthcare mark will not only improve patient safety but overall healthcare facility.
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Every child has a right to Quality Education.
Dr. @RavPSingh, Secretary General, QCI along with other dignitaries discussed and deliberated upon the ways to achieve #SDG4 at 1st Quality Education Conclave organised by UN Global Compact Network at New Delhi.
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The process of Quality Certification will ensure that the hospitals are demonstrating commitment towards Quality Care .
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QCI in collaboration with @MoHFW_INDIA conducted the Kayakalp scheme assessment in private healthcare institutions. We are happy to share that 635 healthcare organisations have been certified so far. Catch the glimpses of certificate distribution ceremony!
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Learn about GOLD/ SILVER Quality Certification through these simple steps.

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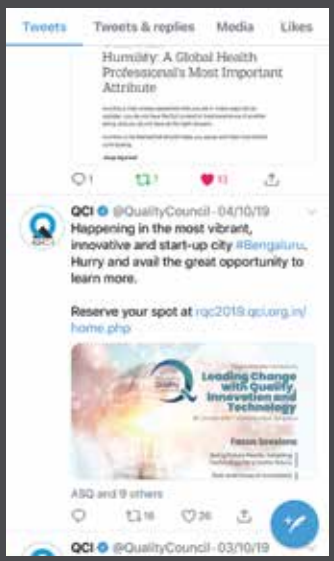
Minister @PiyushGoyal released High-Level Advisory Group Report in New Delhi today.
A 12 member High-Level Advisory Group (HLAG) constituted by the Commerce Ministry has made the report which suggested way forward to make India a preferred 'Investment Destination.'
Minister of Commerce and Indu... and 8 others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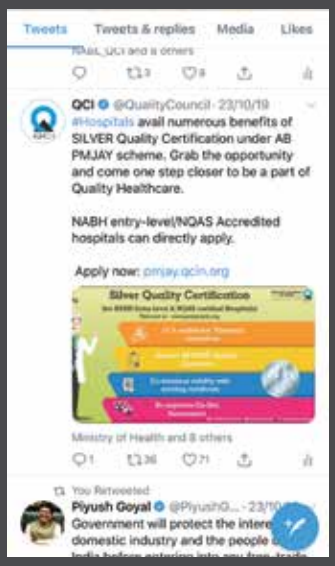
Reserve your spot at rqc2019.qci.org.in/home.php
Leading Change with Quality, Innovation and Technology
ASQ and 9 others
QCI @QualityCouncil · 03/10/19


Tweets
Tweets & replies
Media
Likes
QCI @QualityCouncil · 23/10/19
#Hospitals avail numerous benefits of SILVER Quality Certification under AB PMJAY scheme. Grab the opportunity and come one step closer to be a part of Quality Healthcare.
NABH entry-level/NQAS Accredited hospitals can directly apply.
Apply now: pmjay.qci.in.org
Silver Quality Certification
Ministry of Health and 8 others
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Piyush Goyal @PiyushG... · 23/10/...
Government will protect the intere... domestic industry and the people ...

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1,394 people reached
Boost Post
Quality Council of India
26 December
Proud to announce NABH- National Accreditation Board for Hospitals and Healthcare Providers has successfully launched the 2nd edition of... See more
Quality Council of India
Government organisation
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6.4K
8 comments 5 shares
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15 December
#ProudMoment Congratulations! #ISRO on the successful launch of #PSLVC48 carrying #RISAT2BR1 along with 9 Foreign satellites from SDSC SHAR, Sriharikota.
73
4 comments 35 shares
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29 November
India has become the second largest market for e-learning after the US. The sector is expected to reach US $ 1.96 billion by 2021 with around 9. Million users.
Ms. Vanita Yadav, Director, NABET shared some valuable insights of Education Sector in India.
Sanjay Singh and 21 others
2 shares

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Quality Council of India
29 October
#ShineOn Congratulations! MGM Hospital and Research Centre, Katni, Madhya Pradesh on receiving the first SILVER quality certificate under the latest quality certification standards established under #AyushmanBharat #PMJAY
Know more: www.pmjay.qci.in.org
Ministry of Health and Family Welfare, Government of India National Health Portal, INDIA
QUALITY CERTIFICATION
Sanjay Singh and 412 others
6 shares
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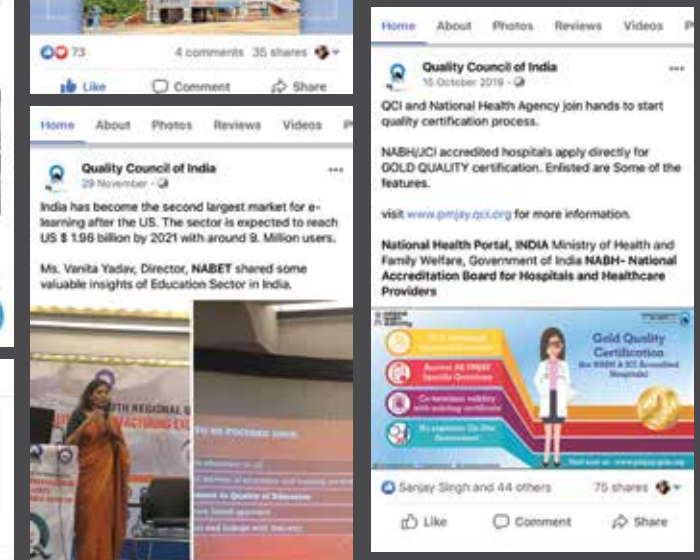
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Quality Council of India
16 October 2019
QCI and National Health Agency join hands to start quality certification process.
NABH/JCI accredited hospitals apply directly for GOLD QUALITY certification. Enlisted are Some of the features.
visit www.pmjay.qci.org for more information.
National Health Portal, INDIA Ministry of Health and Family Welfare, Government of India NABH- National Accreditation Board for Hospitals and Healthcare Providers
Gold Quality Certification
Sanjay Singh and 44 others
75 shares
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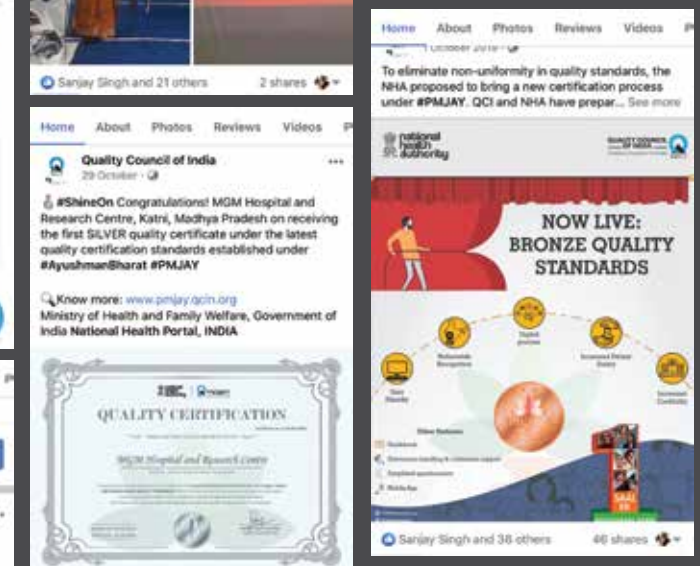
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To eliminate non-uniformity in quality standards, the NHA proposed to bring a new certification process under #PMJAY. QCI and NHA have prepar... See more
national health authority
NOW LIVE:
BRONZE QUALITY
STANDARDS
Sanjay Singh and 38 others
46 shares

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Piyush Goyal and 7 others
QCI @QualityCouncil · 15/10/19
In a survey conducted by the Indian Railways and executed by Quality Council India, under the 'Swachh Rail Swachh Bharat' campaign Jaipur has been declared as the Cleanest Railway Station.
#SwachhRail
JAIPUR
RAILWAY STATION
IS THE
CLEANEST
IN THE
COUNTRY
Piyush Goyal and 7 others
QCI @QualityCouncil · 14/10/19

Tweets
Tweets & replies
Media
Likes
Dr Harsh Vardhan and 8 others
You Retweeted
NABET @QCI_NABET · 01/11/19
Address by Dr. R.P Singh, SG Quality Council of India (QCI) at 1st #Quality #Education Conclave held on 1st November 2019 at New Delhi.
@HRDMinistry @QualityCouncil @DrRPNishank @AdilZainulbhai @RaviPSingh @cbseindia29 @QCI_NSQP @QCIelearning @Director_NABH @NABL_QCI @NABCB_QCI
QCI @QualityCouncil · 04/11/19
#ShineOn We are happy to ann
that Sanjiv Bansal Cygnus Hospital,

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1,164 people reached
Boost Post
Quality Council of India
25 November
1-Day training program on ISO 45001:2018 was organised by NBQP - National Board for Quality Promotion on Occupational Health and Sa... See more
Ashish Gupta and 18 others

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638 people reached
Boost Post
Quality Council of India
15 November
Congratulation Lyfboat hospital on receiving the highest certification for quality patient care and safety in India #NABH Accreditation!
NABH/QCI is responsible for providing global accreditation to Indian #healthcare facilities for the quality of their services.
NABH- National Accreditation Board for Hospitals and Healthcare Providers
Lyfboat
achieves
NABH
accreditation

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Quality Council of India
8 November
Missed a chance to attend the Conclave? Catch all the LIVE action at https://youtu.be/XyoJFV1KRjLL Keep following us to know more!
9th #RegionalQualityConclave
NBQP - National Board for Quality Promotion
Federation of Indian Chambers of Commerce & Industry (FICCI) PIB in Gujarat
Regional Quality Conclave (RQC)

Quality Council of India
24 December
As per the instructions of Department of Commerce, GoI Department for Promotion of Industry and Internal Trade, QCI carried out the testing... See more
TOYS
According to the survey conducted by Quality Council of India, the following results were found
In case of Electric Toys
In case of Soft Toys
In case of Plastic Toys
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79
1 Comment 10 shares

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100 people reached
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31 December
We are always making efforts to work closely with the Government for creating an Eco-system of Quality in India which can impact the Quality of life o... See more
HAPPY
2020
NEW YEAR
40
3 comments 2 shares

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11
2 shares
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917 people reached
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4 December
To further improve #Education Sector in India, NABET to organise an Education Conclave for positioning NABET as National Board for School A... See more

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Quality Council of India
31 October
Rashtriya Ekta Diwas: QCI took pledge for the Unity and integrity of our nation and participated in #RunForUnity organised on the occasion of #NationalUnityDay.
NABET

NATIONAL ACCREDITATION BOARD FOR TESTING AND CALIBRATION LABORATORIES

NABL PROGRAMS

International Events

October 2019

CEO, NABL received ILAC MRA certificate for accreditation of Proficiency Testing Provider (PTP) as per ISO/IEC 17043: 2010 program in addition to prevailing ILAC MRA and APAC MRA.

November 2019

2nd NABL Lab Forum conducted in Nagpur on 4th November 2019 (90 Participants)

3rd NABL Lab Forum conducted in New Delhi 16th November 2019 (110 Participants)

4th NABL Lab Forum conducted in Jaipur on 29th November 2019 (50 Participants)

1-Day state level awareness program on NABL Accreditation - 8th November 2019, Lucknow

A 1-Day state level awareness program about NABL Accreditation was organized by Uttar Pradesh JAL NIGAM on 8th November 2019 at Lucknow.

Mr. Avijit Das, Director, NABL with Mr. Vikas Gothalwal (IAS), MD, UP Jal Nigam inaugurated the program.

Officials from NABL presented general information on NABL Accreditation. Around 75 participants attended the program.

1-Day awareness program on Quality Assurance Scheme for Basic Composite Medical Laboratories (Entry-Level) on 11th November 2019, Chennai

NABL conducted 1-Day awareness program on Quality Assurance Scheme for Basic Composite (QAS-BC) Medical Laboratories (Entry-Level) on 11 November 2019 at Chennai. Around 48 participants attended the program.

1-Day awareness program on ISO/IEC 17025: 2017 at New Delhi on 22nd November 2019

1-Day laboratory awareness program on ISO/IEC 17025: 2017 was conducted for Central Water Commission, Ministry of Jal Shakti at New Delhi on 22nd November 2019.

1-Day NABL awareness program for Laboratories on Integrated Assessment on 23rd November 2019

Integrated Assessment with FSSAI, EIC, APEDA, Tea Board of India and IOPEPC – Awareness for Laboratories was conducted on 23rd November 2019 at Mumbai.

The program had awareness sessions by regulators on the regulatory requirements and participants' questions were answered.

NABL officials explained about integrated assessment process, additional requirements and decision making process.

52 Participants from various laboratories attended the program.

December 2019

8th National Conclave for Laboratories, Chennai

NABL conducted its 8th National Conclave for Laboratories at Chennai from 13th – 14th December 2019.

The 2-Day Conclave consisted five Technical and interactive Sessions and served as a platform for laboratories to interact with Accreditation Body and Regulators.

The objectives met during the Conclave includes but not limited to:

- Understanding Regulatory / Government Requirements
- Discussions on laboratory issues, accreditation body issues
- Discussions on online portal for NABL accreditation
- Risk Management in laboratories and its implementation
- Updates on International accreditation scenario – ILAC and APAC
- Business opportunities and financial support available from government to laboratories

The Conclave was graced by eminent speakers:

- Dr. S P Vasireddi, Founder and Chairman, Vimta Labs Ltd.
- Dr. N Bhaskar, Advisor QA, FSSAI
- Mr. K Raj kumar, Director, IRMRA
- Mr. B Jayamani, DGM, R&D, MRF
- Mr. Brajendra Kumar, Director (SR) R-Div, TEC
- Mr. C Kumaran, Controller, Legal Metrology
- Ms. Rajalakshmi Subramanyam, Lead Assessor, NABL.
- Mr. Puru Gupta, IAS, Deputy Secretary, Trade Policy Division, Department of Commerce
- Mr. Man Prakash Vijay, AGM (Quality), APEDA
- Mr. G Shanmuganathan, Additional Industrial Advisor, MSME

Dr. R P Singh, Secretary General, QCI lauded NABL on improving impartiality and transparency in its operations and dedicated the Valedictory Session for taking critical suggestions from participants and discussing the way forward through improvements in accreditation system.

1-Day awareness program about NABL Accreditation – 23rd December 2019, Ghaziabad

1-Day awareness program on NABL accreditation was conducted for Ministry of Agriculture and Farmers Welfare at National Centre of Organic Farming, Ghaziabad on 23rd December 2019.

Around 25 participants from various fertilizer testing laboratories attended the program.

Indian Geotechnical Conference 2019 at Surat

NABL officials participated in the Indian Geotechnical Conference held from 19th -21st December 2019, Surat.

NABL officials presented general information regarding NABL accreditation.

1-Day NABL Awareness program on Laboratories about Integrated Assessments on 21st Dec 2019

Integrated Assessment with FSSAI, EIC, APEDA, Tea Board of India and IOPEPC – Awareness for Laboratories was conducted on 21st December 2019 at Kolkata. The program had Awareness Sessions by regulators on the regulatory requirements and participants' questions were answered.

48 Participants from various laboratories attended the program.

Mr. Avijit Das, Director, NABL explained about integrated assessment process, additional requirements and decision making process to the participants.

NABL PTP / RMP Assessors Conclave organized in New Delhi

NABL PTP / RMP Assessors Conclave was organized in New Delhi on 19th December 2019. The Conclave aimed to harmonize assessment practices in PTP / RMP Assessments.

NABL Trainings

October 2019

5-day NABL Assessor's Training Course as per ISO/IEC 17025:2017 in Gurgaon from 16th - 20th October 2019.

3-Day Training on ISO/IEC 17034 conducted at Lucknow from 10th – 12th October 2019

November 2019

5-day NABL Assessor Training Course as per ISO / IEC 17025 : 2017 in Pune from 5th– 9th November 2019

1-Day NABL Training Program for Assessors on Integrated Assessment on 22nd November 2019

1-Day Training program for Assessors on Integrated Assessment with FSSAI, EIC, APEDA, Tea Board and IOPEPC was conducted at Mumbai on 22nd November 2019

5-Day NABL Assessor training course as per ISO 15189:2012 was conducted from 26th – 30th November 2019), Gurugram

December 2019

4-Day NABL Training on General requirements for Proficiency testing as per ISO/IEC 17043 was conducted from 3rd - 6th December 2019 at New Delhi

MARK OF EXCELLENCE

National Accreditation Board for Hospitals and Healthcare Providers (NABH) is a constituent board of Quality Council of India (QCI), set up to establish and operate accreditation programme for healthcare organizations.

NABH has been established with the objective of enhancing health system & promoting continuous quality improvement and patient safety. The board while being supported by all stakeholders, including industry, consumers, government, has full functional autonomy in its operation.

NABH provides accreditation to hospitals in a non-discriminatory manner regardless of their ownership, size and degree of independence.

International Society for Quality in Healthcare (ISQua) has accredited NABH. The approval of ISQua authenticates that NABH standards are in consonance with the global benchmarks set by ISQua.

Vision

To be apex national healthcare accreditation and quality improvement body, functioning at par with global benchmarks

Mission

To operate accreditation and allied programs in collaboration with stakeholders focusing on patient safety and quality of healthcare based upon national/ international standards, through process of self and external evaluation

NABH **Activities**

NABH Accreditation Programs

NABH offers accreditation to Hospitals, Blood Banks, Eye Care, SHCOs/ Nursing Homes, OST Centers, CHCs/PHCs, AYUSH Hospitals, Wellness Centers, Medical Imaging Services, Dental Centers, Allopathic Clinics, Ethics Committees and Panchkarma Clinics

NABH Certification Programs

NABH offers certification to Medical Laboratories, Nursing Excellence, Emergency Departments, Medical Value Travel Facilitator (MVTF), Pre-Accreditation Entry Level for Hospitals, Pre-Accreditation Entry Level for SHCOs

NABH International

NABH has started its operations overseas under NABH International (NABH I). It offers all accreditation programs as being offered in India. The program is unique as in addition to the accreditation standards it requires compliance with local regulatory requirements

Training & Education

NABH conducts Education/Interactive Workshops, Awareness Programmes and Programmes on Implementation (POI)

For further details please contact:

National Accreditation Board of Hospital and Healthcare Providers
Quality Council of India

5TH Floor, ITPI Building, 4A, Ring Road, IP Estate, New Delhi-110002, India
Ph.: 011-42600600; **Fax:** 23323415; **Email:** helpdesk@nabh.co; **Website:** www.nabh.co

NATIONAL ACCREDITATION BOARD FOR HOSPITALS AND HEALTHCARE PROVIDERS

NABH Programs and Trainings

Achievement in last three months
(October 2019 to December 2019):

S.No.	Program	Accreditation/Certification Granted
1.	Accreditation Program	87
2.	Certification Program	492
3.	Empanelment Program	151
	Total	**730**

Assessment Conducted:

1432 assessments conducted for Accreditation, Certification and Empanelment during October 2019 to December 2019

NABH Training Programs on Implementation (POI) & Education Workshops:

- Program on implementation training conducted in the various cities on NABH Accreditation Standards of Hospitals, AYUSH, Blood Bank and Nursing Excellence, Pre-Entry Level Hospital & SHCO Certification Standards, Clinical Audit Workshop and Continual Quality: Tools and Techniques Workshop
- The objective of this programme is to provide guidance to healthcare provider on implementation of NABH standards
- This programme is very useful in developing Internal Capabilities within the hospitals to work towards implementation of quality and patient safety standards, achieving accreditation and maintaining the same
- In all, 11 programs were conducted during October 2019 to December 2019 wherein more than 495 healthcare professionals participated

GLIMPSES OF TRAININGS

PEH POI for MP Govt. 4-5 November 2019

NABH Stall at Advangate Health, Gr. Noida, 13-15 Nov 19

Clinical Audit at Bhopal - 17 Nov 2019

MIS Refresher Course on 2nd Edition at Delhi - 14-15 Dec 2019

NABET

National Accreditation Board for Education and Training

NABET Accreditation Scheme for Hospital Healthcare Consultant Organization (HAH-CO)

As we all are aware that Insurance Regulatory and Development Authority of India (IRDA) has notified that "All such providers offering cashless services for allopathic treatment shall meet with the pre-accreditation entry-level standards laid down by National Accreditation Board for Hospitals and Healthcare Providers (NABH) or such other standards or requirements as may be specified by the Authority from time to time --- Ref. Notification: IRDA/HLT/REG/CIR/146/07/2016 dated 29.07.2016."

Many more Hospitals & Healthcare Organisations are planning for NABH accreditation/certifications. A need is felt for the accredited Consultant Organisations(COs) to help the healthcare organisations in understanding the accreditation process, documentation, implementation and application development etc.

For detail you may please visit the link for the Accreditation scheme for Hospital and Healthcare Consultant Organisations:

http://nabet.qci.org.in/skill-training-services-division/accreditation-criteria/consultant-organisation

For any further information or clarification, please feel free to contact us. We will be happy to serve you.

Dr. Hari Prakash (Director, NABET, Quality Council of India)

ITPI Building, 6th Floor, 4-A, I P Estate, Ring Road, New Delhi - 110002, India
Work: +91-11-2332-3416 – 20, Extension No. 129 | Fax: +91-11-2332-3415 | www.qcin.org

QUALITY COUNCIL OF INDIA
QCI Creating an Ecosystem for Quality

NATIONAL ACCREDITATION BOARD FOR EDUCATION AND TRAINING

Projects & Workshops of Formal Education Excellence Division (FEED), NABET

Projects Undertaken by FEED-NABET

FEED-NABET has conducted School Audit- Teacher Assessment of 83 Senior Teachers at Indian School Muscat, Oman

ST & SC Development, Minorities & Backward Classes Welfare Department and QCI signed an MoU on 4th December 2019 for Assessment of Residential Hostels. FEED-NABET has initiated the project implementation exercise in the month of December 2019 and the assessments are going to initiate from January 2020.

2/18/2020 CM Naveen Patnaik launches scheme to improve amenities in Odisha's tribal hostels - Times of India

Printed from
THE TIMES OF INDIA

CM Naveen Patnaik launches scheme to improve amenities in Odisha's tribal hostels

TNN | Dec 5, 2019, 04.32 AM IST

BHUBANESWAR: Chief minister Naveen Patnaik on Wednesday launched Mission Suvidya, which as the name suggests, aims to ensure quality in basic facilities such as the safety of a building, making toilets functional and usable, ensuring safe drinking water, proper kitchen and dining areas in hostels managed by the state's SC/ST development department.
The department has signed two MoUs — one with the Quality Council of India (QCI) and another with NGO Akshara Foundation — for the effective implementation of the mission, at the secretariat in the presence of Naveen.

"I am happy to launch Mission Suvidya that aims to bring a qualitative shift in the accommodation facilities provided to students in SC/ST hostels. The mission has a maximum laid down standard for assuring and sustaining quality with an objective to achieve ISO certification," said an official statement quoting Naveen.

Official sources said according to the MoU, the QCI will conduct a comprehensive assessment and evaluation of all hostels under the department and help improve the standard and quality of these hostels to achieve the ISO certificate.

Assessment, Quality Intervention & Certification of MCGM Schools project has completed the execution in the month of October 2019 and the project outcomes presented to MCGM Education officials

Glimpse of workshops organized by FEED-NABET

4 Workshops organized pertaining to 3 days and 2 days during the period October to December 2019

- 3-Day workshop on Preparing School for Accreditation from 16th-18th October 2019 in Ahmedabad, Gujarat

- 3-Day Workshop on Preparing School for Accreditation was held from 25th-27th November 2019 in Bengaluru

4 Workshops organized pertaining to 1-day during October to December 2019

- 1-Day Awareness Workshop on NABET Accreditation Standard for Quality School Governance was organised in Hyderabad

- 1-Day Awareness Workshop on NABET Accreditation Standard for Quality School Governance was organised in Chandigarh

NATIONAL ACCREDITATION BOARD FOR CERTIFICATION BODIES

National News

NABCB launches new Accreditation Scheme for ISO 23301

NABCB, in its pursuit to broaden the accreditation programme for industry, launched a new accreditation scheme for Business Continuity Management System (BCMS) on 25th October 2019. The scheme has been designed based on the standard ISO 22301 Societal Security - BCMS which is an ISO standard for a management system (similar to ISO 9000) for business continuity. The implementation of this scheme will support to decrease the possibility of a disruptive incident, and during occurrence of such incidents the scheme will support organizations to be prepared to respond in an appropriate way, thereby drastically decreasing the potential damage of such incidents. Business continuity encompasses planning and preparation to ensure that an organization can continue to operate in case of serious incidents or disasters and is able to recover to an operational state within a reasonably short period. Business continuity includes three key elements like resilience, recovery and contingency. The NABCB accreditation to Certification Bodies shall be based on requirements of ISO/IEC 17021 and ISO 22301 standards. More information and documents relating to this scheme is available on NABCB website.

NABCB conducts training on different conformity assessment standards to train assessors

NABCB conducted three different training courses for assessors on different accreditation standards which included ISO/IEC 17065, ISO/IEC 17021 and ISO/IEC 17020. NABCB conducted 3-Day assessors training as per requirements of ISO/IEC 17021-1:2015 from 21st-23rd Nov 2019. The course was attended by 33 participants. The faculty for the programme were Mr. Atul Bahl, Lead Assessor, NABCB and Mr. Mrutunjay Jena, Director, NABCB.

NABCB conducted ISO/IEC 17020:2012 training for assessors between 25th-27th November 2019 in New Delhi. The training was attended by 27 participants and the faculty for programme was Ms. Rajalakshmi Subrahmanyam, Lead Assessor, NABCB and Dr. Aparna Dhawan, Jt. Director, NABCB.

NABCB conducted assessors training programme ISO/IEC 17065:2012 from 2nd-4th Dec 2019. Programme was attended by 13 participants at New Delhi. The faculty for the program were Dr. S. Ravishankar and Mr. A. Sudhindra -- both Lead Assessors of NABCB.

NABCB nominated as permanent member in the Core Working Groups formed for drafting technical regulations by the Department of Commerce (DoC), GOI

In order to address regulatory gaps in India, DoC has notified Core Working Groups of various ministries for notifying technical regulations. DoC has nominated NABCB as a permanent member in all Working Groups for assisting in drafting technical regulation/Quality Control Orders. Approx. 57 technical regulations are in process of being drafted.

NABCB Interaction with Stakeholders

NABCB Interaction Meeting with Consultants

NABCB hosted the second interactive meeting with Consultants in Chennai at Hotel Lemon Tree on 21st November 2019.This was facilitated by Consultants Consortium of Chennai. Mr. Shyam Bang, Chairman, NABCB in his Inaugural Address requested the Consultants to support Quality Movement in the country. The purpose of the meeting was to discuss the importance of NABCB accreditation in improving and maintaining quality standards across the country and to understand the issues consultants have in recommending NABCB accredited certification to their clients. The meeting was attended by approximately 60 participants.

Mr. Rajesh Maheshwari, CEO, NABCB, during his address stressed the need to Consultants to understand the NABCB processes and schemes for Accreditation thereby helping them to create the momentum in Quality circle. He also briefed the participants about various QCI Voluntary Certification Schemes. Dr. S. Ravishankar, Lead Assessor, NABCB, talked about Accreditation Schemes and its International Equivalence, NABCB Accreditation Processes and Guidance on Selection of CBs. Few nominated consultants also gave presentations on Improving Credibility of ISO Certifications in the country.

NABCB aims to educate the Consultants about the processes to improve the Quality Ecosystem by reaching to industry and more such meetings are yet to be planned for Pune and Kolkata.

Consumer Awareness Programme

NABCB, in its process to educate consumers and consumer organizations in small cities about Quality of Products and Services, organised Consumer Awareness Programmes in partnership with Consumer Coordination Council (CCC) at Raipur on 29th Nov 2019. The programme was inaugurated by Shri Amarjeet Bhagat, Minister for Food &Civil Supply and Consumer Protection, Chhattisgarh. He urged the consumers to be well informed. He requested the consumers to come forward and register complaints as it is necessary to improve the system. He assured that government would take strong measures to implement Consumer Protection.

The programme was attended by approx. 120 social and consumer activists representing Consumer organizations from Raipur and nearby cities. Mr. Ajay Kumar Sharma, Jt. Director, NABCB, briefed the participants about the significance of Voluntary Standards, Technical Regulations, Complaint Handling Process and the measures to be taken into consideration while lodging consumer complaints. Ms. Chinmayi Salooja, Accreditation Officer, NABCB, educated the participants about the role of Accreditation and Product and Systems Certification for assuring quality.

International News

NABCB delegation attends the annual meetings of IAF and ILAC in Frankfurt, Germany

IAF – ILAC Joint Annual Meeting was held in Frankfurt, Germany from 21st - 30th October 2019. The delegation from NABCB consisted of Mr. Rajesh Maheshwari, CEO, Mr Mrutunjay Jena, Director and Dr Aparna Dhawan, Jt Director.

The meetings of various working groups on Management Systems Certification, Certification of persons, Product, Medical Devices, and GHG, meetings of task force on competence of AB assessors were attended by NABCB delegation. NABCB also secured international equivalence for its accreditation programme for personnel certification bodies during the meetings. NABCB also signed the Mutual Recognition Arrangement (MRA) of the International Accreditation Forum (IAF) for its accreditation programme based on international standard, ISO/IEC 17024 (Conformity assessment - General requirements for bodies operating certification of persons which specifies criteria for the operation of a Personnel Certification Bodies). Mr. Rajesh Maheshwari, CEO, NABCB, received the certificate from IAF Chair.

Dr. Aparna Dhawan attended the joint meeting for ILAC Marketing and Communications Committee and IAF Communications and Marketing as the APAC CPC Chair. During the meeting members analysed marketing strategies, reviewed informative materials, case study videos for World Accreditation Day 2020 theme.

NABCB Journey for Implementation of Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)

NABCB started its journey to grant scope of CORSIA under its accreditation scheme of Validation and Verification as per requirements of ISO 14065 launched on 26th Jan 2019. NABCB received two applications in first quarter of 2019 which included Bureau Veritas India Pvt. Ltd., Mumbai and TUV India Pvt. Ltd., Mumbai and both the organisations were granted accreditation in last quarter of 2019. The first accreditation was granted to Bureau Veritas India Pvt Ltd., Mumbai on 11th Nov 2019.

NABCB also jointly conducted a programme with Directorate General of Civil Aviation (DGCA) for sensitization of airline operators for ICAO CORSIA Scheme accreditation on 14th Oct 2019. Programme was attended by 25 delegates which included participation of airline operators from India like Air India, Indigo, Spice Jet, Go Air, Vistara and Reliance Air. Inaugural Session had presence of Additional DG, DGCA and Mr. Rajesh Maheshwari, CEO, NABCB. Presentations from NABCB were delivered by Mr. Mrutunjay Jena, Director and Dr. Aparna Dhawan, Jt Director.

NABCB participation at workshop included Dr. S Ravi Shankar, Lead Assessor; Mr. Atul Bahl, Lead Assessor; Mr. Mrutunjay Jena, Director; Dr Aparna Dhawan, Jt Director; Mr. Ajay Sharma, Jt Director. The workshop supported understanding the requirements of CORSIA Scheme.

Dr. Aparna Dhawan also delivered a talk on “Implementation of Accreditation Framework on CORSIA verification in India.”

Dr. Aparna Dhawan also attended the APAC training on ISO/IEC 17029, ISO 14065 and ISO 14064-3 Validation and Verification from 4th-6th November 2019 at Seoul in order to prepare NABCB on requirements of standard and harmonise the accreditation process of implementation.

India, thus, is one of very few Accreditation Bodies in Asia Pacific region to grant accreditation for CORSIA Scheme.

Dr. Aparna Dhawan, Joint Director, NABCB, successfully completed CORSIA verification course organised by ICAO at Indian Aviation Academy, New Delhi from 2nd-4th Dec 2019. The course was attended by 16 participants from DGCA, Air line operators. NABCB also trained its assessors and secretariat on requirements of CORSIA by undertaking a 3-Day Regional Workshop on Environment matters in Aviation organised by DGCA and EASA at IAA, Delhi from 10th-12th Dec 2019. The

NATIONAL ACCREDITATION BOARD FOR HOSPITALS AND HEALTHCARE PROVIDERS (NABH)

ISQua Accreditation ORGANISATION

5th EDITION JANUARY 2020

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GUIDEBOOK TO NABH ACCREDITATION STANDARDS FOR HOSPITAL

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NATIONAL ACCREDITATION BOARD FOR HOSPITALS & HEALTHCARE PROVIDERS (NABH)

QUALITY | SAFETY | WELLNESS

Webinar on 'How to reduce the cost of quality using Industry 4.0'

Date: 1st October 2019

NBQP, in association with MixORG Consulting Pvt. Ltd., hosted a Webinar on How to reduce the cost of quality using Industry 4.0. Technology and tools allow optimization of day-to-day operations which result in higher efficiency in manufacturing and management processes. While using new and powerful technology resources, Industry 4.0 will benefit industries with much advanced and efficient operations. This Webinar threw light on how to learn to reduce cost of quality using Industry 4.0 tools and tactics. Viewers got acquainted with the Smart factory, Industry 4.0 and learnt their impact on quality and the quality management professionals through understanding of the skills that quality professionals need to meet the new challenges of smart factories.

Program on 'Importance of Energy Management System ISO 50001:2018' for value chain

Date: 29th October 2019

Venue: SAIL – Rourkela Steel Plant, Rourkela, Odisha

The program was conducted by NBQP at SAIL – Rourkela Steel Plant, Rourkela, Odisha for their contractors, sub-contractors and supervisors. The objective of this program was to familiarize them with the requirements of Energy Management Systems ISO 50001:2018 & its importance. They were explained the measures that can be taken by them to ensure effective implementation of Energy Management Systems within the Unit.

A 1-Day Awareness Workshop on 'ISO 45001:2018 Occupational Health and Safety Management Systems'

Date: 15th November 2019

Venue: Hotel Shubh Inn, Bhopal, Madhya Pradesh

The objective of this program was to familiarize the participants with revisions made in the standard as well as make them aware about the standard holistically. Some of the key terms in the revised standard were also elaborated w.r.t safety procedures, preventive and corrective action. It was a successful workshop which concluded with distribution of participation certificates to the attendees and collection of their valuable feedback.

A 1-Day Awareness Workshop on 'Risk Management in Business'

Date: 16th November 2019

Venue: Vijaya Hospital, Chennai

A Risk can be defined as an event or circumstance that has a negative effect on your business. Types of risk vary from business to business. Business Teams must decide on how much risk they are prepared to take in their businesses. Some risks may be critical to their business success but at the same time exposing the business to wrong types of risks may be harmful. The process of identifying risks, assessing risks and developing strategies to manage risks is known as Risk Management. A Risk Management Plan and a Business Impact Analysis are important parts of Business Continuity Plan. By understanding potential risks in any business and finding ways to minimise their impacts, organisations manage to recover quickly if an incident occurs. It's important for organisations to allocate time and resources for preparing Risk Management Plan to reduce the likelihood of an incident affecting their business.

Program on 'Importance of Energy Management System ISO 50001:2018' for value chain

Date: 18th November 2019

Venue: NSPCL – Bhillai, Durg, Chhattisgarh

The program was conducted by NBQP at NSPCL – Bhillai, Durg, Chhattisgarh for their contractors, sub-contractors and supervisors. The objective of this program was to familiarize with the requirements of Energy Management Systems ISO 50001:2018 & its importance. Explained the measures that can be taken to ensure effective implementation of Energy Management Systems within the Unit.

Webinar on 'Industry 4.0 - SMART Manufacturing with IoT'

Date: 24th December 2019

NBQP, in association with MixORG, hosted a Webinar on 'Industry 4.0 - SMART Manufacturing with IoT.' Digitalization is advancing at a rapid pace and innovative pioneers are successfully defining and implementing digital agendas. Industry 4.0 and IoT, defined as intelligent, interconnected equipment and products autonomously communicating and optimizing along the entire value chain, are key elements of this digital revolution. The Webinar focussed on smart manufacturing, components of IoT and use cases in the real world.

Webinar on 'Digitally transform your business through Supply Chain 4.0'

Date: 26th November 2019

NBQP, in association with MixORG, hosted a webinar on 'Digitally transform your business through Supply Chain 4.0'. Supply Chain 4.0 is taking on board the Industrial Internet of Things (IIoT), Industry 4.0 as a driver for digital disruption in the physical world eventually transforming every part of the business. Digital technologies like Advanced Analytics, Cloud computing, Pervasive Connectivity, Product Lifecycle Management and embedded sensors resulting in:

- Improving operations and lowering costs
- Driving engagement and customer experience
- Creating new products and business models

The Webinar focussed on Fourth Generation Supply Chain (SCM 4.0) as the enablement of Supply Chain to cope up with the Industry 4.0 environment using digital technologies like Sensors, Robotics, Big Data, Augmented Reality and real time Geo-location tracking.

Risk-Based Thinking in ISO 9001:2015

Date: 27th November 2019

Venue: Sahasra Electronics Pvt. Ltd.

One of the key changes in the 2015 revision of ISO 9001 is to establish a systematic approach to consider risk, rather than treating "prevention" as a separate component of a quality management system.

Risk is inherent in all aspects of a quality management system. There are risks in all systems, processes and functions. Risk-based thinking ensures these risks are identified, considered and controlled throughout the design and use of the quality management system.

In previous editions of ISO 9001, a clause on preventive action was separated from the whole. By using risk-based thinking the consideration of risk is integral. It becomes proactive rather than reactive in preventing or reducing undesired effects through early identification and action. Preventive action is built-in when a management system is risk-based.

Risk-based thinking is something we all do automatically in everyday life.

Webinar on 'How Block chain technology can impact Industry 4.0'

Date: 27th December 2019

NBQP, in association with MixORG, hosted a Webinar on 'How Block chain technology can impact Industry 4.0.' Block chain is the biggest buzzword after Industry 4.0. It's a technology that consists of three core building blocks:

- A ledger that can't be changed
- A consensus algorithm – or a way for groups to agree
- The means for performing transactions on that ledger – how to make changes to that ledger

The Webinar focussed on how businesses can benefit from the convergence of Industry 4.0 and Block Chain.

Webinar on 'Industry 4.0 in Manufacturing: The German Perspective'

Date: 28th November 2019

NBQP, in association with MixORG, hosted a Webinar on 'Industry 4.0 in Manufacturing: The German Perspective.' It gave an overview of the implementation of Industry 4.0 in manufacturing in Germany including the inventory, technological dependency, rules and regulations etc. India, on various outlines on the digital disruption, Industry 4.0 and its signifi¬cance to the manufacturing industry and how the VDMA supports the Indian manufacturers towards process optimization through automation. Innovations, problem-solving expertise and highest quality are key characteristics of the German mechanical engineering industry.

Advance Excel (2-Day) "Save Time & Improve Productivity"

Date: 5th – 6th December 2019

Venue: ICCW Building, New Delhi

To give a deep understanding of the advanced Excel formulas and functions that transform Excel from a basic spreadsheet program into a dynamic and powerful analytics tool.

While most Excel courses focus on simply what each formula does, this program dealt with hands-on, contextual examples designed to showcase why these formulas were awesome and how they could be applied. This program not only trained participants to regurgitate functions and formula syntax but also THINK like Excel.

Webinar on 'Industry 4.0 - SMART Manufacturing with IoT'

Date: 24th December 2019

NBQP, in association with MixORG, hosted a Webinar on 'Industry 4.0- SMART Manufacturing with IoT.' Digitalization is advancing at a rapid pace, and innovative pioneers are successfully defining and implementing digital agendas. Industry 4.0 and IoT, defined as intelligent, interconnected equipment and products autonomously communicating and optimizing along the entire value chain, are key elements of this digital revolution. The Webinar focussed on smart manufacturing, components of IoT and use cases in the real world.

GLIMPSES OF **TRAININGS**

MEMBERS WRITE

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Hand Hygiene: Key to a Healthy Nation

Dr. Prajakta Lele
M.B.B.S., MBA
Healthcare administration & accreditation consultant

The 21st century is full of advancements in every field right from agriculture, automobile, electronics, education to healthcare. Artificial Intelligence, robotics, automation, and digitalization are booming in the field of healthcare and changing the dimensions of diagnosis & treatment modalities

HAND WASHING

A PRACTICE THAT KEEPS US SAFE

Why hand hygiene is a quality improvement tool?

Worldwide, 30, 000 women and 4,00,000 babies die every year from infections such as puerperal sepsis, often caused by lack of water, sanitation and poor hand-washing practices.[1]

It is estimated that washing hands with soap and water could reduce diarrheal disease-associated deaths by up to 50%.[2] Up to 80% of communicable diseases are transferred by touch. Proper hand washing can reduce diarrhea rates by 40% and respiratory infections by close to 20%. Failing to wash hands correctly contributes to nearly 50% of all food borne illness outbreaks. There is fecal matter on 10% of credit cards, 14% of banknotes and 16% of cell phones.

All these changes are welcome for business to be in the market and, of course, to grow better from all sides. But while taking charge of theses advanced technological tools, one must not go away from the basic simple tactics which are our ancestral miraculous gifts like, 'hand washing.' Here we will focus only on quality improvement in the medical world by following a simple method of hand washing. Whether medical professionals, hospital staff, nurses alone need to follow this practice and can bring a significant change in a nation's health? The answer is NO. Every individual in the society needs to practice hand hygiene. Impact of this simple habit would be a great contributing factor for a healthy nation.

Approximately, 39% of people don't wash their hands after sneezing, coughing or after blowing their nose.[3]

Let us widen our horizon and take example of a vendor selling vegetables at the corner of a lane, people buy vegetables from him and exchange the currencies/coins This give and take is not limited only to vegetables and currencies but thousands of microbes are transferred while this transaction is being done. These tiny members of ecosystem called bacteria, viruses, parasites or fungi are very adaptive and opportunistic in nature and hence, these don't miss a single chance to enter into human body and feed on them. Such entry of these microbes is mediated by vehicles like mobiles, newspapers, currencies, stationary, clothes, utensils, automobiles, spectacles, ear-phones and what not, the list is long. Every single object we touch, exchanges the microbes and chances of getting infected increases after every act.

One simple habit of hand washing can easily help us unloading the major load of microbes which definitely reduces chances of infection and spread of infections to a greater extent. Now, consider the scenario at a hospital, where nurses give medication, injections to every patient. Doctors take round twice a day for every patient, hospital staff changes the bedsheets, give bed pan, change the urine bag etc. While performing the above activities does every staff, every doctor, every care-taker, take care of their hand hygiene? It's obvious to simply overrule this simple practice in day-to-day routine. This ignorance can not only affect the patient's graph but can also be proved dangerous to the life of staff, doctors and nurses and their families. Not only water-borne and air-borne diseases can be transmitted but many of skin infections can also be transmitted from one person to another. The epidemiology triad consists of vector, host and agent and as all three cause disease to manifest, anyone under control may control the manifestation or can even lead to elimination of the disease.

I would like to quote here my experience of hand hygiene workshops conducted by us at various hospitals for doctors and staff & at schools for teachers and students. We could come across few common lacunae at both the places that people are not aware about the hand wash technique, how diseases are transmitted from one person to another, what impact it has on doctor's and his family's health, how the vicious cycle of disease transmission, cross infections and increase resistant microbes start? These are few important questions and all are to be addressed very seriously so as to check the spread of disease, improve patient's health status and form a healthy society. It is necessary to run a nationwide campaign for achieving the aim of a healthy society and a healthy nation.

Following are the check points where we need to wash our hands in a systematic manner:

For hospital staff:

- Before and after touching the patient
- Before doing any intervention
- After body fluid exposure
- Before and after touching surrounding area of patient

For general public:

- Before and after having food
- After using toilets
- After touching shoes
- Before entering kitchen
- Before cooking
- Before serving food
- After dusting and cleaning home
- Washing hands and legs before entering home
- After touching currency
- After greeting people (shaking hands is one of the major acts involved in disease transmission)

What is the impact of hand hygiene in healthcare quality improvement?

- It reduces the disease transmission-reduction in diarrheal disease by 50%, 16% reduction in respiratory diseases
- Reduces hospital stay by 56-60%
- Increases rate of recovery
- Reduces rate of complication
- Increases hospital efficiency, efficacy and profitability

Health Industry is not only about the funds coming to industry or the output given by the industry but it is also about how much information does it disseminates and how it contributes to make society hygienic and 'less-prone' to disease. A healthy society is the foundation of a healthy nation.

[1] *https://www.who.int/news-room/feature-stories/detail/forgetting-to-wash-your-hands-can-cost-lives last accessed on 18th December 2019.*

[2] *https://www.cdc.gov/healthywater/hygiene/index.html last accessed on 15th December 2019.*

[3] *https://allportablesinks.com/blogs/news/17-handwashing-facts-and-statistics last accessed on 10th December 2019*

Hospital Planning & Commissioning

Indradip Das
BSc, PGDMLE, PGCQMAC, MHA, MBE

Background

Hospitals are known as the most complex organization not only for the complexity in daily operations but the facility mix which itself demands the maximum possible attention at each stage right from conceptualization. Understanding the integration of all departmental activities, simultaneous smooth and right functioning by the right man behind right machine at every facet of the care delivery system combined with human touch ultimately produces an error-free treatment to the patient and smile on patient's relative's face

AN EXCITING JOURNEY

DAY ZERO TO DAY ONE

Understanding Viability

Ensuring correct work in place demands planning for the same much before the facility starts its operation. It actually begins from the feasibility analysis. A detailed study includes location analysis, understanding the socio economic status of the area, the disease profile, health indicator status, paying capacity & habit, local competition / trend and a site analysis (soil analysis, bore water level, area altitude & land height, earthquake zone etc.) and the finances. A good planning team not only takes care of technical aspect of feasibility but the economic viability becomes priority so as to take care of the stakeholders' interest and importantly for debt syndication and to have an idea on proposed ROI, break even etc. After leaving no stone unturned we reach to the enviable facility mix with the needed volume. The quality of the feasibility analysis should be done by an unbiased outside agency preferably a hospital management consultancy that will not have any pre conceived opinion about the project. Depending upon the techno economic feasibility report (often known as DPR) banks provide debt mostly in the range 30% - 60% of the project cost.

Design & Construction

A space programming followed by Architectural brief, layout and site plan with landscaping is primarily done to start the designing work. Working drawings are made by different engineers for electrical, civil / structural, MEP & HVAC services. Finally, all designs are amalgamated into one and we get master drawing for construction. Interiors are preferably done for medical and nonmedical areas with a different approach.

In best case scenario the team is to be monitored by a hospital planning expert with sound knowledge of clinical requirement and hospital operations. The team must ensure zero rework / reconstruction and building meet the requirements and standards of regulating (NBC, Clinical Establishment Act etc) and accreditation organizations (JCI, NABH etc.).

An accurate design and layout include design for safety, security, facility design principles, easy functional flow, infection control guidelines, surge and emergency preparedness for effective emergency management, pro-active risk management during and after the construction etc. The building positioning, landscaping, façade designing also have an environmental aspect to keep in mind. Usage of maximum natural lights, corridors with lesser turns, elevators/ staircase at right position, access control facilities, air changes/ pressures/ filtrations in OT and critical care areas are some indicators of a good design. The commissioning process further requires manpower and equipment estimation, defined hiring process with pre-decision evaluation, licensing, identifying and implementing defined operational policies (preferably in line of NABH / JCI) etc.

Commissioning

Commissioning process is very complex and involves the following multiple parallel activities to carry out with accuracy & timeliness. A commissioning calendar is a useful tool to keep the timeliness in track. The same should have all parallel activities and completion time mentioned.

- Licensing
- Equipment and furniture planning and procurement
- Manpower planning and recruitment
- Tariff and salary structure
- SOP formulation
- MIS development
- Brochure designing, launching website and pre-inauguration marketing
- Soft run
- Project launch

Members Write

Use of Intelligent Agents in Energy Aware Green Computing of IT industries for Environmental Sustainability

Dr.D.Jeya Mala
Director of MCA,
Fatima College,
Madurai, Tamil Nadu

Mr .A.Pradeep Reynold
Environmental Engineer,
Heubert Enviro Care Solutions Pvt.Ltd., Tamil Nadu

The importance of environmental impact assessment and protecting the environment from industrial setups has gained attention during the recent past as it affects the human life

This is not only applicable to manufacturing industries but also IT industries. Due to the dedicated infrastructure resources such as servers, client machines and other needed hardware in software development environment is one of the highest contributors of environmental pollution.

This has made the IT industries think about a paradigm shift from traditional resources setup to a green computing environment to reduce the carbon emission in the environment. This leads them in moving towards "Green Computing" or "Green IT" development. This new buzzword leads to think about reducing energy consumption and their green house gas emissions. Besides saving energy and aiming for efficiency, green computing is a complex trade-off between efficiently using any required resources and keeping the environmental impact lower.

As per the report by Accenture, performing business applications on the cloud will reduce the carbon footprint of an organization. This report also states that, carbon emission is dramatically reduced up to 90% in small businesses when cloud-based virtualization is used. Similarly, for large and mid-size businesses this emission has been reduced from 30 to 90%.

According to a Leading Analyst Gartner, within the time of next 5 years, almost all the software development organizations will move to cloud computing-based solutions for one or the other development activities.

In this article, we provide a novel solution of using cloud-based solutions, the users who may be the general users / organizations / enterprises can access the various resources from the application domain or computing environments or physical resources through cloud.

Due to the cloud-based environment with efficient algorithms/hardware and resource energy management systems, the amount of energy consumption will be reduced and which, in turn, reduces the carbon footprint in the environment.

The general objectives of cloud computing are to provide simple Application Program Interface (API) to access the services from the cloud on need basis, to deploy the commercial applications over the cloud to be accessed by the devices through an easy handling of network policies with respect to the independent management principles of subscribers.

In the proposed framework, these responsibilities are distributed among the intelligent agents which perform the selection of a cloud resource and allocation and execution of computing activities over the cloud. During their decision-making process, the agents can be provided with preferences which are nothing but the soft constraints that are preferred for a particular solution. These preferences help in improving the performance of an agent.

Hence, runtime determination of selection of the cloud and providing the right outcome within less amount of processing time is possible with this kind of architecture. This further reduces the resources wastage to reduce power consumption and thus leads to green IT.

This article provides an eye opener for the researchers and IT industries that are working to reduce the Carbon Emission in the environment in an intelligent way.

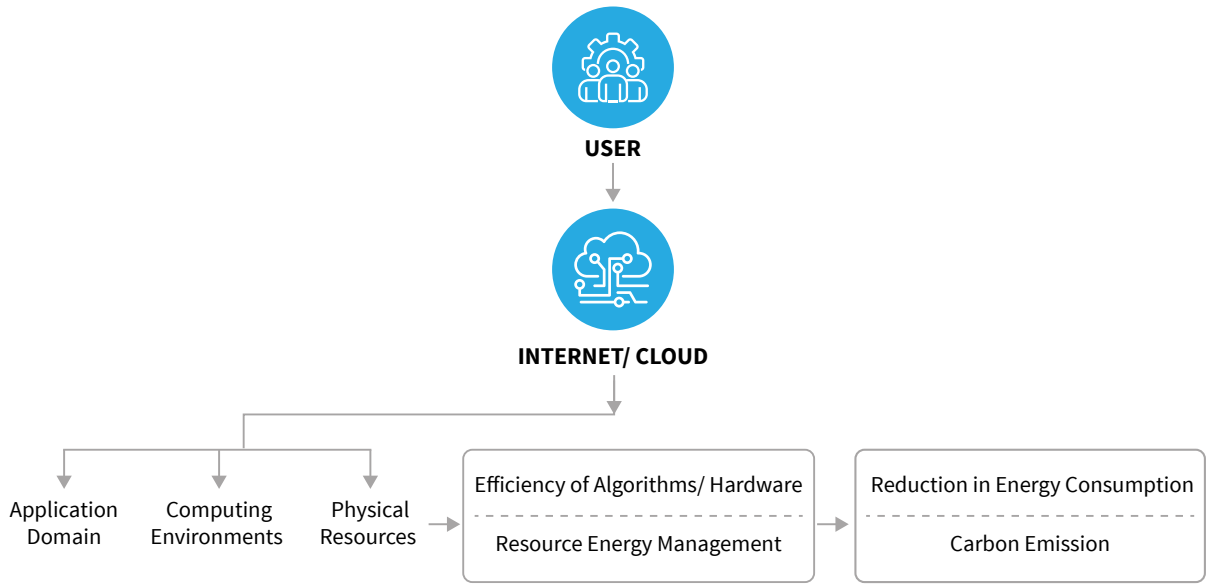

Fig: The proposed Energy Aware green computing Framework

Members Write

Challenges in Management System Consultancy

T. Venkataraman
Director, Quality Growth Services Pvt. Ltd.

Introduction

With the publication of ISO 9000 series of standards, the 1990s saw a trend for quality certification and there was a sudden need among the industries to demonstrate that they are producing quality products. This boosted the Certification business but the knowledge of how to implement the standards in the industry was limited. Management System Consultants use their know-how to support clients in any sector to deal with important issues, achieving organisational growth, improving quality and productivity. The Management System Consultancy industry makes a substantial contribution to the world economy.

Need for Consultants

There was a need for consultancy services, for expert advice on efficient planning, implementation and monitoring of various development programmes. The emerging of consultants and consultancy firms resulted in the increased awareness in the industry. The main challenge was in the right interpretation of the standard and getting the company certified. With the existence of only a few certification bodies, the consultants had to make the companies prepare for certification as per the needs of the certification body. Relying of Industries on foreign Consultants and Consultancy firms caused threat to Indian Consultants.

Typical Consulting Process

Starting from Quality Management System (QMS), other management system standards on Environment, Food Safety, Information Security, Energy Management etc. were published by ISO, thereby expanding the scope for consultancy services. The periodic revision of these standards also brought in a lot of opportunities for the Consultants. All management system standards require the Leadership and thereby involvement of Top Management. For the development of a management system, the Management Responsibilities include:

- Decide strategy
- Set goals
- Establish policy
- Organise the project
- Allocate resources
- Set standards
- Follow up
- Approve
- Motivate
- Educate and train

The Top Management in turn look upon the consultants to help them in their responsibilities. Therefore, the consultant needs good knowledge about standards and requirements, good communication and interpersonal skills.

Changing Scenario

The scenario changed after Quality Council of India (QCI) was formed and the National Accreditation Board for Certification Bodies (NABCB) started the accreditation of certification bodies. By now the industry has also become more aware about ISO and other Management System Standards. Tenders and Request for Quotations (RFQ) started specifying the Conformity or Certification to Management System Standards as an eligibility criterion. The trend of industry started changing from Quality Improvement to just getting Certification. The challenge to the Consultant was in helping the company to make a system as well as helping to get certification. The companies started looking out for cheap consultants who will get them certificate. Non accredited certification bodies and those accredited by foreign accreditation bodies started making the certificates easily available at a cheap price. This is one of the biggest challenges in the Management System Consultancy today.

The following actions may be necessary:

1. To stop the certification bodies giving consultancy and not to be associated with any consultancy firm for the purpose of certification
2. Making the industries aware and asking them not to request for Consultancy and Certification from the same firm
3. Bringing out a regulation to have control on the certification business

Challenges Faced in Consulting

The consultant is faced with satisfying many different expectations for performance and delivery during the course of consultancy. What is often not well understood or clarified is that accompanying the overall goals and objectives is a set of “expectations”—often undocumented—regarding what the customer actually looks forward to receiving from the consultant as the day-to-day work is carried out. These expectations are influenced by the scope, nature, and complexity of the services, by the amount of fees paid and value received, and by the mix of consultant resources. The Top Management expects Value addition from the consultants but are hesitant to invest in any additional resources or sometimes even the basic training to be provided to the employees. Their Commitment to Quality slowly moves to getting certificate only. Therefore, the biggest challenge for a consultant is to have periodic dialogue with the Top Management and helping them to stay committed.

To sum up, the challenges facing the management system consulting fall into the following broad categories.

1. Competition and differentiation: As competition intensifies with the entry of heterogeneous consultants in the market, there is a significant need for consulting firms to define their unique identities and differentiate themselves from the

rest, in an increasingly fragmented consultancy field.

2. Organizational design of the management consulting firm: The traditional professional partnership organizational form is under threat with increasing globalization of consulting firms as well as their customers. This necessitates that consulting firms consciously adopt new organizational forms that best suit their contexts and identities.
3. Internal organization of knowledge flows to serve customer needs: High knowledge intensity of management consulting firms ensures that firms proactively manage their knowledge flows within the firm, especially the organizational knowledge. Efficient leverage of organizational knowledge is essential for creating and maintaining the balance between exploitation of existing knowledge and creating new knowledge. At present the consultants are left to upgrade their knowledge and competence by self-learning and no guidance is available, like in ISO 19011 for auditors. Often the knowledge of the consultant is challenged by the certification body auditor and the client, for fear of certification, agrees with them.
4. Uniformity in Consultancy services: At present, each consultant has separate ways of providing consultancy services and ultimately everyone seeks to get certification for the company. With the result, there is huge variation in the cost of consultancy services, with which the customers always go for the one with least cost. Though ISO has published ISO 20700:2017 as a guide for Management Consultancy services, based on the good practices, from the management consultancy industry, appropriate application of the standard is not evident for following it.
5. In QCI, the accreditation of Consultancy Organisations is done by National Accreditation Board for Education and Training (NABET) and registration (not accreditation) of Consultants is done by National Board of Quality Promotion (NBQP). But the accreditation/registration is for each individual Management Systems. Therefore, a consultancy organisation or consultant who gives consultancy on various management systems will have to seek accreditation/registration for each management system and pay fees separately. This discourages the consultant/organisation to gain recognition in the industry.
6. Association of Management System Consultants: In order to get the voice of the consultants heard and for participation in various government schemes and initiatives, an association of the management system consultants has become essential. Formation of such association is already on the anvil.

Conclusion

Innovation, differentiation and ethical behaviour are important parts of any Management System Consultant's value proposition. In spite of the challenges, the consultants need to focus on deliverables and outcomes of management systems consulting. Consultancy services, being a noble profession, it is important to maintain integrity and professionalism at all times with due respect for the profession.

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Professional Membership Scheme

Dear Quality Aspirants / Professionals,

Warm greetings !

NBQP is one of the five constituent Boards of QCI. The "Professional Membership Scheme" is one of the initiatives which is being operated by the NBQP in order to make "Nationwide Quality Movement" a reality, as well as integrate the organizations, institutions and individuals working in the field of quality.

This "scheme" is open for all as per their eligibility and it would give you an edge over the other Professionals/ Corporates as QCI has earned the reputation of being a very credible, successful and highly sought after accreditation/ registration institution. Besides getting the membership certificate, a copy of quarterly "Quality India" magazine and an opportunity for placing articles/ads in it, discounted registration for the Awareness/Training programs & events such as Conclaves, Seminars/Workshops, access to the upcoming Knowledge Repository etc. will be provided.

If you have the passion to become a part of this movement for quality promotion, stay abreast with the latest on the quality front, connect with other professionals, advance your knowledge and career, or grow your reputation as a thought leader, this membership would put you on the right track.

Best Regards,
CEO-NBQP(QCI)

For any membership related queries, you may connect:
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ACCREDITATION STANDARD FOR QUALITY SCHOOL GOVERNANCE

National Accreditation Board for Education & Training (NABET) is one of the statutory board of Quality Council of India mandated for accreditation in the field of Education, Training & Services. Four distinct verticals have been formulated to provide focussed strategic direction to the activities of the Board. One of the verticals of NABET, **Formal Education Excellence Division (FEED)**, fosters quality in school education through spreading awareness, conducting assessments and accreditation. FEED - NABET accredits schools on **Accreditation Standard for Quality School Governance (ASQG)** in the country with a view to provide framework for the effective management & delivery of holistic education program aimed at overall development of school. The standard has three interwoven domains.

- School Governance
- Education & Support Processes
- Performance Measurement & Improvement

BENEFITS OF ACCREDITATION

OVERALL

- Standardisation of schools practices in alignment with National & International Benchmarks
- Better collaboration between stakeholders leading to improved effectiveness
- A sound basis for school improvement, strategic planning, restructuring, and staff development.
- A way to manage change through regular assessment, planning, implementation, and reassessment

STUDENTS & PARENTS

- Improved quality of education
- Holistic education helping students for personality development
- Organized and transparent school system for better day to day experience for students and parents
- Feedback system to get student and parent's issues addressed

SCHOOLS

- Capability development for delivering quality education
- Quality improvement in existing school system/ process
- System/ process driven activities
- International standards applied for local and national school needs

MANAGEMENT

- Benchmarking school against best in education field
- Establishing centre of excellence and continuous improvement
- Regular feedback on performance through internal and external assessments

FEED-NABET has accredited and assessed 5,500+ schools till now in India and abroad.

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